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The FARMERS MAIL AND BREEZE

cop 2

Improve the Home Grounds

The Living Conditions Can be Made
More Satisfactory on Kansas Farms

By M. F. AHEARN

MATERIALS necessary for increasing the value of real estate can be found near almost every home. Nature produces an abundance of flowers, shrubs and trees that may be obtained at a small outlay of capital and labor. Kansas is fortunate in this respect. The state has a wealth of beautiful wild flowers and many hardy ornamental shrubs that have showy flowers, richly colored fruits, leaves and barks.

One writer on this subject has said: "Man must first provide for his necessities, then for comforts, and finally for pleasures." The people of our Western states have been busy trying to obtain the necessities of life, and a visit to some of our farm districts will show how well they have succeeded. That the comforts of life during the last five years have not been overlooked is attested by the number of modern homes found in the rural districts. The automobile has made trips possible not only to nearby towns but also to the large cities, so we find that pleasures are not neglected.

Settlers in a new country must first provide shelter for man and beast, and their first efforts are directed toward the erection of buildings. As the country develops there is an insistent demand for civic improvement that must sooner or later be heard.

Village improvement societies are formed and a hurry-up call is sent for some landscape expert to advise and plan for the beautifying of the school grounds or the city parks. Private citizens become interested and there is a general attempt made to improve the home grounds. Many persons become discouraged and fall, due to ignorance of when to plant, where to plant, and how and what to plant.

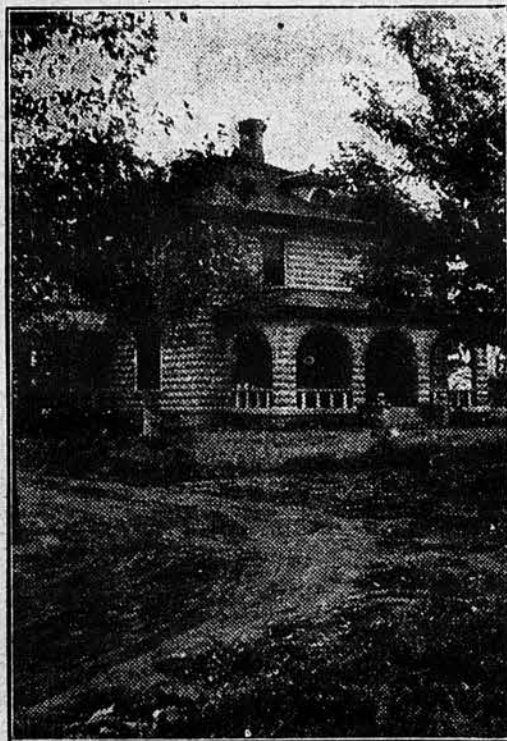
The first requirement in the beautifying of the home grounds is the making of a plan. This plan should be specific and the product of one mind. It should be followed carefully, and changed only when circumstances make it unavoidable.

Two great styles used in the adornment of grounds are the formal and natural. For small estates use the formal style, but for large areas the natural is more satisfactory. Having decided the treatment to be given the grounds a map should be made locating buildings, drives and walks, trees and shrubs and providing for vistas and long perspectives.

In any landscape scheme the first thing is to provide for open lawns. Avoid scattered planting. Trees and shrubs should be relegated to the boundaries, the angles of the buildings and the curves in the walks and drives. Beginners usually make the mistake of planting gorgeous colored plants at equal distances over the lawn, taking great pains to fill up the center. Such a planting will attract the attention of travelers but it cannot hold it.

Plant trees in groups rather than as single specimens, and mass the shrubs. Pleasing groups are obtained by using trees and shrubs in the same group. On large estates fine effects may be obtained by the planting of groves of forest trees. Use several varieties of trees and shrubs, provided the space is large enough to permit of such selection. Plantings properly placed afford protection from sun and wind and provide screens for unsightly objects.

The problem of locating walks and drives is often perplexing. Curved walks are more graceful and natural, but a straight walk is direct. For small places the drives and walks should be straight. This is particularly true



of places that occupy only a city block. Where the grounds are more extensive and the grouping of trees and shrubs is an important factor in the arrangement of the grounds, the walks and drives should be curved. All walks and drives should be well drained.

Fences are often necessary but are always unsightly. Substitute hedges for fences wherever possible. Barberries, buckthorn, arborvitae, cedar and Californian privet make fine hedges. Privet winter kills in some localities, but where it thrives it is efficient.

Taking the fence away makes the home grounds appear more extensive and gives a more inviting appearance to the place. Around farm houses a fence is often a necessity for protection. Under such circumstances strive to make it as attractive as possible. This may be accomplished by using woven wire and hardy vines, or woven wire and cedar. Fancy iron fences and gaudily painted picket fences are only important for the lessons they teach. They have no claims to beauty.

Water in the landscape provides possibilities for the use of a great variety of water plants. This water may be in the form of a pool, pond or running stream. Fortunate indeed is the person who may claim ownership to a body of water as it affords beauty, comfort and pleasure to a marked degree. Next to having water in the place is the advantage of a good view of a river shimmering between the dark green of the trees and shrubs. Plant sedges, willows and alders along the banks; and water-lilies, hyacinths and lotus in the pool.

The farm house offers a separate and distinct problem. Farm buildings should set well back from the road with a spacious lawn. Shade trees should be planted in quantity, but far enough apart to permit mowing the lawn with a horse machine. Roads should be laid out to one side or to the rear of the buildings. Some shrubbery is permissible, but its generous use will cause a great deal of extra work.

It would be a difficult matter to list tree, shrubs and flowers suitable for Kansas conditions. There is a variety of soil and climatic conditions to be considered in the preparation of a list for such a large area. For the Eastern portion the following list will be found useful: Spireas, barberries, lilacs, Japanese quince, Juneberry, pearl-bush, buckthorn, dogberries, Siberian pea-tree, bladder-senna, honeysuckles, snowball, button-bush, Purple-fringe tree, Rose of Sharon, Deutzias, mock-orange, Golden-bell black-haw and several others. Western Kansas will be more successful with a few such as caragana, colutea, Tamarisk and Sabins juniper. A good plan to follow is to observe the plants found growing wild in that vicinity and make the most of these hardy pioneers.

The list of trees for Eastern Kansas is large. Here are some of the best: Oaks, maples, elms, lindens, maiden-hair, ash, hackberry, hickory, walnut, pines, spruces, firs, Tulip tree and coffee-bean. Trees that will be found successful in the Central part of the state are: Honey locust, Russian olive, Red cedar, Bull pine, Tamarisk and Sabins juniper. An expenditure of a few dollars for hardy plants means an increase in value of the property and a corresponding increase in satisfaction and comfort.



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THE FARMERS MAIL AND BREEZE

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



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Farm Editorials

A FOOD SHORTAGE such as the present generation of Kansas farmers has never known confronts the nation. Prices are certain to be high. It is of the greatest importance that every farmer should manage his farm so a high production can be sold at these prices will be obtained. The outlook for farming in Kansas in 1917 is very bright.

Good Vegetables

It is especially important this year that the best results should be obtained from the farm gardens. If more attention is given to the vegetables the cost of living can be reduced greatly—and the price of the things you buy at the stores will be high all thru 1917. In addition, a good garden does much to make the living conditions more satisfactory. Why not give the garden a chance this year?

For Better Living

To be honest, to be kind, to earn a little and to spend a little less; to make, upon the whole, a family happier for his presence; to renounce when that shall be necessary, and not to be embittered; to keep a few friends, but these without capitulation; above all to keep friends with himself; here is a task for all a man has of fortitude and delicacy. —Robert Louis Stevenson.

E. J. Guilbert

E. J. Guilbert of Wallace is doing some mighty fine things on his ranch on the Smoky River. He has the largest herd of purebred Galloway cattle in the world. Much attention is given to irrigation, especially with potatoes. Mr. Guilbert is vice president of the Kansas Irrigation congress. Considerable success has been encountered in the growing of alfalfa, Sweet clover and the sorghums. Western Kansas needs more such farmers with the big vision of the opportunities which that section offers.

Corn Yields

A crop rotation will increase the yield of corn greatly. This is being well shown by the soil fertility work at the Kansas State Agricultural college. The average yield of corn on the plots grown under a rotation of corn, cowpeas and wheat has been 28.03 bushels an acre, while the yield where the corn was grown every year was 22.87 bushels. This is the result for the last seven years; the field is Riley county upland.

More than that, the spread between these two fields is increasing every year. The yield of corn grown last year under the rotation was 42.25 bushels an acre; the yield where the corn is grown under a continuous cropping system was but 23 bushels. There was an increase in yield from the cropping system of more than 19 bushels last year—and corn is now selling for more than \$1 a bushel!

Why not plan a rotation system so your fields will have a chance to produce the best yields?

Land Values

Many students of farm problems have been led to believe that land prices are too high for a man to buy land and pay for it during his active life. In some of the older countries land values are placed at the price of 25 years' rental. If the rent is \$2 an acre, the selling price would be \$50 an acre; if \$5, the price would be \$125 an acre; if \$10 rent is received, the price would be \$250 an acre. Much land is available in the newer regions at a lower price than 25 years' rent, while in other instances as much as 50 years' rent is demanded for land which is held at speculative values.

Farm management studies have shown that the size of farms has a decided influence upon the profit or labor income derived from the land, and they indicate that small farms of from 40 to 100 acres pay a smaller labor income than larger farms. Labor income rose steadily as the farm increased in size until an average of 240 acres was reached, indicating that approximately this size gave the best utilization of man and team, labor and of farm machinery used on the place. In the survey the labor income for 80-acre farms was only \$122 a farm after paying 5 per cent interest on all capital invested in land, buildings, machinery and livestock. The 240-acre farm in the same survey paid \$684 labor income a farm, also paying 5 per cent on the investment. The small farm had a much higher percentage of the investment in unproductive buildings and in horses and machinery neces-

sary to the operation of the land. According to this survey, land will pay larger dividends in 240-acre units than in smaller units, and in consequence will command a higher price when the purpose is to add it to an adjacent small farm than to operate it as a small independent unit. A survey of farms operated by the owner, part owner and tenants shows that the higher labor income was produced by the farmer who owned a part of the land he operated and rented additional land to work in connection with his own. Where the land was worked by tenants the owner received 3.1 per cent interest on his investment. Where worked by a tenant who was also a farm owner he received 4.1 per cent interest. This lower rate of interest is in part responsible for the higher labor income of the tenant over the land owner, who in these surveys is charged 5 per cent on his invested capital. If land operated by tenants will pay only 3 to 4 per cent on the investment and land operated by owners will not pay a fair labor income after paying 5 per cent on the investment, then it is fair to assume that either the capitalization is too high or the interest rate should be reduced.

Still another factor must be reckoned with in determining land values. The city man buys a piece of land and erects a home which he supports independent of his business. If he does not own his home he must pay rent, which is a direct charge against his salary or income. In the country the farmer's home is upon the land; the house in which he lives is charged up as a part of the working capital. The desirability of any farm region as a place of residence affects the price of land. This is more especially true in older and more settled sections where a new generation is seeking to establish itself. Probably the largest factor in forcing up the value of land is the price which resident farmers are willing to pay to establish their sons and daughters upon land in the same neighborhood. The financial responsibility of the parent guarantees and helps to liquidate the obligation. A premium above the earning power of the land is paid for purely residence values.

To review: Land values are established largely upon the earning power of the land. They are affected favorably by good markets and good railroad facilities, which increase their earning power, and by low interest, which decreases the fixed charge against the land. Skilled labor and intensive industries also increase the earning power of land. Crop rotations, efficient management and increasing the size of the farm business increase the acre income.

The pressure of the ever increasing population against the almost constant area of tillable land will tend to increase the price of land so long as our population continues to increase.

Nebraska.

B. A. BURNETT.

Sweet Clover

The value of Sweet clover for pasture is being well demonstrated in all sections. It will grow on high, rocky points where the native grasses have died and where it is almost impossible to get other pasture crops started. O. C. Hagans, county agent of Miami county, has been active in encouraging a larger acreage of Sweet clover. We take this from his report for 1916:

In the spring of 1915 a demonstration of the use of Sweet clover as a pasture crop for seeding rocky pastures where the stand of pasture grasses was too thin was planned on D. M. Lauver's farm. The Sweet clover was seeded and made a fair growth during 1915, and supplied some pasture late that season. During 1916, this Sweet clover made a good growth and produced seed that should reseed this rocky point for 1917. W. E. Hays and K. McLain of Osawatomie, Ersel Reed of Louisburg, A. L. Lingle of Richland and F. C. Atwood of Sugar Creek are co-operators who have used Sweet clover for pasture, and all report that it proved satisfactory, especially on rocky hills and abrupt slopes where other pasture clovers and grasses had failed to grow.

There are several thousand acres of rocky pasture land in this county, which is producing practically nothing, and which if seeded to Sweet clover would give good pasture returns.

Sweet clover is demonstrating that it has an important place on the poorer soils in Kansas. A larger acreage will pay. This will be planted in the next five years.

Tenancy Problems

Kansas people need to consider the tenant problems very earnestly and carefully. Unless this is done the crop yields will continue to decline, and country life will not make satisfactory progress. Many countries have developed a good system of tenant farming—Kansas, however, is not so far along as Moses was. In speaking of that recently, H. J. Waters, president of the Kansas State Agricultural college, said:

"It is a mistake to assume we are the first people to have to meet the farm tenant problems. The fact is that tenancy dates back to the beginning of the established order of agriculture, before man used typewriters for writing farm leases or fountain pens for signing them. The earliest leases of which

there is a record were written in clay and sun dried, and the signature was made by thumb nail impressions, but the terms of the leases were exactly the same as those of today—one-half the crop when the oxen and seed were supplied by the landlord and one-fourth to one-third when the tenant owned the seed and the work animals.

"Moses established the best system of land ownership that has been known, intended definitely to prevent land monopoly and to keep farms to the size that would be the best for everybody. One important provision was that the land belonged to the Lord, and the one who tilled it held it for a rental of two tithes to support the priesthood, which had no land, and one tithe for the public welfare. The tenant could hold this land only 50 years at most, or until the year of jubilee, when all contracts ceased and all debts were cancelled. If we redistributed the land now once every 50 years we should hear little complaint of oppressive landlordism."

There are two ways to attack the tenant problem, and Kansas should use both. One is to provide for a system of distribution that will be fair to both the owners and the tenants, by developing a method of credits that will enable tenants to buy the land on the best terms. The Federal Farm Loan Act is a step in this direction. Then a system providing for long time leases on a livestock basis, such as has been worked out in England, should be developed.

Keeping Up a Front

BY CHARLES DILLON

Very rich men have been heard to complain over the burden, the worry, the sleepless nights incident to the possession of great wealth. Doubtless there was and is some reason for this viewpoint, but I have often thought that the real tragedy is in the lives of men and women whose hearts are wrung "keeping up a front." Rich men forget this side of life, if they ever knew it, or have little sympathy for those compelled to live it. Some philosopher once said that the clerk who wore cheap gaiters in the winter to cover his ankles and topless shoes was happier than the millionaire who worried over his responsibilities to humanity. Occasionally I have known rich men who suffered genuinely because it would be necessary to close down a plant throwing hundreds out of work. There are rich men and women who realize deeply and sincerely their duty to society, to the whole human family, but generally, I believe, this is not the rule. The real tragedy of life, I maintain, is for the man with a big title and a small income.

Times have changed so mightily in the last 20 or 30 years. When I was a boy we stared open-mouthed—and so would the grown-ups—at a man reputed to be a millionaire. Today, in a meeting of financiers "there is none so poor to do him reverence." He's a white chip in a game in which the limit, apparently, is the sky. The millionaire has to struggle to keep up the pace, just as you and I, and a lot of others in our humble spheres, have to strive to preserve our status in a society made up largely of shams and fool ideals. The things that suited our grandmothers won't do for today. We must outdo our neighbors. If one man's wife serves porters to the Ladies Aid Society another man's wife will provide snowbirds or canaries if she has to sell a cow to do it. If Jim Brown, a mile away, buys a six-cylinder car I'll get an "8" or blow up trying for it. We are all striving to reach what we foolishly believe to be the top, and find ourselves at the bottom with a bundle of unpaid bills.

What we need to do—we who are not rich—is to learn the virtue of self-denial in doing without. I give my boys a regular weekly allowance, small but still to be depended upon. They are urged to carry this money every day, not to put it in their banks. They may go down town and blow themselves if they wish—spend 25 cents in one wild orgy. But unless they have been able to keep one-half the weekly allowance in their pockets, and have it to show me Monday morning they get no allowance for one week. It teaches them to resist temptation. They learn self-denial. How sincerely I wish they were in the country where they might join the Capper Pig Club! Those boys—John Case's boys—are not likely ever to know the tragedy I mentioned a while ago.

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

Rural High School Farms

There are more than 40 rural high schools in Kansas. I wish again to suggest the advisability of having an experimental farm in connection with all these schools. I believe the state should have made provision thru the legislature to help in this, but as that was not done it is the duty of the various rural high school districts to help themselves. There is nothing, so far as I know, in the law which will prevent these districts buying or renting land for experimental farming. A long time lease might be made on a tract of say 80 acres or possibly 160 acres, and this might be used for the experimental farm. While the primary purpose of this farm would not be to make a profit I believe that it could be made to pay its way. Now, on an experimental farm it is as essential that certain methods be proved to be failures as that other methods be proved to be successes. For example, it would be exceedingly valuable to show that the production on a given number of acres could be doubled or trebled by proper methods of cultivation and fertilization as compared with the ordinary methods, altho the neglected acres would not produce enough to pay the lease price. I have a theory that agriculture can be made the most attractive study in our schools, but it must be made interesting by practical demonstration. It cannot be made interesting by simply studying it in a book.

Another thing I want to call attention to, and that is the advantage these rural high school farms might be to the local dealers in farm implements, tractors and the like. The experimental farm will be an ideal place to test the various kinds of plows or cultivators for sale by the local dealers, and the tractors especially. The farm tractor is still in its infancy, so to speak. A great many farmers must be shown that it will pay them to buy a tractor before they will make the purchase, which by the way is a very sensible position to take. A tractor costs a good deal of money. Unless it will pay the farmer to buy one he is foolish for making the expenditure. On the experimental farm the tests of the various tractors and other farm machinery could be made. This not only would be a help to the school but it would be fine advertising for the dealers. The farm implement dealers in the vicinity of the rural high schools should encourage the experimental farm idea. Get the directors of the school interested. Help to get the land and agree to provide implements for experimental purposes. Get everybody in the district interested. Get them all to go to school if possible.

Why the Delay?

I always have had and still have a high admiration for Senator Lafollette of Wisconsin. I also have a high opinion of most of the other senators who stood with him in the filibuster which resulted in defeating the passage of the bill giving the President authority to arm merchant vessels if he deemed it necessary for their protection on legitimate business. I am of the opinion that Lafollette and the others who stood with him were honest in their opposition, and if they were then they were entirely justified in opposing the measure.

However, they knew that their opposition could only result in delay and possibly a misconception of American sentiment by the German government. I always have favored the rule of the majority. Not that the majority always is right. As a matter of fact the majority frequently is wrong and the minority quite frequently is right. But in a republic like ours the basic principle is that the majority should rule, and the minority, while using all legitimate means to persuade the majority that it, the majority, is right; and while always doing all the missionary work possible, should submit to the will of the majority when that will is expressed lawfully, reserving of course, to themselves, the minority, certain inalienable rights which even the majority has not the right to take away.

In the case in point, regardless of whether the majority or the minority was right, it was perfectly apparent that not only a majority of the senate but a majority of the people of the United States favor standing by the President in the present crisis. I think, therefore, that Senator Lafollette and his minority associates should have contented themselves with expressing their disapproval of the action of

the majority, voted against the measure, and let it go at that.

The President has the power, of course, to reconvene Congress in extra session at once and push the bill thru despite the objections of the minority. The only result of this action is delay and considerable extra expense with, as I have said, the further possible result of creating a misunderstanding in the minds of the ruling powers in Germany and Austria.

Kansas Rural Credit

So many letters come to me making inquiries concerning the Kansas Rural Credit association that I have decided to attempt to make a general explanation that will answer even if it does not satisfy the questioners. It has been more than two and a half years ago since the plan to organize co-operative rural credit associations in different states of the Union was originated. In Kansas the gentleman most active in pushing this plan was L. W. Moody. The general outline of this plan was almost identical with that upon which the present Federal Land Bank or Farm Loan Act was based. At that time there did not seem to be a very bright prospect that a Federal rural credit law would be enacted and therefore it was proposed to establish co-operative rural credit associations in the various states. Subsequent events have demonstrated that this was a great mistake, but that fact was not apparent two and a half or three years ago.

This plan, which as I have said, is practically the plan embodied in the Federal Farm Loan Act was presented to myself and a good many other men, among them our bank commissioner. It seemed to be a good plan. I might have had more doubt about the correctness of my opinion concerning it if it had not been approved by so many other men far more successful in business than I, men in whose integrity and judgment I had confidence.

A number of organizations were formed in different states but the Kansas organization is the only one in which I feel particularly concerned. The Kansas Rural Credit association was organized under the laws of Kansas. It was under the general control of the banking department of the state. Its capital stock was divided into shares of \$50 each, but with the provision that a surplus fund equal to the capital stock was to be built up and therefore the shares were to be sold at \$100 a share, \$50 to be applied to the surplus fund. The association was to lend money only to its own stockholders. The money to lend was to be derived in part from the sale of the capital stock, but principally from the sale of bonds to be secured by the capital stock and surplus of the organization and by first mortgages on real estate on which loans should be made not to exceed 50 per cent of the appraised value of the lands. The association was to issue long-time 5 per cent bonds. The rate of interest to be paid by the borrower was to be the rate of interest paid on the bonds, plus not to exceed 1 per cent to pay the expenses of the organization, and added to that an amortization annual payment which would be sufficient to pay off the mortgage in a given number of years. It was estimated that a 1 per cent amortization charge would be sufficient to wipe out the mortgage within 35 years.

In the beginning the organization seemed to be going prosperously. Real estate loans to the amount of \$104,000 were made. The bonds were ready to be issued and we were given to understand by the manager that the sale of the bonds had been practically arranged and that ample capital would be available to take care of all loans. As appraisers two men recognized as especially competent to pass on the value of Kansas lands were employed and apparently the Kansas Rural Credit association was going to be what I and the other men who had consented to allow their names to be used as directors had hoped, a great benefit to the stockholders and prospective borrowers.

Then came the passage of the Federal Land Bank Law, generally known as the Farm Loan Act. When the provisions of that law became known it was entirely evident that it made it impossible for an organization such as the Kansas Rural Credit association to succeed. The Federal law made the bonds to be issued by the Federal Land Banks entirely free from taxation, while the bonds of the state organizations were subject to the same taxes as other property. It was evident that a taxable bond could not be sold in competition with a non-taxable bond and the

whole structure of the state organization rested upon the ability to sell its bonds. When this fact was known a meeting of the directors of the Kansas Rural Credit association was called to devise a plan by which the Kansas organization could be reorganized under the Federal law. At first it was supposed that there would be no particular difficulty in doing this. The directors supposed in fact that a reorganization plan was in process of being worked out, and that by the first of March of this year the new organization would be in complete working order. I still believe that it would have been possible to have worked out a plan of reorganization that would be successful, but in that I may be mistaken. At any rate the proposed reorganization did not succeed and at a meeting of the board of directors held about a month ago while I was absent from the state, it was decided that the only thing that could be done was to close up the business of the association and distribute whatever assets there might be among its stockholders. Accordingly a receiver was appointed by the district court of Lyon county to take charge of the affairs of the association. The receiver is Mr. Hamer of Emporia. This receivership is the closing chapter of the sad and disappointing story.

Our hind-sight is much better than our foresight. It is entirely evident now that the organizing of the state association was a mistake, but a very large number of supposedly wise and successful men did not think so. I am not including myself among these for on financial matters I do not consider myself either very wise or successful.

There were some other faults connected with the organization. The expense of organization for one thing was too great. The plan of selling the stock was, as I now see it, very faulty. The agents selected or employed to sell the stock, depended for their compensation on the commissions derived from the sale of the stock. The lure of this commission tempted them in some cases to make false statements to the purchasers of the stock and representations which it was impossible for the association to fulfill. Farmers all over the state were definitely promised loans within a very short time, generally within a definite time. The principal complaints have come from these persons who were lied to by these agents.

I warned the management against permitting agents to make these misrepresentations and I have no doubt other directors did the same thing. Nearly two years ago, feeling that it was impossible for me to keep in touch with the business of the association I tendered my resignation as a member of the board of directors, but the directors refused to accept it. I wish, however, to say this of the men who composed this board of directors; they are honorable men who consented, I think, in nearly every instance to allow their names to be used as directors only because they believed the plan was a good one and would succeed. What I very deeply regret is that there are men in the state, as I have reason to believe, who bought stock in the Kansas Rural Credit association because my name was connected with it. They will suffer loss on account of their confidence in me. It is true that I never advised anyone to purchase stock in this association. All I said was that it seemed to me that with proper management it should be a success. That, of course, was before the passage of the Federal law. After the passage of that law it was evident that it could not succeed as a state organization. I did believe, however, that there would not be much difficulty in reorganizing under the Federal law as a joint stock land bank, and if such organization had been effected it is my opinion that it would have proved to be a great success, and that not only would no stockholder have lost money, but that his stock would have been an excellent investment. Personally, I think that it was a mistake to abandon the attempt to reorganize under the Federal law, but I have no doubt the other members of the board of directors did what they believed to be the best thing they could do under the circumstances.

I can only say in conclusion that I have never been connected with an enterprise which has caused me so much disappointment and regret. No doubt many of those who purchased stock will not feel the loss very seriously, but others are not so fortunate nor so well able, financially, to lose even a small amount. Fortunately, there were not many who purchased many shares of stock, so that the individual loss in most cases will be small, but that

I should be the occasion directly or indirectly of causing anyone to lose, troubles me a good deal, for I most sincerely value the confidence of those individuals who may have invested because of that confidence in and friendship for me, and it pains me to think that by reason of that confidence they are the losers.

Compulsory Service

I am asked why I am opposed to compulsory military service. The questioners sometimes say: "You admit that you would be in favor of defending the country in case of foreign invasion, and that means that under certain conditions you would favor war. But war requires a trained army and unless there is preliminary training there cannot be a trained army."

I have, on several occasions, described a plan for general industrial training which I would be willing to favor, which would provide a vast, well-disciplined, intelligent, industrial army trained for peace, but available in emergency for military purposes. But that plan is as far removed as it possibly could be from compulsory military training. Universal military training such as is being demanded is undemocratic and calculated to promote war instead of peace. I do not care how much this is disputed, the experience of other nations and the dictates of common sense prove that it is true. Modern warfare is as different from the old warfare as the modern selfbinder is different from the old sickle. It is entirely evident, therefore, that to call out all the young men of the country and put them thru the manual of arms and make them march and countermarch, present arms and shoulder arms for six months or a year will not prepare them for modern warfare. It will, however, build up in this country, just as it has in other countries, where tried, a military aristocracy, a military caste. This is contrary to the fundamental principles of democracy. Modern warfare is science misapplied for purposes of destruction instead of being properly applied for purposes of construction.

Battles are no longer fought in the open to any considerable extent, and they are even less likely to be fought in the open in future wars if there are to be future wars. It is, therefore, useless to call out all the young men of the country and put them thru the forms of drill unless they are supplied with all the modern implements of destruction and trained in scientific murder. If then we are to adopt the system which has brought Europe to bankruptcy and piled woe and misery on that continent beyond the power of human imagination to conceive, we must maintain constantly an up to date army of 10 million men. They must be supplied fully with the most modern and most destructive weapons known to man. They must be trained in all the hellish devices for wholesale murder that the best brains of men have invented. In other words we must be in a state of war constantly, with the difference that part of the time we shall not be actually engaged in fighting.

If there is any one thing that is proved beyond a doubt it is that public sentiment is shaped by education and custom. In the days when the duel was considered the proper method of settling disputes and avenging either real or fancied wrongs, every real gentleman was supposed to be trained in the use of weapons either the sword or the pistol or both. According to the argument of the advocate of universal military training the better versed he was in the use of weapons, the less likely was the man of those times to have trouble.

Exactly the reverse was true and very naturally so. The man who believed that he was an expert with a pistol or a sword was very jealous of what he called his honor. He was ready to take offense at slight provocation and eager to settle it on the field of honor. The men who had the most duels were those best trained in the use of weapons, provided of course that they were not killed in the first encounter by some other man who was as well or better trained than they. Men trained in the use of weapons; men trained to war, naturally think about weapons and war, and they are vastly more apt to want to fight than the men who have never had such training. Universal training is intended to inculcate the martial spirit, the passion for war. It is intended to make the minds of the young men subject to the authority of the selected class who are given the power to command. What the world needs is to have the public mind directed away from war and toward the arts of peace. If the world is ever to be freed from the curse of war there must be an education among the masses that teaches that war is the greatest of crimes and the greatest of follies. It takes generations to eradicate false impressions, false ideas. The time to begin to educate men away from war is now when the nations are war-weary.

A Practical Plan

The demand for better farming, better system for marketing farm products, less waste in the distribution of food supplies and carrying them to consumers, and better conditions for those who till the soil as well as for other classes of labor, is widespread and insistent. Congress and numerous state legislatures are seeking to correct existing evils, by legislation, and economists, big and little, are using large space in weekly and monthly publications, explaining present conditions and criticising their faults.

I should have the farmers at every town form a

co-operative association to promote the general welfare of the community and among other things: To own and operate a big community farm; to have a company store that shall provide supplies to members at cost plus expense of operating; to be a selling organization to market the products of farm, garden and orchard to best advantage; to afford a means thru which the community's social needs may find expression and satisfaction in the form of schools, library, church, hospital, amusements.

The big farm should be a demonstration farm—a concrete example right at home of the right ways of doing things with proof in the financial returns of correct methods. In a limited way it might be an experimental farm but chiefly it should be a proof that scientific agriculture means a fatter pocketbook. It should keep high grade breeding stock for the benefit of all the members of the association and be equipped with tractors and other heavy machinery to do occasional heavy work for the small farmers.

The selling department of the association should be equipped with necessary warehouses, stockyards, elevators and be in charge of an expert salesman. Probably the largest direct financial profit to the association would be from the better prices obtained from a well organized selling force. The community store would be the most difficult to manage but on the Rochdale plan or something like it could provide members most of their supplies at a considerable saving.

A happier, more contented and more useful social life naturally would follow and grow out of the community activities. Instead of every fellow for himself and the d—l take the hindmost it would be pull together for the common good, each for all and all for each.

The general superintendent of the association should be a man of large executive and business ability. He should be elected by the directors of the association for a term of years and should have large authority and discretion in conducting the affairs of the association. The superintendent should appoint his assistants. For all departments of the farm there should be working managers who are experts in their departments, such as an expert poultryman, an expert dairyman, an expert in swine husbandry.

Neither the department managers nor the superintendent should get a salary. They should work on a profit sharing basis. Big profit, big pay; no profit, no pay. I would provide that no one should be eligible to appointment as superintendent or department manager unless he had the endorsement of the state agricultural school. Such a provision would insure harmonious relations with the school and helpful suggestions from them when needed.

Such an association should be easy to finance. Two kinds of corporation stock should be issued and sold: common and preferred. Every member should be required to buy a certain amount of common stock. The holders of common stock should elect the directors, each stockholder having one vote irrespective of the number of shares he holds. The preferred stock should have a guaranteed yearly dividend 1 or 2 per cent more than the prevailing interest rates for loans on good security. Preferred stockholders should have no voice in the management of the association. They would buy stock simply as an investment, safe and yielding a good interest. Common stockholders would get no dividends until the preferred stockholders have first been paid. Given provisions such as these and the enthusiastic support of a half dozen of the leading farmers and stock men of a community and any experienced promoter would put the enterprise on its feet in short order.

Wichita, Kan.

Somewhat along the same line of thought is the following letter from Mr. Ferris of Osage City who has given a great deal of thought to the community farm idea:

Thank you for again referring to my co-operative plan some two weeks ago. But now your last article in Farmers Mail and Breeze, "Back to the Farm," is the best and most reasonable article that I have ever read from your pen on that subject. It contains the three laws by which wealth is produced honestly, and tends toward a more abundant and higher life, and reduction of crime. The three laws are: Community life, quick transportation to God's workshop, soil, sunshine and rain.

In my mind's eye I see a train load of 1,000 children 10 to 14 years old with a teacher to every 50. They are going 5 miles out in the country to gather an 80-acre bed of onions. It is school vacation in August. They are all well clad in their school garments. Under one arm they carry a Stark, a seamless sack. In this sack are a pair of wood sole shoes, a Mexican hat, and a pair of overalls, blue for girls and striped for boys. And in the other hand a dinner bucket. At the country station they form into line and march to the onion bed, led by a fife and drum band. At the onion bed, they don their uniforms in a divided tent, the teachers pin their numbers on their backs, one to 1,000. They take large buckets provided by the teamsters, and proceed to gather onions and load wagons. The teamster weighs their buckets and gives their number credit on his book. On Saturday night they go to the central office and get receipt for labor which is money, and legal tender for everything in this corporation.

The onions are loaded into cars and sent to the best market, where a stockholder and member of this great family lives, and has the product already sold to retailers. The children are worked six hours a day with recess, as in school. Child labor laws can be overdone. The children are advised to use their money judiciously. They buy their own clothing and buy stock in the enterprise. These children can work all vacation. It will keep them out of mischief and it is all the military training that they need.

The teachers are not school teachers but gardening teachers. There is plenty of work for all mem-

bers of this great family. And living at the big boarding house is cheaper than keeping a single house.

If ever you have occasion to refer to this plan again please remember it provides a home for the annual renter, landless farmer without equipment, retired farmer, that would live longer if he had a little work to do.

I do not mean that girls need all make garden. They can learn dressmaking, work in overalls and shirt factory, canning factory, cheese factory.

Here is the axiom: The one man farmer cannot do rotation, diversified farming and stock raising, intense farming and complete farming and work 160 acres of land, no matter how much machinery he has.

Here is a synopsis of bylaws, governing the association: A joint-stock company with limited capitalization. Maximum stock for one stockholder \$50,000. Minimum stock that every member must take \$500, five shares. Any worthy person at least 18 years old may become a member on probation. Probationary members may vote when a certain per cent of their retained wages amount to five shares. Every member stockholder has one vote. Annual dividends paid to all who have one share of stock paid in full. Salaried officers, paid monthly, wage earners paid weekly, by the hour, by the job, by weight and by measure. Officers elected annually but may be recalled at any time. Choice of work taken by lot, or mutual consent. Board and rooms at large boarding house at 5 per cent above cost. The general manager and the 24 superintendents are the executive board.

H. L. FERRIS.

The Crime of War

War, in this day of enlightened people is the instrument of civilized anarchy for gain to fill the coffers of selfish ambition. This war ought to meet the disapproval of every well thinking man. The awful carnage and sacrifice of human lives, the stupendous cost of carrying on war, and the economic loss is too high a price to pay for the right of citizenship. The sacrifice and hardship is greater than the actual blessing and reward. I would that the rulers and men of influence would have a higher regard for mankind.

LEWIS TRIMPE.

A Child's Right

From Governor Capper's Address at the Dedication of Vinland High School, at Vinland, January 19, 1917.

I thoroly believe a new kind of patriotism is coming in America—the best and the truest the world has ever known. It is the patriotism of progress and welfare, and the school house is its cornerstone. Every time we dedicate a new school house we are doing the biggest and the greatest thing we can for our community, for our state and for the nation.

This new kind of patriotism is demanding a schooling for boys and girls that will not annually turn great masses of them adrift in the world without the knowledge that will make them capable and self-supporting. No young people will ever have greater need of a sensible, practical, useful education and a good home training than our young people and their children, for a new day has come in America and to the world. More and more it is to demand of every man and every woman an active, useful, busy life of service, service for home and country and humanity, in return for the living—a happy, purposeful living—which it is said the world owes everyone.

There are to be no soft and easy berths for drones and human butterflies in this new time, now upon us. Life will be real, life will be earnest and it will be happier for those who deserve happiness.

The dawdlers and the unfit—by reason of faulty education or otherwise—will be crowded to one side. They will have the tasks that simple minds, unskilled hands and lazy wills can perform. They will be the failures in a time when failures will be fewer and with less excuse than they have ever been before. Happiness and opportunity will not be their lot, for the reason that they were never fitted to attain them. They will be compelled to drop behind and stay behind in a crueler inferiority than the world has ever felt before, the pariahs of a time when brains and efficiency will constitute a nobler aristocracy and culture than the world has ever known.

My wish is to emphasize the tremendous importance of giving all the children of Kansas an equal chance, the best chance possible, in the race of life, and that means an education that will help them thru the world, an education that with life and experience they can build on while it serves them well.

I hold that it is the right of every boy and every girl in every community in Kansas, to have guaranteed to them by the district, the county, the city and the state, some form of education and training which shall make them self-supporting workers and useful members of society.

After eight years' schooling every parent has a right to expect that the state has given his child an education which shall enable him to make his way in the world. When it fails to do this, as I think it sometimes does now, it is time to remedy such a serious deficiency.

We should devote more time to the common branches and the common things in life which are of vital importance to persons who work with their hands. We should stand for a practical, up-to-date, present-day school—a school that will be of direct practical service, that will widen instead of narrow the field of opportunities for every boy and girl in Kansas.

What About the Roads?

Sensible Legislation to be Followed with an Active Campaign for Five Years

By J. Frank Smith

THE KANSAS Good Roads association and all the friends of the movement for better roads in this state have reason to be well pleased with the work of the legislative session just closed in the matter of highway legislation. The good roads question has been a real issue for several years but it has been local. Every county had its conditions both as to highways and to the methods of building and maintaining them. Even adjoining townships had widely different systems of road building and the standards of plans always changed with every change of officials. County roads, carrying the thru travel, often failed to connect at county lines. In one county the culverts on county roads might be 12 feet wide and in the adjoining county be 20 feet wide. To establish a uniform system of inter-county highways and standardize the plans and sizes of bridges and culverts was one of the objects of the legislative campaign of the Kansas Good Roads association. This has been attempted in a bill known as House Bill No. 601, and by name the State Highway Commission Bill. This bill caused more debate and opposition and required more time and harder work to prepare and get enacted than all the other road bills. It creates a highway commission of the governor and two others to be appointed by him. This commission appoints a state highway engineer who is to be the head of the road and bridge building of the state. Boards of county commissioners will appoint county engineers, except in counties with less than 10,000 population, and in these small counties several may unite to form an engineer district and employ one engineer. In the large counties the engineer is to be appointed within six months, but in the small counties the appointment does not have to be made for two years.

Another bill was enacted that consolidates the office of county surveyor and county engineer after two years, and the surveyor will not be elected after that date. The work formerly done by the surveyor will be done by the engineer. The county engineer is appointed by the county commissioners for term of two years but with the approval of the highway commission. This means that the county engineer may be a successful and practical road builder but may not be a graduate engineer. While he may not have as much technical knowledge as a graduate he may be a good road and culvert builder and thus fill the needs of the position.

The big object aimed at, or at least one, was to place the expenditure of the millions of road funds every year under the direction of skilled men, who are selected especially for their fitness for the work, instead of allowing inexperienced and often unsuccessful road workers to expend the funds as they may desire. This is too often done in experimental ways.

One of the good features of this bill is that providing for the dragging and maintaining of roads by the patrol system. If earth roads as well as all others, with the culverts and bridges, can be kept always in first class condition the people will receive better service and in the end save money. This plan will eliminate all mud holes, bumpy culverts and bridges, and keep the drainage always good. The bill is, in fact, a codification of all the earth road laws, and should be read by every official and taxpayer interested in roads. Many of the papers will publish this law soon and those wishing copies may get them from the papers or from the secretary of state on application.

The Hard Road Bill.

Senate Bill No. 576, known as the Hard Road Bill or the Amended Hodges Road Law, permits the people of any community who desire to improve a section of public road to lay out a benefit district, prepare petitions as outlined in the bill, and initiate the road improvements under

three options. To make a valid petition requires 35 per cent of the resident landowners owning 51 per cent of the land in the district or 51 per cent of the resident landowners owning 35 per cent of the land in the district or the owners of 60 per cent of the land in the district. The term resident landowner means anybody living within the county. The petition is to state the kind of road, the description of road as to length, the time the bonds are to run, not less than 10 nor more than 20 years and bear not more than 5 per cent interest. If the petition is valid the county commissioners shall grant the same and proceed to let the contract and build the road according to plans outlined in the law. If Federal aid is received or state aid or any other donations they are to be applied first and the remainder divided as follows: 25 per cent to the land in the district, assessed according to benefits accruing, 25 per cent to the township or townships, and 50 per cent to the whole county. This fair division of the cost certainly will appeal to any community that wants to improve a highway.

To Build a County System.

This law provides that when 20 per cent of the resident landowners petition the county commissioners asking to have the proposition of building a complete county system of improved roads submitted to the vote of the people the board shall so order. The question shall be submitted either at a special or general election. The petition shall state the roads to be improved, the kind of improvements, and whether the improvements are to be paid for by bonds or by a special tax levy. In case of tax levy the same shall not exceed 3 mills in one year and the amount of road contracted for in a year shall not exceed the funds raised by the levy. The whole county shall pay the cost after any Federal, state or individual donations have been applied.

Under this law it is believed that at least 1,000 miles of improved roads will be constructed or at least contracted for each year during the next two years. This is believed to be as fair and practical benefit district road law as can be found in any state of the Union.

The New Bridge Bill.

Senate Bill No. 506, and known as the "Bridge Bill" is a codification of all of the bridge and culvert laws. It is intended to standardize the bridges and culverts of the state, have them uniform in all counties and provide open competition for every contractor who wants a fair deal on any bridge or culvert. There is an extra number of this bill and the secretary of state will supply it to any one on application. Likewise copies of the Hard Road Bill and the Automobile Bill.

The Automobile Bill.

We now have a revision of the old Automobile Bill. The chief difference is the provision that only 50 cents of every \$5 for motor license or of the \$2 for motorcycle shall be sent to the secretary of state. The remainder shall be held in the county and placed in a special fund to be used for dragging the roads. The \$4.50 of the owner of every motor car in cities of the first and second class shall be used in dragging the county roads. If the fund is larger than needed the surplus may be placed in the county road fund. The \$4.50 from all residents in third class cities and townships shall be divided, \$2.25 to be used in dragging the county roads and \$2.25 to be used for dragging the township roads in the township where the car is owned, and outside of the towns. The motorcycle fund also is divided 50-50. Every motor dealer is to pay \$15 for three tags.

The county commissioners or county treasurer are required to keep these funds carefully separated and applied as directed. This is expected to provide a dragging fund that will keep the

county roads and most of the main township roads well dragged all the time.

The Kansas Good Roads association has been incorporated, and has arranged for a vigorous five-year campaign for better earth roads and a general interest in building 365-day roads. The association will not advocate any special type of road, leaving that for the local engineer and taxpayers. It hopes to conduct a sane and sensible campaign of education for the best possible application of the new road laws that have just been enacted.

The directors have engaged J. Frank Smith, who is president and who has had charge of the legislative campaign, to take charge of the campaign as general manager. The plans are to open headquarters in Topeka soon and keep up a lively campaign thru the press and with public meetings and in every way possible help Kansas people to take advantage of the new laws and get the best possible service in the matter of earth roads and also the building of hard surfaced roads.

Training to Eat Silage

BY GUY M. TREDWAY
Allen County

This farm has just fed out its first silo. The cows had to be taught to eat the silage at first just as some cows have to be taught to eat any new feed. A little bran was sprinkled on the silage for the cows that refused to eat it, and one or two had to have other well-relished feed put over it at first. Within a week all were eating it greedily. Calves learned to eat it as quickly as did the cows and it made an excellent feed for them all winter. They ate much of it. Of course it was carefully balanced with other feeds.

The amount fed to the milk cows was not weighed to them. Instead every cow received all she would clean up, after which alfalfa hay was fed. This balanced the ration, and more milk and cream were produced than during any other winter. This is one of several ways in which a silo pays for itself.

When corn stover is fed a large percentage of it is wasted, as it is too coarse and unpalatable to be eaten. When the same crop is fed as silage every particle is eaten. This is a saving in the acreage necessary to cut, in the amount of feed to be handled, and in the quality of the feed.

Some say a silo is a soil robber because it takes all the stalks off the land, and nothing is left to plow under. But it does not take the stalks off more than half as much land as if the crop were fed as stover. Frequently the stover is fed in a lot, on pasture, or in a dry winter as this has been, in some low place the feeder would like to fill. In these cases little is put back on the land, and all the plant food is lost. Silage usually is fed in a barn or shed where all the manure can be saved. A very large percentage of the plant food in silage can be put back on the soil. None need be lost when fed to work horses, and as butter and milk contain but little of the elements of plant food, a very small percentage need be lost when silage or other feed is fed to milk cows.

Much disagreeable work is saved when silage is fed. But little hauling of feed need be done all winter, whereas when stover is fed hauling must be done frequently no matter what the weather or condition of the fields may be.

Some silage was spoiled. Our silo has no roof. Six or 8 inches had to be thrown off the top. However, no more was spoiled on top than was spoiled in a neighbor's silo which had a roof. Had the fall been wet there might have been a difference. Unthreshed oats were put thru the cutter into each silo to the depth of several inches after the silage was in. This was scattered evenly and kept well tramped. When the oats sprouted the roots made a rather com-

pact mat which helped exclude the air. The exclusion of the air is the important factor in keeping silage.

There were some mould spots thru the center of the silage. This is due to the fact that a considerable amount was left in one place when filling and all the air was not forced out in tramping. It is important that the silage be distributed evenly as it goes into the silo.

Near the bottom considerable silage was spoiled around the outer part of the silo. As our silo is a hollow tile and plastered on the inside, then a "wash coat" of clear cement was given, this spoiling was due to the fact that the silage was not well tramped. We believe the best method of tramping around the edge is with the back to the wall and with a side step just long enough that one track touches the other.

Silage was fed to the brood sows all winter. Such sows must have a bulky ration to satisfy their appetite. Enough grain was fed to keep them gaining slowly, and enough bran, also bulky to balance the grain and silage.

Chickens will eat considerable silage. They seem to be quite fond of the pith in the pieces of stalk. But the supreme test of silage and whether it is profitable to build a silo is to be found in the condition of the cows in the spring, and the returns in cream or butter as compared with other feeds. Several persons have remarked lately as to how well our cows appeared. They never came to this time in the year in better condition, nor have they produced as much cream any winter as they have this. The effort will be to have enough silage next winter so that the silo may be opened as soon as pasture fails, and to have it last until grass is plentiful the following spring.

End Receivership Scandals

For many months Governor Capper has been voicing the sentiment of the people of the state in his vigorous condemnation of corporation receivership abuses, and showing by cases that have recently occurred in Kansas, the huge attorney's fees, receivership allowances, and court costs that are piled up for ultimate payment by the people of the state. His demand for a change in that way of doing things has had the support of the newspapers of the state, which have voiced the feelings and expressions of the people of their respective communities. What has been true of other communities is true of Lawrence and Douglas county. The stand of the governor has met with emphatic approval.

While there may be difference of opinion as to the method of applying a remedy, the bill introduced into the Kansas legislature, giving the state utilities commission authority in receivership affairs, has been the only corrective plan suggested. An enactment of law that would achieve this result was championed by Governor Capper, favored by many legislators—probably a majority—but opposed by a strong force of lobbyists. That the Kansas legislature of these modern days should bow to the influence of corporation representatives and permit a personal attack upon the governor of the state because of his stand on a matter of such genuine moment, is at least one thing for which the present legislature will be remembered. —The Lawrence Gazette.

Feed all of the spare milk, such as buttermilk, separator milk, and clabbered milk to the chicks. They relish it and it is good for them. It matters not if it is sour, provided it be clean.

The loss in weight in Southern cattle is evident from the fact that few ticky cattle are fat, nearly all being in poor condition when sold at the stockyards.

Not So Many New Laws

Important Measures Include Some Urged in Other Legislatures

IMPORTANT NEW LAWS.

Among the measures of state-wide importance that were passed might be mentioned:

The bone dry law.
Two supplementary budget measures.

The state manager law.
The city manager law.
State highway commission act.
Benefit road districts act.
Roads and bridges law.
Revision of the motor vehicle license law.

Adoption of the permanent income tax amendment for the support of the state schools, subject to the approval of the people at the next general election.

Adoption of the "citizenship" voting amendment, allowing foreigners to vote only after they have taken out final citizenship papers. This amendment will have to be approved by the people at the next general election before it will become a law.
Majority age of girls raised to 21 years.

Mothers' compensation act made compulsory.

New workmen's compensation act.
Detention home for women provided.

State oil inspection law.
Child labor law strengthened.
County jail prisoners to work on highways.

THE SESSION laws of Kansas for 1917 will be the least bulky of any printed in years. The legislature ceased its work a week ago last Friday afternoon, with a record of only 334 measures enacted and the governor had vetoed four of these when this review was prepared. The supreme court, incidentally, declared the first law passed unconstitutional. For several years the number of new laws placed on the statute books has run around the 400 mark. A week ago it looked as if only about 250 new laws would be enacted, but the senate insisted on staying in session an extra day and a half, and in that time several measures of minor importance were added to the list of bills passed by both houses.

The executive budget amendment, the call for the constitutional convention, receiverships for public utilities to be placed under supervision of the utilities commission, home rule for cities, consolidation of county offices, revision of the tax laws and judicial reapportionment were about the only measures of state-wide importance that were killed by the legislature this session.

There was very little friction between members of either house and the two committees on ways and means. The appropriations for the next two years, amounting to 11 million dollars, were changed less than \$10,000 by the two houses. In keeping the appropriations down to 11 million despite the tremendous increase in cost of everything, the growth of the institutions, and the added expenditure made necessary for military purposes, the legislature, it was believed by leaders had shown a streak of real economy. Also it got thru the session with a 20 per cent reduction in the number of employees, and without any visible harm resulting.

Bills signed by the governor in the week ended March 12, when this paper closed, of particular interest outside the cities were:

State Government.

House bill 781 requires the head of every department and institution to make an itemized account of all receipts and disbursements, with budget for succeeding year, to the governor. On these reports, in part, the governor can base his budget to be presented to the legislature.

House bill 826, budget act, providing that the governor shall compile a budget of estimated appropriations for the state institutions and departments, to be submitted to the legislature.

House bill 335, movie censorship bill. Creates a board of three members, appointed by the governor, to censor movies.

Headquarters at Kansas City, Kan. Appeals from decision can be taken only to Wyandotte county district court. The fee to be sufficient to pay for censorship, but not more than \$2 a reel.

Senate bill 470 provides that grain inspection fees may be decreased when the money accumulated in the grain inspection revolving fund reaches \$40,000. Raises the salary of the chief inspector from \$2,000 to \$2,500 a year and that of the first assistant from \$125 a month to \$2,250 a year. Transfers \$50,000 from the revolving fund to the general revenue fund in the state treasury.

House bill 643 creates three new offices in the office of the secretary of the state board of agriculture, one carrying a salary of \$2,000, one at \$1,500 and one at \$1,000 a year. Raises another from \$1,200 and one stenographer from \$900 to \$1,000 a year.

Senate bill 96 prohibits the employing in state institutions of persons related by blood or marriage to a member of the governing board or the head of the institution.

Senate bill 268 gives the deputy sealer of weights and measures the right to collect the same fees as the sealer himself.

Senate bill 699 increases the salaries of the supreme court justices to \$5,000 a year. Does not apply until the beginning of a new term of office.

Senate bill 283 provides that cash deposited in the state bank guaranty fund must be deposited in the state treasury and placed at interest, the interest to be credited to the guaranty fund.

Railroads and Public Utilities.

Senate bill 719, allows the public utilities commission to make rules governing the distribution of freight cars.

Senate bill 675, gives the utilities commission the power to regulate the building of bridges or dams across navigable streams by private individuals or corporations.

House bill 838, makes the railroad right-of-way and depot grounds pay taxes in drainage districts for drainage work and maintenance.

Agriculture.

House bill 778, gives agricultural fair associations the right of eminent domain to condemn land for fair grounds.

House bill 491, provides for the inspection and weighing of hay and straw at terminal points.

Senate bill 107, to regulate, thru the public utilities commission, the distribution of cars.

House bill 675, requires shippers of livestock to be identified before the stock is accepted by the railroad for shipment.

Senate bill 249, requires railroad companies to notify shippers of leaking or defective grain cars.

House bill 491, provides for the inspection of hay and straw by the state grain inspector at terminal railroad points, rewritten to allow 75 cents fee for plugging a car, to correspond with a similar law passed this session by the Missouri legislature.

Education.

House bill 510, authorizes boards of trustees of high schools to levy tax of 3 mills on petition of 51 per cent of the voters to clear up outstanding indebtedness.

House bill 27, requires that pupils from outside districts attending high schools without tuition, must pass an examination before admission.

House bill 488, repeals an old act requiring an election to allow the admission of non-resident pupils to county high schools.

House bill 486, repeals the law authorizing the school board in common schools employing ten or more teachers to appoint a committee to give teachers' examination without requiring them to be examined by the county superintendent.

Insurance.

Senate bill 494, allows the incorporating of co-operative companies where a majority of incorporators are residents of Kansas, instead of requiring all to be residents of the state.

House bill 665 allows life insurance companies to invest funds in municipal, county and school district bonds in other states, as well as in Kansas. Requires only a majority, instead of two-thirds of the board of directors to ratify the making of investments.

Senate bill 509 requires executors and administrators to pay into the county treasury any money left in their hands and unclaimed by heirs within a year. In case any heir proves his title to such money after it has been paid into the county treasury, it is to be returned to him.

Taxation.

Senate concurrent resolution 15, submitting to the people of Kansas an amendment to the constitution allowing the legislature to levy a tax for the support of state educational institutions, instead of making appropriations for them.

House bill 570, allows counties to levy a tax of 1 mill for the extermination of grasshoppers.

Good Roads.

Senate bill 506, one of the "good roads" measures, requires all bridge contracts to be let in open competition, and requires the county engineer to furnish estimates and in case of any dispute among the commissioners and county engineer the state highway commission has power to decide the matter. The measure allows the county to buy materials and construct the bridge under the supervision of the county engineer.

Senate bill 92, compels contractors building or repairing roads or streets to keep red lights displayed to mark dangerous places in the night.

Elections.

House bill 783 allows double election boards in precincts having 200 or more voters, instead of requiring 250 or more.

Senate bill 529, fixing the time for the

publication of election notices, requires the county clerk to publish notice fifteen days in advance of a regular election or 120 days in advance of a primary election.

Miscellaneous.

House bill 8, senate substitute, repeals the divorce proctor law.

Senate bill 234, raises the majority age of girls from 18 to 21 years.

House bill 654, allows garage keepers liens for repairs on automobiles.

House bill 621, makes it a felony to remove journal brass from locomotives or other railroad property.

Senate bill 169, provides that before a building is moved across a highway where electric wires are strung, the owner must get a permit from the county clerk, and must notify the owners of the wires. The wires are to be cut, if necessary, by the owners of the wires, and the mover must make good damages.

Senate bill 80, prohibits the lower riparian owner from building a dam or levee to divert the flow of surface water to the damage of a land owner up stream. Does not apply to the damming of natural water-courses, and the act is limited to agricultural lands.

House bill 77, raises the compensation for county commissioners in counties of less than 3,000 population from \$350 to \$500.

House bill 817, permits corporations, as well as individuals, to erect dams for creating water power.

Senate bill 588, deeds back to Lane county certain land that has been used for irrigation experimental purposes.

Senate bill 683, conveys the state's interest in land that has been used for experimental purposes in Hamilton county to Hamilton county.

Senate bill 445, allows county commissioners of Sedgwick and Wyandotte counties \$1,000 additional clerk hire.

Appropriations.

Senate bill 693 appropriates \$258,000 for the Hutchinson reformatory.

Senate bill 694 appropriates \$480,000 for the state penitentiary at Lansing.

Senate bill 344 appropriates \$108,200 for the Girls' Industrial school at Beloit.

Senate bill 714 appropriates \$60,000 for the new board of administration for salaries and expenses.

Senate bill 689 appropriates \$23,000 for equipping the Plumb memorial building at the Emporia Normal.

Senate bill 626 appropriates \$17,000 to build a hospital at the Orphans' home at Atchison.

House bill 889 appropriates \$1,632.69 for the McPherson celebration, July 4, 1917.

Senate bill 562 appropriates \$12.64 for the expenses of the senate investigation of the university.

Senate bill 688 appropriates \$5,423.36 for repairing the Plumb memorial building at the Emporia Normal.

House bill 584 appropriates \$1,000 to help pay for a school building in district 63, Douglas county.

House bill 439 appropriates \$7,840 for the payment of employees at the Memorial building, and for repairs.

Senate bill 117, substitute, appropriates \$24,000 for special improvements at the Emporia State Normal.

House bill 699 appropriates \$2,295.65 for the care of destitute insane, outside of the state hospitals.

Senate bill 666 appropriates \$57,000 for the use of the new state highway commission.

House bill 68, substitute, appropriates \$1,290 for the restoration of the John Brown cabin, and upkeep of John Brown Memorial park at Osawatimie.

House bill 882 appropriates a revolving fund of \$75,000 for the state school book commission, and appropriates \$15,000 for each year of the biennium for the expenses of the commission.

House bill 734 authorizes school boards to purchase or lease grounds for recreation purposes, and authorizes a tax levy of one-fourth of a mill in addition to other school district taxes.

Senate bill 235 appropriates \$500 for the care and management of the park at Pawnee Rock.

House bill 684 appropriates \$2,000 for storing and displaying relics and records of G. A. R. in Memorial hall.

House bill 390 transfers \$12,497.99 from the Robinson fund at the university to the university rent fund.

Senate bill 701 appropriates \$50,000 for the aid of weak school districts.

House bill 899 appropriates \$4,800 for the official state paper.

House bill 173 appropriates \$50,250 for the Mother Bickerdyke home at Ellsworth, and \$273,000 for the Soldiers' home at Dodge City.

House bill 154, appropriates \$75,000 for repairing the east wing of the state house and lighting dome.

Senate bill 700, appropriates \$150,000 for the assistance of high schools maintaining normal training courses and \$120,000 for the assistance of high schools maintaining agricultural and domestic science courses.

Senate bill 247 appropriates \$144,000 for the Boys' Industrial school at Topeka.

Senate bill 524, appropriates \$4,500 for equipping a dairy barn and \$8,000 for a cell house at the Hutchinson reformatory.

House bill 516, appropriates \$5,400 for the salaries and expenses of the board of managers of the State Soldiers' home.

House bill 440, appropriates \$26,950 for the Memorial building, new furnishings, equipment and repairs.

Senate bill 695, appropriates \$7,000 to establish and maintain an automobile repair school at the Hutchinson reformatory.

Bills remaining to be signed or vetoed by the governor in the last hours of the session will be described in the next issue of this paper.

Vetoed the "Straight Ballot"

The bill introduced by Mack of Harvey county seeking to repeal the Massachusetts ballot law was vetoed last Saturday night by Governor Capper. On its face the measure was a poor sort of compromise leaving intact some parts of the Massachusetts ballot law. But the main feature of the measure was the return to the straight party ticket, allowing the illiterate or lazy elector to "vote 'er straight." To all intents and purposes the Mack measure restored the old party circle.

In his veto message Governor Capper said he regretted his being obliged to disappoint some of his party associates but this regret was tempered with the conviction that the Massachusetts ballot law is right, and that he still believed in it firmly. He believed Kansas people would resent its repeal as they certainly would resent frequent and unnecessary tinkering with ballots. The governor said:

It is my firm and sincere conviction that a form of ballot which compels less discrimination in the choice of candidates instead of more, is not conducive to good citizenship, nor to good government and good politics. Party organization and party strength we must have. But party health is even more vital. Voting a ticket blind at elections can hardly be said to promote party health. It cannot build up a virile Republicanism, nor a stronger and better democracy. We shall best serve our party by best serving our state.

It has been demonstrated that there are fewer opportunities for mistakes in voting the Massachusetts ballot than there were under the old form of straight-party tickets. Notwithstanding the great and increasing length of tickets, the number of spoiled ballots has been reduced to a minimum. It should be remembered that four years ago the governorship turned upon several thousand defective ballots spoiled by reason of straight-ticket complications. Had the Massachusetts ballot been in use at that time the election would never have been in doubt.

The proposed ballot to which house bill 515 would return is complicated. It is a mixture. Half is under the straight-ticket form, and half is left under the present form. It promotes confusion.

Besides its simplicity, the great merit of the Massachusetts ballot is that it encourages intelligent, discriminating voting and stimulates greater interest in public affairs on the part of the voters.

The party circle ballot encourages careless, indifferent, thoughtless voting. One cross on the ballot and the voter's duty to the state is discharged.

The Massachusetts ballot is a step in advance in safe-guarding the secrecy of the ballot. When all that is required is the placing of a cross in the circle, the precinct watcher has a ready check on the voter in the time he takes to mark his ballot in the booth.

I am advised that 19 states have the Massachusetts ballot as now used in Kansas.

It is a curious fact that only one state has the ballot prescribed in house bill 515. That state is Nebraska, and I am informed a bill is pending in the legislature to repeal its ballot law, with good prospect of success.

It has been pointed out to me that members of the opposing party in this legislature have opposed the repeal bill.

I am as loyal as any man to the best interests of my party. I do not think that house bill 515 is in the true interest of the party. It even involves a reflection, it seems to me, on the party's intelligence. However this may be, the legislature and the governor are not sent here to devise legislation to give one party an advantage in elections thru a form of ballot.

The party's claim upon the voters is rightly based on the service it gives them, the character of its principles, the things it stands for, the character and fitness of the men it nominates and the men it elects to public office.

To Protect the Shippers

Governor Capper refused to stand for the repeal of the commission merchant license law, passed by the 1915 legislature, and returned it to the house of representatives with his veto. Sowers of Sedgwick this session introduced a bill to amend the 1915 act by excluding grain merchants from its provisions. Martin of Reno, who has a mania for repealing any law passed since 1900, led a fight that resulted in the Sowers bill being amended to repeal the entire 1915 act.

In his veto measure the governor said:

To the House of Representatives:
I respectfully return herewith house bill No. 633 without my approval. This measure repeals chapter 371 of the session laws of 1915, intended to protect the shipper and the farmer from unscrupulous commission merchants. Many members inform me they voted for this measure under misapprehension and believe the law of 1915 should not be repealed. I am of the opinion that the present law does not work a hardship to any commission merchant who is transacting a legitimate business. I therefore veto the bill to repeal the law of 1915.

Big Interest in the Pigs

Capper Club Members are Welcoming the Winners Now

By John F. Case, Contest Manager

KANSAS pig population is increasing at a rapid rate. From all over the state club members are writing to me and telling about the coming of prize winners. Few hard luck stories have been told; almost every member reports a fine beginning for the contest work. Red, black, white, spotted and belted the frisky little fellows are bringing joy to their owner's hearts. And with the price of hogs skyrocketing around the \$15 mark these pigs look like diamonds in the rough. Pigs are going to be pigs this year.

I haven't "talked hog" in this department very much because every breeder who sold contest sows promised to advise and help you boys. But I do want to say three things: Beware of over feeding your sow before farrowing, see that she gets plenty of exercise, and when the pigs come see that they get started right. Watch for thumps and scours. We can't afford to lose a pig thru negligence. The loss of one pig might not only mean losing a prize but it might lose a county prize as well.

Also entry is not complete when this is written indications are that Polands and Durocs are going to run a dead heat in number of entries. With the Spotted Polands in a separate breed club the red hog breeders are going to be a little ahead. More than 300 boys have entered these breeds of swine. The Spotted Poland club will have ten or more members and this year the Hampshires will have a large and aggressive membership in the breed club work. More than 40 O. I. C. and Chester White sows have been entered. The Berkshire club shows an increased membership and they are a live lot. One Mule-foot sow has been entered. She is owned by Ralph Willison of Montgomery county.

Within the last week I had two visitors you boys will be interested in hearing about. They were Walter Shaw of Wichita and F. C. Gookin of Russell. Mr. Shaw and Mr. Gookin are the enterprising breeders who put up the prize Hampshire and O. I. C. pigs for our breed clubs. Both men have sold a number of sows for entry in the contest. They told me that the prize pigs would be the quality kind. Don't lose sight of these fine prizes for the breed clubs offered by Kansas breeders for the best records made. In every breed where we have competition a fine prize pig has been put up. We owe a lot to these enterprising men.

Mr. Shaw came to Topeka to help organize the Kansas Hampshire Swine Breeders' association. I attended the meeting and told the men folks they were more than a year behind in organizing the Hampshire boosters. They seemed very much interested in hearing about our club. I suspect that as a result of this organization we will have a trophy put up for our Hampshire club. And I shouldn't be surprised if other state and national swine associations would fall in line, too. But this isn't a promise, it's just a hint.

Talking about Hampshires, Wallace Corder of Douglas county wrote me this: "When we come to Topeka to the fair, Mr. Case," said Wallace, "why can't we have breed club meetings, every club in a separate room?" Sure, we will have breed club meetings. And I expect to have some of the best swine breeders in Kansas to talk to you boys. There's going to be something doing in Topeka when the Big Free Fair comes around this year.

Duroc breeders will be glad to hear that Elmer Jones of Clay Center, Kan., is back in the club again. Elmer lined up this year but dropped out as the Jones family expected to move away. His place was promptly filled and when Elmer found that they would stay on the farm after all he was eager to get back in the club again. As it happened a vacancy occurred so Elmer gets the fifth place in Clay county. Dan Vasey is proving one of the live wire county leaders so you had better keep an eye on Clay county. Elmer Jones made good as

secretary-treasurer of the Duroc breed club last year and we will keep him on the job. He's a real booster for the club and for Duroc swine.

Members may send their 25 cents breed club dues to these boys: Polands, Virgil Knox, South Haven; Durocs, Elmer Jones, Clay Center; Hampshires, Ray Jones, Sylvia; Berkshires, Gilbert Arthur, Burlington; Spotted Polands, William Robison, Yates Center. These boys were secretary-treasurer for their breed clubs last year and I think they are entitled to a second term without opposition. We will show the men folks something about retaining officers who make good. Louis Kahle, secretary of the O. I. C. and Chester White club last year is in line again but has changed breeds so a new secretary-treasurer must be elected. Election of breed club officers will be held within a month. A letter will be sent to every member when nominations are made.

County leaders are showing so much pep that I dislike to mention one without telling about many others. Andrew Houck of Newton, Harvey county, has been laid up with blood poison caused by an injury while playing basket ball but he has every club member in line and



Ralph Hoener and His Pets.

they expect to place Harvey county in the lead. That's the spirit that will make winning possible. Andrew also gave his friends some good advice in the letter he sent out, based on the experience gained in club work last year. Nothing wrong with this Harvey county group.

I admire a boy who has the courage to stay in the game no matter what happens. The O. I. C. sow belonging to Ralph Hoener of Preston, Pratt county, died when the pigs were born. Did this 11 year old chap write me a tearful letter saying, "I can't go on with the contest because my sow has died?" Not so you could notice it. "We had to feed the pigs from a bottle for awhile," wrote this plucky chap, "but now they drink out of a trough and are doing fine. I want to stay in the contest and will do the best I can." Bully for Ralph! A boy with that spirit will come thru with colors flying. That's the sort of chaps we have in our club.

Vester Ingram of Coffey county, Harvey Stewart of Lyon county, and Frank White of Woodson county all have a contest on hand at home. Vester's father and Frank's father each have entered sows in a home contest and are keeping records in competition with the boys. Isn't that fine? I'll place a few pennies on the boys, tho, for I don't believe that any man can do so well. At the Stewart farm it's a toss up. Harvey's brother Leslie, two years younger has entered a sow and began keeping records the same day. I wish more family contests could be arranged. It surely would add a lot of interest to the work. Don't you think we should enroll these three contestants as honorary members of our club?

Well, here's the list of all members not printed in the Farmers Mail and Breeze and every county in Kansas has at least one boy lined up:

Name and Address.	Age
BARTON COUNTY:	
Elmer York, Albert.....	16
Paul Morrison, Great Bend.....	10
Merle Houchin, Galatia.....	13
Lane Mayhew, Great Bend.....	15
Arthur Hoopes, Holsington.....	11
ELLIS COUNTY:	
Elmer Moore, Hays.....	14
GRAHAM COUNTY:	
Roy Kuntz, Hill City.....	16
Leigh Savely, Hill City.....	13
Charley Snively, Studley.....	17
GEARY COUNTY:	
Lawrence Langvardt, Dwight.....	15
Earl Younklin, Wilford.....	15
GRANT COUNTY:	
Mitchell Caldwell, New Ulysses.....	17
GREELEY COUNTY:	
Murray Sultz, Hartland.....	15
LANE COUNTY:	
Sherman DeLaney, Dighton.....	14
True Osborn, Shields.....	12
Forest Buffum, Dighton.....	17
MORTON COUNTY:	
Seba Butts, Point Rock.....	17
Lewis Marlow, Wilburton.....	11
Gleeson Carroll, Richfield.....	13
RAWLINS COUNTY:	
Karl Franke, Herndon.....	14
Forrest Minor, Atwood.....	12
Harry Haynes, McDonald.....	10
Andrew Tongish, Herndon.....	15
RUSH COUNTY:	
Ellis Sparks, Bison.....	13
Walter D. Neve, Bison.....	17
Jack Pivonka, Timken.....	14
SCOTT COUNTY:	
Harry Payton, Scott City.....	15
SHERIDAN COUNTY:	
Robert Morgan, Guy.....	11
Edward Miner, Allison.....	11
Lester Shields, Selden.....	11
STANTON COUNTY:	
John Yinger, Johnson.....	17
STEVENS COUNTY:	
Vivian Downing, Rolla.....	11
Clyde Wood, Liberal.....	11
Frank Sperry, Liberal.....	13
THOMAS COUNTY:	
Cecil Agnew, Brewster.....	14
Taylor Smith, Brewster.....	13
Rufus Baker, Levant.....	11
Howard Bray, Gem.....	13
Claude Stoffer, Gem.....	14
TREGO COUNTY:	
Leroy Harvey, Banner.....	13
Albert Dietrich, Ellis.....	17
Walter Cass, Collyer.....	13
WALLACE COUNTY:	
Clarence Hayes, Sharon Springs.....	11
Melville Smith, McAllester.....	13
Earl Rogers, Sharon Springs.....	15
Dona Rule, Weskan.....	15
WICHITA COUNTY:	
Grant Wilkoff, Modoc.....	13
Charles Glenn, Leoti.....	12
WYANDOTTE COUNTY:	
Harold Allan, Kansas City.....	12

Notes of the Granges

BY A. M. BUNGE.

The lecturer of the state Grange would like to have the following questions answered by all Granges:

Have you attended the meetings of your subordinate Grange regularly?

Do you reach the Grange hall before the opening hour?

Do you pay your dues promptly? This saves the secretary extra work.

Do you welcome new members, and strangers, and make them feel at home?

Do you respond willingly when asked to take part in the lecturer's program?

Do you take an interest in the work of the legislature.

Have you this year once thanked your officers for their faithful work in the Grange?

Do you carry an insurance policy in the Patron's Fire and Tornado company?

Can you give the Grange salutation with sincerity?

Do you send the state lecturer reports of the leading lines of your Grange work that might be of use to him?

What per cent of the subordinate Grange membership in your county belong to the Pomona Grange?

What per cent of the membership of your subordinate Grange attend your regular meetings?

Does your subordinate Grange take a vacation during the summer?

Does your Grange always provide time for the lecturer's hour at your regular meetings?

Will your Grange try to send quarterly reports to the state lecturer?

The following items of Grange work

in our county have come to the state lecturer indirectly:

Prairie Queen Grange has been initiating and receiving applications for more new members. The men of that Grange took their teams, and the sisters took big dinner baskets, and hauled and husked the corn for their master who had had much sickness and loss in his family, and was not able to work. The sisters spread one of their bountiful dinners and all had a good time.

This was Thursday, and the following Saturday that Grange served one of the most bountiful and best dinners at the Grange home that the big crowd had ever sat down to.

Members of the order will understand that the Lebo Grange buys so much produce in car load lots that the members always have plenty to eat. This Grange has a Penny March that provides money for flowers for the sick.

From the lecturer of Key West Grange we learn that that Grange had Mr. Sweezy of Osage county address them on the single tax theory on the third of this month. Members who attended the Pomona Grange at Lebo last summer will remember that Mr. Sweezy gave a very interesting talk on that topic at that meeting.

Valley Grange has been having seasonable topics discussed by its own members. The first meeting in February they discussed improved gardening methods. The information brought out was valuable.

The last meeting was devoted to unusual methods of winter egg production. One member reported the receipt of \$110 for eggs from a flock of 206 hens during January and February. One sister was reported to have done better than this.

Ernest McClure writes that a typographical error recently implied that he had posed as the secretary of the state Grange. He wishes to correct the impression by saying that A. E. Wedd of Lenexa is secretary of the state Grange. Mr. McClure is a committee secretary.

Shawnee Farmers Organize

A number of farmers met at the Chamber of Commerce Saturday afternoon and organized a Shawnee County Farm bureau, which will begin business as soon as the details are worked out. Already more than 200 farmers in the county have signed for memberships in the new organization. The next meeting will be Saturday, March 24.

Edward C. Johnson, director of extension of the Kansas State Agricultural college said there are 18 farm bureaus in Kansas, which have been granted state aid, and now have county agents at work, and the farmers are being greatly benefited by the movement. Seven more, including Shawnee county, are well organized and are waiting favorable action on the part of the county commissioners. At least 10 more are being organized.

It is estimated that the bureau will cost about \$3,000 a year. This provides for the salary of a county agent and the running expenses of the bureau. Of this amount \$1,200 will be by the county and a like amount by the agricultural college. The remaining \$600 will be paid by the members, thru the medium of dues, which will be set at a figure to barely cover the necessary amount needed to make the bureau self-sustaining.

In order to get the county and state aid, a membership of 250 bona fide farmers is required. The bylaws adopted are similar to those used by all the county farm bureaus. The officers elected are: Scott Kelsey, R. R. No. 27, Topeka, president; L. H. Neiswender, Topeka, vice president; H. H. Wallace, Topeka, secretary-treasurer. A committee will be appointed to cover every part of the county in the effort to get all the available farmers for members in the new organization. The cost of instituting the bureau will be about \$800 for office expense, an automobile for the agent, and numerous other pieces of equipment which will be necessary. Mr. Johnson promised the aid of the agricultural college in getting a suitable agent when the organization was far enough advanced to warrant hiring one.

It is true that old hens lay fewer eggs than do pullets, but some old hens are better layers than are some pullets. Learn to judge your stock.

Mention the Farmers Mail and Breeze.

An Inning for the Cows

Speakers on the Santa Fe Train

Also Urged More Poultry

By F. B. NICHOLS, Associate Editor

A HIGHER return is being obtained in Kansas farming by developing production with more profitable products. The day of grain farming in this state is passing. "An increase of \$1,000 a year in the net returns from the average Kansas farm can be obtained by the addition of 10 good dairy cows and 400 hens to the livestock," said H. M. Bainier, agricultural agent of the Atchison, Topeka and Santa Fe railroad, on the dairy and poultry special which is now making a trip over the lines of that company in Kansas.

Farmers appreciate pretty generally the importance of giving the cows and hens a better chance. They showed this in the care with which they studied the cows and poultry, and in the intelligent questions which the speakers were asked. They also showed it in the remarkable attendance, which has consisted almost entirely of earnest, careful students. In many towns the crowds have been so large as to delay the train for a considerable time; the attendance at Kingman for example was 772 persons, almost all of whom were mature farmers. More than 1,000 persons went thru the cars at Newton, but several hundred of these were school children. Both the attendance and the interest are far better than on any other institute train ever run in Kansas.

The most encouraging thing about the trip, according to A. S. Neale, dairy specialist with the extension department of the college, is the appreciation that farmers have shown of the importance of getting cows that have been bred for a definite utility value. Much study is being given to the conformation of the cows by the crowds. Especially is Canary Bell, an Ayrshire cow with a higher milk and butterfat record than any other living cow in Kansas, attracting much notice. In her last yearly test this cow produced 17,406 pounds of milk and 668 pounds of butterfat, from which 786 pounds of butter was made. The average test of this milk was 3.84 per cent.

Canary Bell shows good dairy type to a very considerable degree. She is a purebred animal born August 2, 1908, and is in her prime now. An Ayrshire bull calf also is carried on the train. All the dairy animals are from the Kansas State Agricultural College.

Excellent representatives of the other three leading dairy breeds are shown. Of these the Holstein cow, College Daisy, a grade, has a milk record of 13,643 pounds in a year, with a butter fat production of 501 pounds. This gave 585 pounds of butter. The average test was 3.68 per cent.

The Guernsey cow is a purebred animal born in 1910 on the Island of Guernsey. She has a yearly milk record of 8,950 pounds, with a butter fat production of 429 pounds. Five hundred pounds of butter was produced from this. The Jersey cow is the oldest animal on the train; she was born in 1903. She has a milk record of 10,148 pounds, with a butter fat record of 592 pounds and a butter production of 698 pounds. This animal has kept up high production year after year; her average milk record for the last three years has been 9,473 pounds, and the butter fat yield was 543 pounds. This gave an average yearly production of butter for the three years of 634 pounds.

Average cows in Kansas produce about 3,000 pounds of milk and 120 pounds of butterfat a year.

"An increase in dairying in Kansas will add to the profits and provide for a more satisfactory agriculture," said Mr. Neale. "Kansas has many advantages for dairy farming, especially in the production of the basis of the dairy ration, which should be silage and alfalfa. The state is leading in the acreage of alfalfa, and the number of silos in most communities is increasing rapidly. The growth in the production of these feeds together with the increase in the number of cows in Kansas are good indications in the development of the dairy business."

Mr. Neale called special attention to the importance of feeding the animals properly at a time of high prices for feed, such as this winter. A certain amount of feed is required for the proper maintenance of a cow before she can start to produce milk, and this costs from 7 to 8 cents a day at present prices on an average. This expense is required whether milk is produced or not. Enough additional feed must be given to allow the maximum production of milk or one may not get the maintenance cost back.

A good concentrated mixture to feed in addition to the alfalfa and silage consists of corn, 4 parts; bran, 2 parts; and oil meal, 1 part. This usually should be fed at the rate of 1 pound to every 4 pounds of milk. With some cows, that produce especially rich milk, it may be better to feed a little more of the mixture than this, such as 1 pound to every 3 pounds of milk.

returns, however, a man should have efficient cows—they must be capable of making a good use of the feed they receive—and then one must keep them under conditions that will enable them to do their best.

One should be able to determine the exact production of the animals—records must be kept if the owner is to make the most profit. As the speakers showed, this is a very simple thing, and but little time is required. Weigh the milk at every milking, or on certain days in the month, and then get tests on it from time to time. If one wishes an exact account of the production daily records will have to be kept, but a general idea can be obtained if records for certain days are available.

About 100 chickens, ducks and turkeys are in the poultry car, of breeds adapted to Kansas conditions. These are birds borrowed from poultry raisers in Kansas, and they show what has been done

the average Kansas flock is produced from the free range, it also is true that one should understand just how this is being obtained, and how much must be added. Mr. Sherwood especially urged the importance of getting a well balanced ration, and of being sure that the protein supply is high enough.

One should get as much of the protein as possible from the feeds produced on the farm. Sour milk has a higher value for poultry than is appreciated by most farmers, and alfalfa leaves should be used more. When considerable alfalfa is being fed around the buildings the chickens as a rule will get enough of the feed from the shatterings, but when this is not the case the leaves should be provided.

Feed all of the sour skimmed milk and alfalfa leaves that the chickens want. Kafir makes a good grain, and the amount fed should be determined somewhat by the feed the hens are getting from other sources. All of these feeds can be produced on the farm—kafir ought to be grown a great deal more for chicken feed in Kansas. If one has this combination, he can get along fairly well by buying bran as the additional feed. This should be fed as a moist mash. It is best to feed the grain at night, for the chickens will be more active thru the day in hunting feed if they do not get grain in the morning.

A breeder can of course add all sorts of combinations to this ration. If there is a deficient supply of sour milk it is best to buy beef scrap. Some of the animal protein also can be fed in the form of rabbits or other animals obtained by hunting. If some other grain, such as corn, is produced it is well to add some of it to the kafir to supply a variety. Wheat may be fed, but most farmers prefer to supply the grain in some other way after it gets above 90 cents a bushel. Many men have rations very different from the simple, home-grown ration suggested, that give good results. The average farmer, however, wishes a simple ration that he can produce at home, and which will be easy to feed. A specialist can work out his own rations and methods in a more complex way.

Serious losses have occurred in Kansas in the last three seasons from the production of fertile eggs in midsummer. Mr. Sherwood told of the importance of producing infertile eggs, and urged that all of the roosters should be sold in the latter part of May. A special effort will be made this year with the "swat the rooster" movement. When a person sells all of the roosters by the first of June and then gives the eggs reasonable care during the hot midsummer he can expect to get most of them to the consumers in a condition so they can be used. If the roosters are left with the flock large losses are certain; these occurred even in 1915, which was the coldest summer known for many years.

Eggs may be fertile after the roosters are removed for as long as three weeks. The eggs sometimes will be infertile after two weeks, but one cannot be sure they are infertile until 21 days have gone by.

Many questions were asked about the operation of incubators. Most persons who have good incubators have been very successful in their use, but some farmers had encountered troubles. Mr. Sherwood urged the importance of following the directions carefully.

The train has been a wonderful success. An attendance of 7,050 persons was recorded in the first five days, which probably is a record for Kansas. Every farmer in the territory where the train will stop should make a special effort to visit it. Here is the schedule for the rest of the trip:

Saturday, March 17.

8:30 a. m.	Yates Center	10:15 a. m.
11:00 a. m.	Neosho Falls	12:45 p. m.
2:00 p. m.	Garnett	3:45 p. m.
4:05 p. m.	Richmond	5:50 p. m.

Monday, March 19.

8:25 a. m.	Gridley	10:15 a. m.
10:45 a. m.	Burlington	12:30 p. m.
1:20 p. m.	Waverly	2:50 p. m.
3:20 p. m.	Williamsburg	4:50 p. m.

Tuesday, March 20.

8:30 a. m.	Ottawa	10:15 a. m.
10:45 a. m.	Baldwin	12:30 p. m.
12:45 p. m.	Vinland	2:15 p. m.
2:45 p. m.	Lawrence	4:30 p. m.

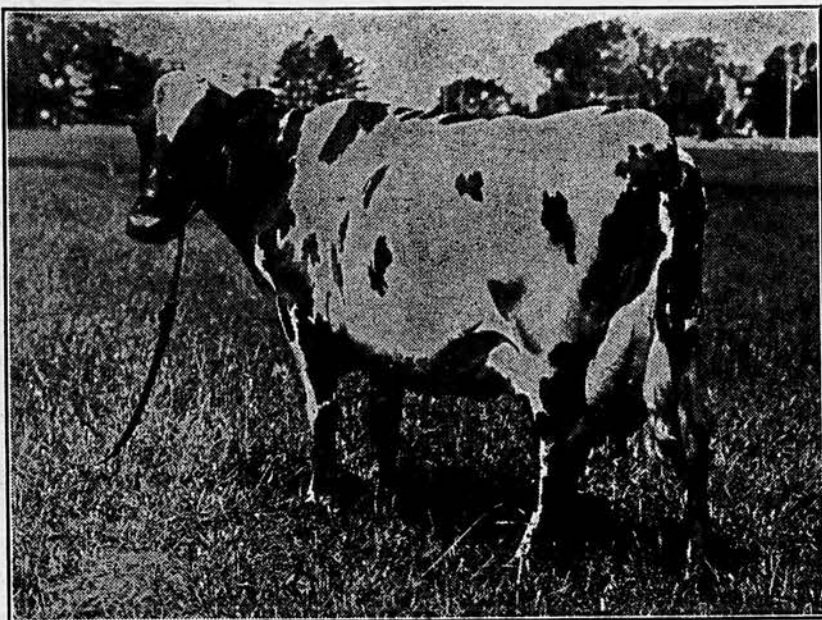
Wednesday, March 21.

8:25 a. m.	Olathe	10:15 a. m.
10:30 a. m.	Gardner	12:00 noon
12:15 p. m.	Wellsville	1:45 p. m.
2:15 p. m.	Pomona	3:45 p. m.
4:40 p. m.	Lebo	6:10 p. m.

Thursday, March 22.

8:30 a. m.	Emporia	10:00 a. m.
10:30 a. m.	Reading	12:00 noon
12:25 p. m.	Osage City	1:55 p. m.

(Continued on Page 31.)



Canary Bell, an Ayrshire Cow Owned by the Kansas State Agricultural College; This Animal Produced 17,406 Pounds of Milk Last Year.

Another important thing is to feed the animals well when they are dry. Many men will give a cow merely a maintenance ration while she is dry, and as a result the unborn calf is not developed properly, and the cow is not in a good condition to produce milk when she becomes fresh. A general appreciation is needed of the fact that a dairy cow is a highly organized animal that produces a valuable product, and that she needs plenty of feed and good care at all times.

More effort in breeding up the herd was urged by the speakers. The use of good sires will result in raising the average milk production of the herd quite rapidly, as has been well shown by experimental work, and by the experience of good farmers generally in Kansas and Wisconsin. While it is true that a good sire is more expensive than a scrub sire, it also is true that the average sire can be used a great deal more. The ideal way of handling the matter, as the speakers pointed out, is by co-operation, by a development of community breeding. If several men interested in dairy farming will unite in the purchase of a good sire the cost may be much less than the total cost of the scrub sires they formerly owned, and in addition the maintenance cost of the one animal will be much less than the maintenance of several animals. Co-operation is needed in developing the dairy business in Kansas.

The prices paid for milk and butter fat have been quite satisfactory in the last few months, even with the high prices of feed, which perhaps supplied some of the enthusiasm with which the train was met. There is every indication that the price of dairy products will continue to be high—the business has a bright future. To get the proper

by breeders in this state. Time is allowed for the crowds to study the birds carefully.

"The poultry industry of the nation is a billion dollar business," said Ross M. Sherwood, head of the poultry department of the Kansas State Agricultural college. "It is a line that pays good profits on most farms, for a high proportion of the feed used by the average flock can be obtained from waste products. But poultry raising in Kansas can be developed a great deal more. This development is needed, for it is obvious that all the poultry products that can possibly be produced will be sold at good prices."

It is very important in getting this increase in the production of poultry products that better chickens should be kept. Mr. Sherwood told of experiments to show this. In one of these tests, for example, the production from scrub chickens was but 98 eggs a year. The use of a purebred cockerel from a good laying variety increased the egg production to 110 eggs the first year from the half blood birds. The use of another good male on these birds, which resulted in producing birds that were three-fourths pure, increased the egg production to 150 eggs.

In getting this start into better chickens one should understand the values of good birds. In the case mentioned the use of two good cockerels brought the egg production up from 98 to 150 eggs a year; it is evident therefore that these birds had a high value. The rule in buying males or eggs should be to pay enough to get the quality you desire.

No matter how good the quality of the variety a breeder has, it will not be possible to get a high egg production unless one gives the proper feeds. While it is true that a large part of the feed of

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Lettuce for all the Seasons

There is Much More to Growing Choice Plants than the Raising of "Spindly" Leaves in Crowded Rows

WELL developed lettuce plants of any kind may be grown by thinning out the seedlings to stand first 4 to 6 inches, and later 8 to 12 inches apart in the row, or by setting the plants that far apart in the row. I have found that transplanted lettuce seedlings usually require from a week to 10 days to overcome the setback caused by the transplanting. If you want lettuce of choice quality quickly, sow seed thinly where the plants are to grow and thin out the seedlings as soon as they are large enough.

Lettuce is not particular as to soil in Kansas, but grows more slowly on heavy clay than on rich, fertile loam. But the heads will "stand" longer on clay soil before going to seed, and clay soil will preserve the moisture better, which is essential to success. While lettuce is a "cool" season crop, it may be had in prime condition from early in May until Thanksgiving provided attention is paid to the planting of the right varieties.

The two factors which really determine success with lettuce are the amount of cultivation that you are willing to give and the selection of sorts for the different seasons. The latter is, perhaps, the more important, says the Ohio Farmer, for it matters little how much attention and cultivation your lettuce receives—if you have the wrong sort for the season, the plants are sure to "bolt" and go to seed.

A "Short Season" Crop.

As a "short season" crop, maturing in from 60 to 90 days from date of sowing lettuce lends itself readily to inter-cropping. Early in the season, it will thrive between rows of beets, radishes, peas and tomatoes. By placing rows of peas 2½ to 3 feet apart, rows of lettuce may be grown between them, and there will still be room for the use of the wheelhoe. But where intensive cultivation of this kind is practiced, it pays best to start with plants taken from other rows, for it would oblige you to be in a rather "cramped" position if you were to attempt to thin out lettuce between rows of peas.

The biggest trouble with transplanted lettuce lies in the fact that, unless a large ball of soil is around the roots of the plants, they will wilt severely during the 48 hours after transplanting. Unless some protection from the sun is given to newly transplanted seedlings, I have known as high as 50 per cent to die. By covering them with newspapers immediately after they are set out, this loss will be reduced. The best time to transplant them I have found to be in the late afternoon, after the sun goes down. The papers should then be put over the plants in the early morning, lumps of soil or stones being put around the edges of the papers to prevent the wind from blowing them about.

Leaders in the Classes.

The selection of the right sorts for the different seasons solves the problem of lettuce from early spring until frost cuts down the late crop. For earliest spring use you may choose either Early Curled Simpson or Black Seeded Simpson—both looseleaf sorts—forming big bunches of leaves; if given a chance, but never heading. Prizehead, the most widely known and grown in this class, is later than either and not so tender. Since its time of maturity and that of very much finer flavored early butterhead sorts is identical, we do not grow it in our garden. Black Seeded Simpson reaches full size about a week later than Early Curled Simpson, but it stands hot weather better and consequently does not head so quickly.

But the loose-leaf sorts are only a poor excuse as compared with the choicer butterhead sorts. The earliest among them—Wayhead—forms fine solid heads within 60 days after seeds are sown, and when you prepare these heads for the table you'll know why it is worth while to do a little more "fussing" over the lettuce bed and raise head lettuce. After the few outside leaves are removed from head lettuce you need not worry about sand in your salad.

A fine comparison to Wayhead is Naumburger or Tenderheart. The last name is the more appropriate—no finer head lettuce was ever raised than well-

grown plants of Tenderheart. Big Boston, the kind so extensively grown for market, is a butterhead sort which closely follows these two in maturity. The three are as dependable as any sorts in their class, which is very large. But for all practical purposes they will give satisfaction early in the season anywhere, while for summer use you should plant either California cream butter or All seasons. Both are butterheads, mature about a week apart and the heads remain in good condition until early in August from seeds sown early in the spring when the early loose-leaf or butterhead sorts were sown.

The crispheads are, above all, the stand-bys for midsummer. When even California cream butter and All seasons "go on a strike" and begin to burst, then it is that Iceberg, Hanson and New York or Wonderful among the crispheads prolong the lettuce season for another week or 10 days. Crispheads differ from butterhead sorts in having strong midribs run thru the center of every leaf, not unlike in a cabbage head. For this reason, they are often called cabbage lettuce.

Heat Resistance.

These strong midribs, curving toward the center of the heads, are responsible for the heat resistance of this class. I have seen them rot inside in wet seasons, before they would burst and send forth the seed stalks. Crispheads do not have the rich "buttery" flavor of the butterheads, but they surpass in brittleness. The three kinds mentioned mature in the order in which they are named.

All these sorts, then would give you lettuce from early in June, when you gather Early Curled Simpson, until the middle of August when the Crispheads are at their best. What about after the middle of August? At that time sow again short rows of Wayhead and Tenderheart. With the approach of cool nights these early spring sorts again find a growing season similar to that in the spring and form handsome solid heads by mid-September.

To bridge over the gap from mid-August to the time these two early butterhead sorts will be ready, make repeated sowings of Iceberg or All seasons about the middle of June. To extend the season of head lettuce clear up to Thanksgiving sow seeds of the two earliest butterheads again at the end of July and sow several rows of Big Boston at the same time. This is the latest of the trio, but also makes the firmest head. While lettuce will stand considerable cold weather and even light frosts, if gradually hardened in a natural way, I have found it pays to cover the rows with straw whenever the weatherman predicts frost early in the season.

Beekeeping is a Science

Beekeeping is now recognized as a science and is being given an ever increasing amount of attention. New fields of activity have been opened up so rapidly that there are not enough trained men to fill the positions which have become available, according to Dr. J. H. Merrill, apiculturist in the Kansas State Agricultural college.

"While nearly everyone who keeps bees is sure to gather a surplus of honey during the years of good honey flow," commented Doctor Merrill, "it is only the specialist who can get a good yield year after year during both lean and plentiful harvests. There probably always will be farmer-beekeepers but the country will have to depend upon the scientific beekeeper for the bulk of its honey crop. With his more complete knowledge of bee behavior and of the proper conditions necessary to produce a surplus crop, he is better fitted to produce a crop year in and year out."

Better Buy One

I shall be grateful if someone who has converted his stationary engine into a tractor will write me.

Charles Melvin.

R. 1, Carlyle, Kan.

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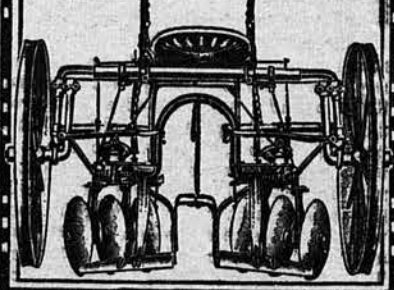
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Chilly Mornings for Work

Oats Sowing Delayed in Coffey County Last Week

BY H. C. HATCH

USUALLY I write this column Saturday afternoon but of late have been taking the morning for it. The mornings are mighty cool now in which to ride a disk or a drill so I leave that work for afternoon and write in the forenoon. I know of nothing colder on which to ride than a disk; one can scarcely walk behind because his weight is needed on the seat to balance the tongue. The newer types of tongue truck disks do not have the fault of being heavy on the necks of the horses.

Lots of oats have been sown in this neighborhood this week but there is still much to do. Some fear that it is too cold and too early but I do not fear that after March 1; I can recall only one year in which oats were thinned by cold weather since 1890 and that was in 1898. We had the oats sown early that year and growing weather followed which brought them up in good shape. Then, March 16, came a freeze which locked the ground up solidly for three days. The oats were all sown broadcast at that time and those which were growing on top of the corn rows thinned out to some extent but those growing between were protected enough so none killed there. Had the oats at that time been drilled there would have been no loss.

We have sown no oats yet but plan on starting the drill at noon today. The ground is all well disked and needs only a good dragging, and the drill can start. On most of the field there is plenty of moisture and in some parts there is enough so that the ground crusts over pretty thick these cold nights. On nearly all the farms here disking has been going on morning and afternoon but if a normal amount of moisture were present the ground would freeze so hard no work could be done at any time of the day. I judge that the acreage of oats in this county will be double that of one year ago. For a number of years oats have been a surer crop here than corn. March 5—Snow and cold weather. We will sow no oats for a day or so.

From Lowemont, Kan., comes an inquiry regarding the sowing of oats and rape for hog pasture. This inquirer says that he never expected to be short on hog pasture, but that he is going to be this year, and must sow something for six brood sows and their pigs. We have used this mixture for a good many years and always with good results. We plow the ground early in the spring and jump on it with disk and harrow before it has time to dry. Rape should have a fine seedbed for good results. We tried fall plowing a few times but it never seemed to grow rape so well as the spring plowing. Usually one disking and two harrowings will fit the land for rape and oats.

We sow first 2½ bushels of oats to the acre with a press drill. Then we follow with the rape, sowing it by hand at the rate of 4 pounds of seed to the acre. The ground should be accurately stepped and the seed measured so that one will know how much should be sown at a round. If this is not done the seed is nearly always sown too thickly. Rape should not be sown thickly or it will grow spindling. Like cabbage, a rape plant should have at least 6 inches of space in which to grow and a foot is even better. After the rape is sown we give it one swipe with the harrow to cover the seed.

The hogs will eat the oats first which gives the rape a chance to get a start. Later they will take to the rape and if the season is not too wet so that it is trampled down the rape will provide pasture right up to freezing weather the next winter. We have had our hogs get plenty of pasture from the rape as late as Christmas but that was an exceptional year; that year the rape lived over winter and many of the plants made seed the next May. Rape will stand a lot of dry weather but too much wet will get it if the hogs are allowed to run on it. Rape is a hardy plant and may be sown any time after March 25. In fact, I think it could be sown in spring as early as oats without danger of killing.

The lots around the yards which usually are sown for hog pasture generally are rich and for this reason produce good rape. There is not much use to sow rape on thin soil as it will make little growth. Sown on rich soil it makes an immense growth. In our hog pasture last summer, where it was very rich the rape stood waist high in July and made feed for the hogs until November. If the land is fairly rich 2 acres sown to oats and rape will provide pasture for six brood sows with good big litters from May 10 to the next November. Of course this mixture is not quite equal to alfalfa or clover but it comes near it; the rape contains much protein and is one of the best balancers for a grain ration. As I said, this mixture may be sown in March and it may also be sown as late as May 1.

L. D. C. of Altoona, Kan., writes: "Some time I should like to have you discuss your method of handling beef cattle." We have never finished any beef cattle since coming to Kansas. We try every year to raise and feed out 50 hogs and that takes about all the corn we can raise. In fact, in the last two years we have not been so fortunate as to raise half enough. We had a lot carried over from 1914 and that enabled us to finish our hog crop last year, but this year we sold the hogs in the fall to get away from the feed bill. So we do not have the grain to fatten cattle and do not care to buy.

Usually we have on hand from 25 to 40 head of stock cattle. There are, usually, about 15 cows and their increase. Sometimes we sell the steers when 2 years old and sometimes keep them until they are coming 3 years; last fall we sold some steer calves because we got all we thought they were worth. In selling stock cattle we are guided by the price and sell when we have a good profit coming regardless of age. If we can't get a profit when they are young we keep them until they are older. Our cattle are all grade Shorthorns; none of the cows is eligible to registry, but for 15 years we have had nothing but Shorthorn males, and the cattle show their Shorthorn blood pretty well.

We try to make the cattle eat much of what would otherwise be waste were no cattle kept. This ration includes corn and kafir fodder, prairie hay not good enough for horses or to sell, and the straw. They get some grain during the winter and they have the product of 18 acres of alfalfa. There may be a question as to the wisdom of full-feeding cattle here, but I think there can be no question of the wisdom of raising all the stock cattle the farm pastures can carry. Pasture can be hired too, and it will pay to do it if more rough feed is raised than can be eaten by the cattle carried on home pasture. I do not think there has been more than one year in the last 21 in which cattle raised on the foregoing plan did not make a profit for their growers.

The question of buying grain to fatten cattle brings up the plan we have followed for 20 years as to feeding grain. Our purpose is to raise enough stock to consume what grain would ordinarily be raised on the farm. When we have a surplus of grain we carry it over. If we have more stock than grain we sell the surplus stock and do not buy grain for them. Since living on this farm we have bought corn only three times. In the spring of 1905 we bought 40 bushels, in 1901 we bought 15 bushels and in 1913 we bought 100 bushels. This plan of handling things may not always be the best, but it is best fully half the time, and it is always safe. I should not at this date think of changing it.

It has been just 21 years yesterday since we moved on this farm, coming here from Northern Nebraska. Despite the last few poor crop years we still like Kansas and should not care to again change our location. I find that no one locality has all the advantages. If we do not have the best soil here for grain raising we have fine hay and pasture which is worth more than we think who have plenty.



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by pushing down the handle of the electric blasting machine," writes Mrs. J. R. Cronister, Martha, Pa. "I certainly enjoyed seeing those big stumps split up and thrown out. You surely are right in saying that

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George Rupp says: "I came here from Hudson, Iowa. I can stand on my windmill and count no less than a dozen grain elevators. I can stand in my yard in the fall and count as many threshing machines. My horses and cattle have run outside all winter."

(In 1915 Alberta produced 107,741,000 bu. of oats or an average of 56.35 bu. per acre. The total value of all crops in 1915 was \$114,186,000.00.)

Mr. A. Taylor of the Rhein District in Saskatchewan, says: "I had 30 acres in wheat that averaged 60 bu. an acre, 315 acres in oats that averaged 88 bu. an acre, 20 acres in barley that averaged 50 bu. an acre."

(In 1915 Saskatchewan produced 195,042,000 bu. of Spring Wheat or 28.54 bu. average per acre—total value of all crops for the year was \$382,845,000.00.)

W. Loat says of the Kenville District in Manitoba: "I had 283 acres of wheat that averaged 43.5 bu. an acre, 17 acres of oats that averaged 66 bu. 25 acres of barley that averaged 50.5 bu. an acre."

(In 1915 Manitoba produced 96,062,000 bu. of Spring wheat or an average of 28.83 bu. an acre. Total value of all crops for 1915 was \$201,100,000.00.)

Charles Draper says: "I came from Nebraska with no capital—and have not had a poor crop for seven years. Any man willing to work can succeed here."

Mr. C. D. Schnauffer says: "I came from Illinois in 1907. Today I am worth \$30,000—I cleared \$120 from the litters from one sow last year."

(In 1915 British Columbia produced 3,033,000 bu. of potatoes or an average of 247.28 bu. per acre; the total value of all crops was \$11,889,100.00.)



Canadian Northern Ry.

R. P. CLARK, C. A.
64 West Adams St., Chicago, Ill.

\$11,200,000.00 Assets

McCook, Nebraska, September 30, 1916.
W. C. Wilson, President.

Bankers Life Insurance Co., Lincoln, Neb.
Dear Sir: Please accept my thanks for your prompt and generous settlement of my policy No. 9001, bought by me just fifteen years ago today. Your agent, L. D. Bennett, handed me your draft for \$628.06, which nets me a profit of \$155.56 and fifteen years of protection for nothing. My one regret is that I did not have the foresight to purchase a larger policy. However, to have that I realize the value of your Company. I have taken additional insurance this year and in the very near future intend to apply for more. You may rest assured that I do and will go out of my way for the Bankers Life of Nebraska. Yours truly, BERT BEATTY.

488

If you are thinking of taking a policy or an agency, write Home Office Lincoln, Neb., for particulars, Dept. A.

Fifteen Payment Life Policy Matured in the Old Line Bankers Life Insurance Company of Lincoln, Nebraska

Name of Insured..... Bert Beatty
Residence..... McCook, Nebraska
Amount of Policy..... \$1,000.00
Total Premiums Paid Company \$472.50

SETTLEMENT
Total cash paid Mr. Beatty..... \$628.06
And 15 Years Insurance for Nothing.

It's easy to sell Bankers Life Policies. They mature to the satisfaction of every policyholder. Why not try it?

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Helping Pigs to Get a Start

How One Hog Raiser Saves Seven Pigs to the Litter

BY PETER J. BECKER

A FRIEND asked me how many brood sows I would have to farrow in the spring and how many pigs I expected to save. I told him I had 20 sows, 12 of them old and tried and the rest young, and that I expected to raise at least 140 pigs—good, even, strong litters. "Pete, you can't do it," he said. "I have raised hogs all my life and am keeping 40 brood sows now. If I can save from three to four pigs to the sow I am doing well. I never have saved more than four pigs on an average."

Something certainly is wrong with his pig raising. Yet he is all of 56 years old, has farmed ever since he was old enough to drive a team, and is counted as a No. 1 farmer in the neighborhood. I could not make money raising such a small average of pigs, not very much money at least. In his case most of the profit is eliminated right at the start.

One cause of trouble is due to unsatisfactory living quarters, the pigs becoming chilled and dying. Then there is the ailment called scours, and another cause of loss is the sow that eats her offspring. Not being on hand when the sow farrows, especially in wet, cold weather, is another common cause of loss. All these are important factors, but I should place several others before these. First, I should ask whether your herd boar had the right kind of feed, exercise, and warm, well bedded sleeping quarters. Is he a well made, strong individual? When breeding time came did you turn him in with the sows or keep him away and breed only one or two a day as you should have done? Then the sows—did you supply them with a balanced feed and did they get enough exercise? Did they have good, dry sleeping quarters?

I am a friend of the hogs, because I have found that it pays. Very often a sow or pig is right in your way and is very likely to stay there. I don't club or kick them out of the way, but would rather walk around them. The sows need a lot of exercise, but they shouldn't get it by being chased about with a club or whip. Coax them around from one lot to another or give them a feed at the other end of the summer pasture. I could make my herd follow me around for two hours. That is the kind of exercise they need.

Many so-called hogmen think that if a sow has plenty of water and all the corn she can eat, she is well cared for. Most sows are fed too much fattening food and not enough bone and muscle producer. I feed good 60 per cent tankage, some shorts, and about 35 to 40 per cent corn. Corn cannot be beaten for fattening, but if you are feeding corn alone to the sows on which you are depending for your pig crop, then look out for fine-boned pigs of low vitality.

I like to have as many pigs farrowed in February as possible, with some more in March but very few in April. This is quite early for them and one must be well prepared with good farrowing pens. I have a hog house 24 by 18 feet in size, with a 4-foot alley between, and pens on the sides 6 by 7 feet. The house was built north and south and has a row of windows on the east, south, and west. The sun strikes every pen in the house. I have a small stove at each end of the alley and these are used when needed in cold weather. I am very well satisfied with this house.

I try to be on hand when a sow farrows. The pigs are taken and dried, then put into a box and covered with a gunny sack. When all are born the pigs are put with the sow for their first meal, then put back in the box. This is repeated as long as the sow seems nervous. When she has quieted down the pigs are

left with her. I try to have all the sows farrow as nearly the same time as possible. One man is in the hog house day and night until the pigs are at least a week old. In this way nearly every pig farrowed is saved. I never let a pig become chilled if I can help it.

About 5 hours after farrowing I give the sow some water with the chill taken off. In 24 hours I begin to feed her a very thin slop, and in 10 or 12 days she is nearly back on full feed, if she has a good, big litter. In three weeks I am feeding her about all she will eat of a balanced ration. Scours have appeared in my pigs once or twice, but by changing the feed a little, or cutting it down, I was always able to stop it, provided it was due to overfeeding. Sometimes scouring is caused by a damp bed. The little fellows can't stand this, especially in cold weather. I change their bedding every day. It means a lot of work but I can't save the pigs if I don't do all this work.

Thumps is a bad thing and harder to overcome at this time of year than at any other season as it is too cold to let the sows out for a stroll. I have a shed built onto the hog house. Leaving the sows in their pens, all the pigs are turned out into this shed, which connects with the alley. The pigs are chased about this shed and alley at an easy gait, for exercise, nearly every day. This is how we avoid the thumps. When the pigs are 4 weeks old the sows are turned out to roam all over the building and when a nice, warm day comes along they are turned into the lot outside. The pigs are all litter-marked, so if any of them get into the wrong pens when turned back into the house they can be returned to their own quarters. When about 6 or 7 weeks old the pigs are coming right along and they help themselves to a large extent.

All the hogs on the place have access to drinking water at all times. I also use hog oilers. I am a firm believer in vaccination against cholera and keep my herd immune by the double treatment. We have clover and rape for pasture, but think that alfalfa is still better. I raise two litters a year, which keeps the herd sows busy—also myself.

No Profit in Lousy Hogs

You might as well try to carry water with a sieve as try to make money with hogs infested with lice. These blood-sucking tormentors will worry hogs until they cannot thrive or put on weight. This not only wastes a large part of your high priced feed, but even worse, it runs down and devitalizes the hog's power to resist the germs of cholera and other infections which periodically rob stock raisers of so much of the joy and profit that should come from success in the hog raising business.

The signs of hog lice are unmistakable. Watch your hogs and when you see them rubbing on posts, fence rails, trees, corners of buildings, etc., you may be pretty certain that lice have come and that it is time to get busy. The remedy is easy. Medicated or crude oil will rid your hogs of these pests. Many hog raisers depend on hog oilers for applying the oil. These oilers are so constructed that they automatically permit the hog to doctor itself by the simple, natural method of rubbing against the oiler and thus applying the oil directly to the itchy and lousy parts. This oil is death to lice, but cannot harm the hog. A few gallons of oil and a good hog oiler will prove a good investment for any one raising a dozen or more hogs. One oiler will care for 20 to 30 hogs.



Answers to Farm Questions

CHEYENNE 17 1/10	RAWLINS 19 1/10	DECATUR 22 2/10	NORTHON 22 2/10	PHILLIPS 22 2/10	SMITH 23 2/10	JEWELL 26 2/10	REPUBLIC 28 2/10	WASHINGTON 31 2/10	MARSHALL 35 2/10	NEMAHA 32 2/10	DROWN 33 2/10
SHERMAN 16 2/10	THOMAS 17 1/10	SHERIDAN 20 2/10	GRAHAM 20 2/10	ROOKS 21 2/10	OSBORNE 24 2/10	MITCHELL 25 2/10	CLOUD 24 2/10	CLAY 25 2/10	POTTAWATOMIE 34 2/10	JACKSON 34 2/10	ADAMS 37 2/10
WALLACE 16 2/10	LOGAN 17 2/10	GOVE 19 2/10	TREGO 26 2/10	ELLIS 23 2/10	RUSSELL 24 2/10	LINCOLN 25 2/10	OTTAWA 25 2/10	DEKALB 26 2/10	OSAGE 35 2/10	DOUGLASS 36 2/10	JOHNSON 38 2/10
GREENEY 15 2/10	WICHITA 15 2/10	SCOTT 17 2/10	LANE 18 2/10	NESS 21 2/10	RUSH 21 2/10	BARTON 25 2/10	RICE 26 2/10	WYOMING 31 2/10	MARION 31 2/10	CHASSA 31 2/10	COFFEY 37 2/10
HAMILTON 15 2/10	NEARNEY 15 2/10	FINNEY 19 2/10	HODGEMAN 19 2/10	PAWNEE 22 2/10	STAFFORD 23 2/10	RENO 28 2/10	HARVEY 30 2/10	SEDGWICK 30 2/10	BUTLER 33 2/10	GREENWOOD 34 2/10	WOODSON 35 2/10
STANTON 16 2/10	GRANT 16 2/10	HASKELL 18 2/10	GRAY 19 2/10	FORD 20 2/10	KIOWA 22 2/10	KINGMAN 27 2/10	SUMNER 30 2/10	COWLEY 32 2/10	CHAUTAUKUS 34 2/10	CHEROKEE 37 2/10	ADAMSON 41 2/10
MORTON 17 2/10	STEVENS 20 2/10	SEWARD 19 2/10	MEADE 22 2/10	CLARK 24 2/10	COMANCHE 22 2/10	DARBER 24 2/10	HARPER 28 2/10				

LETTERS of inquiry on questions of general interest in Kansas farming are printed; others are answered by mail. Names and addresses of the writers cannot be supplied. Study the map when reading the answers and consider the rainfall, which is given in inches for the counties.

Would it be best to put potatoes on land that had been in alfalfa 16 years?
Summer Co. C. A. M.

Potatoes probably would not do well on the alfalfa sod, as there would be too much nitrogen in the soil. You had better plant a crop of corn or kafir.
F. B. N.

Life of Fence Posts.

What is the average life of fence posts?
Cherokee Co. H. B. F.

The average life of fence posts is: Osage orange, 30 years; locust, 23 years; Red cedar, 20 years; catalpa, 15 years; Burr oak, 15 years; chestnut, 14 years; walnut, 11 years; hemlock, 9 years; elm, 8 years; Red oak, 7 years; willow, 6 years. If the bark is left on a post it will rot much faster than if it is removed. Posts treated with hot asphalt resist rot much longer than untreated posts. It is estimated that the life of a cement post is 48 years, and that of a steel post, 30 years.

Soils for Sweet Potatoes.

What sort of soil is best for sweet potatoes?
Riley Co. A. I. O.

Sweet potatoes grow best on a rich sandy loam. They have been grown successfully upon the very sandiest of soils; and, under good cultivation and ideal weather conditions, fair crops have been grown on stiff heavy lands, but a sandy loam is, undoubtedly, the best soil for sweet potato growing. Good crops have been grown on moderately poor soil, but the sweet potato is not different from many of our other food and commercial crops in that it does best on good, rich, deep, well-drained soil.

Stallion Fees.

What is a proper fee to charge for the service of a good stallion?
Rice Co. D. H. J.

The service fee for the excellent stallion owned by the Lyon County Percheron Breeders' association is \$20. That is the best investment the mare owners of that section ever made. We need to hear more about fees of that kind in Kansas, if they are for stallions that have quality. If a stallion has the ability to sire animals with a real utility value the owner should charge a fee high enough to allow him a proper return. Many stallion owners have not obtained a fair profit. If the stallion cannot do this the mare owners should not take their animals to him for breeding, no matter how low the fee may be.
F. B. N.

Records of Ayrshire Cows.

What are the highest records that have been made by Ayrshire cattle?
Cloud Co. D. C.

The records of cows in this breed are:

Milk.

1 year, Garclaugh May Mischief, 27944, 25,329 pounds.
30 days, Garclaugh May Mischief, 27944, 2631.8 pounds.
7 days, Garclaugh May Mischief, 27944, 622.2 pounds.

Butter Fat.

1 year, Lilly of Willomoor, 22269, 955.56 pounds.
30 days, Langdyke Sally 2d, 31691, 100.55 pounds.
7 days, Langdyke Sally 2d, 31691, 24.77 pounds.

Only yearly tests were made and the 30-day and 7-day records were taken from the yearly records.

Planting the Fruit Trees.

What system of planting should one use with fruit trees? How far apart should the trees be placed?
Doniphan Co. R. K.

Several systems of planting are followed but all may be placed under three general heads—the square, triangle and hexagon. The square system calls for a tree on every corner of a square, the triangular has one at every corner of a triangle, and the hexagonal one at every angle of the hexagon. The last two methods permit of a slightly greater number of trees to the acre but the cultural advantage of the square system and the ease with which the ground may be laid out make it the most popular. It also is considered to be the most productive.

The distance of trees will vary with the variety and kinds of fruit planted.

The upright growing trees will require less room for their limited growing development than the spreading varieties. The tendency to plant too closely is more common than the fortunate mistake of giving the trees their maximum growing space. The following distances usually are accepted as best: apples, 30 to 40 feet; pears, 20 to 25 feet; peaches, 18 to 25 feet; plums, 20 feet; cherries, 20 feet.

In placing the tree, it should be set slightly deeper than it was in the nursery. The filling of the hole should be accompanied by firmly tamping the earth with the heels, packing all but the upper 2 inches of soil, which may be left as a mulch. When well set the tree should be absolutely immovable. An improper firming of the soil may neutralize all previous care.
K. S. A. C. FRED MERRILL.

A Need for Fertilizers.

Can I use a complete commercial fertilizer profitably on ordinary grain crops in this county?
Miami Co. E. H.

The most important thing in managing a soil is to establish a good rotation, which has a large place for the legumes. Feed all the crops on the place, and return the manure carefully to the soil. If you will do this you are then in a position to make a use of commercial fertilizers, if you can apply them at a profit. To determine this point it is necessary to conduct a field test. In other words, if you believe you can use fertilizers at a profit, get enough fertilizer to test the idea out on a half acre, and then see whether it will pay. Under most conditions in Kansas, the only way to tell definitely about commercial fertilizers is to run a field test.
F. B. N.

For Small Grain Separators.

Do you believe it would pay for me to buy a small grain separator? I have a tractor to run it.
Ford Co. C. M.

I think that in a great many cases it will pay the owner of a tractor to buy a small separator and do his own threshing, with perhaps the co-operation of one or two neighbors. That hundreds of other men are thinking this was well indicated by the crowds at the Wichita tractor show recently. If a man owns his own separator he can thresh when he gets ready, at the best time. More than that, if he doesn't run the outfit in a way that will save the largest amount of grain it is his own fault. In other words, if a farmer has his own separator, he can do this work when he gets ready in just the way he wishes it done. In many cases this will increase the profits from the grain.
F. B. N.

Diseases of Sudan Grass.

What diseases trouble Sudan grass?
Logan Co. A. N.

About the only troublesome disease of Sudan grass is the red-spot or Sorghum blight, a bacterial disease resembling rust in its effect on the plants. It is caused by a bacteria, and is destructive only where the humidity and temperature are both high. This disease prevents the grass from becoming valuable in Florida, and all along the Gulf coast. When abundant the grass goes down like wheat or oats that have been attacked with the Black rust.

The ordinary grain smut of the sorghums also affects the seed, but this can be prevented by the treatment of the seed with formalin or hot water, and even when present it does not greatly decrease the value of the hay crop.

The Chinch bug is quite fond of Sudan grass and does considerable injury when abundant; the same thing can be said of grasshoppers. In the Southern states the Sorghum midge very nearly prevents the production of Sudan grass seed, but it is not present in Kansas.
H. N. VINALL.

To Castrate the Pigs.

At what age should the pigs be castrated?
Ness Co. C. N.

Pigs should be castrated while they are young; the best time is between 6 and 8 weeks of age, before weaning. At this age there is less shock to the pig and possibly less check in growth.

If it is still sucking its dam when castration takes place the chances are that it will be more thrifty and in better condition than when the operation is performed immediately after weaning. A pig 6, 7 or 8 weeks old is small enough to be handled conveniently and the testicles are large enough to render the operation quite simple.

Select a clear, dry day to perform the operation; it should never be done on a rainy day. When it is possible to do so, avoid castrating during "fly time" or in extremely cold weather.

All the pigs that are to be castrated should be put into a pen just large enough to hold them, to facilitate catching and lessen the excitement among the animals. Another pen should be prepared to receive the castrated ones. If they are to be kept in a house pen it should be clean, dry and free from dust, and a small quantity of clean, dry straw should be scattered in it. If a pasture lot is to be used, select one free from mudholes and wallows.

A good castrating knife or a pen-knife that will keep a sharp edge is necessary to do a clean job. A castrating knife of this kind can be purchased for from \$1.25 to \$2. A roll of absorbent cotton and a vessel containing a 3 per cent solution of compound cresol (U. S. P.), carbolic acid, or other reliable disinfectant should be at hand.

Plant Food for the Garden.

How can I improve the soil of the garden?
Miami Co. F. N. D.

No question about gardens in Kansas is harder to discuss than fertilizers. It is impossible to give definite rules for fertilization since so much depends on the soil, its location, the crops grown and the care received. Vegetable gardening is, however, always very intensive, and crops must be fed if they are to grow. Many large gardeners consider the soil nothing more than a medium to hold the plant food applied to that soil. This is especially true where the soil is of a sandy character, for in a few years it would soon be depleted of its available plant food.

The soil for vegetables must be rich and well supplied with humus. To bring this about, there is nothing better than copious supplies of rich, well-rotted barnyard manure. In general farming much depends on the maturity and yield, but a vegetable farmer also has earliness, quality, condition, yield and maturity to consider. If the soil is not rich in available plant food and humus, friable, early to warm up in spring, nothing more than mediocre results can be expected.

There are many soils in the state adapted to vegetables, which would produce creditable yields of hay, but which would take several years to build up for vegetable crops. This is because such soils lack humus, without which no gardener can hope to secure reliable yields.

Humus is organic matter in the last stages of decay and is the result of the decomposition of vegetative growth already in the soil, the application of animal manures or the turning under of green manure crops. The advantages of humus are, briefly, as follows: 1, supplies soil with plant food; 2, improves the mechanical condition of the soil; 3, it absorbs moisture since it acts like a sponge, and helps to supply the plant with water during a drouth in summer; 4, being black, it absorbs heat, which warms the soil earlier in the spring; 5, contains or-
(Continued on Page 18.)

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This staple cereal in its air-tight, wax-protected package will keep indefinitely, yet is ready to eat at a moment's notice.

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40 to 60 lbs. Per Horsepower

The 4 H. P. weighs only 190 lbs. Mounted on iron truck, as shown below, it may be pulled around anywhere. Besides doing all other work, it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part and leaving the horses nothing to do but pull the machine out of gear. 8 H. P. 2-cyl. weighs only 320 pounds.



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Easy to start in all kinds of weather. Operates successfully on ordinary kerosene. 1 1/2 to 15 H. P. Other Sizes up to 160 H. P.

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20 Mule Team Borax will take a mighty lot of hard work off your shoulders on wash day. This Borax softens the water—it helps the soap neutralize and drive out the dirt—it saves scrubbing and it makes your clothes snowy white.

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MULE TEAM BORAX

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Soap in chip form. Saves you soap cutting. Blended in the right proportions, one part Borax to three parts of pure soap. Not a substitute for Borax but a time, labor and money saver that will pay you to use every wash day. See the picture of the famous 20 Mules on each of the above packages.



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The Largest and Most Magnificent Collection ever Offered. One year size, they will bloom the same year planted and every year after, surrounding your home with a fragrant sea of ever-changing fragrant bloom. This beautiful collection is

The Farmers Mail and Breeze's Gift to You

The shrubs we send you are about a foot high, the best size to plant. They grow rapidly, increasing in beauty from year to year, attaining in a short time the following size:

Golden Bell. Very tall and beautiful. 12 to 18 ft.
Barberry. Neat, dense and spherical. 4 to 5 ft.
Deutzia. Profuse, showy double bloomers. 6 to 8 ft.

Sweet Shrub. Quick growers, spicily fragrant. 4 to 5 ft.
Snowball. Stately and imposing. 6 to 8 ft.
Rose of Sharon. Heavy variegated bloom. 10 to 12 ft.

Nine Months of Fragrant Flowers in Every Year

Your home will be surrounded by a bower of fragrant flowers all the year, except for a few months in the winter. Very early in the year, even before the snow is gone, the Golden Bells are covered with rich golden flowers. Shortly afterward the Barberry blazes out in a mass of canary, quickly followed by the delicate yet massive rose blooms of the Deutzia. Midsummer brings the rich chocolate red flowers of the Sweet Shrubs, which bloom at intervals until snow. Then the Snowballs, with their stately white flowers and finally the luxuriant bloom of the Rose of Sharon is added to the scene. Even when winter's icy touch banishes the flowers, the brilliant red and yellow, brown and gold of the foliage, and the red berries of the Barberry (which remain through the winter) remind us that in but a few short months the flowers will return in greater beauty.

Our "12 Shrub" Offer

We will send this collection of Twelve Hardy Shrubs, Postpaid, as a Premium with a One-Year Subscription to FARMERS MAIL AND BREEZE at \$1.00 and 30 cents additional, or \$1.30 in all. This covers all charges, for both the magazine and the Shrubs.

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Gentlemen:—I enclose \$1.30 for FARMERS MAIL AND BREEZE One Year and the 12 SHRUBS as listed in this ad, all charges paid.

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This big collection consists of these hardy one-year shrubs.

2 Golden Bell (Forsythia)
2 Thunberg's Barberry
2 Deutzias
2 Sweet Shrub (Cal'thus)
2 Snowball Hydrangeas
2 Rose of Sharon

They are securely packed, and sent to you Postpaid, with full instructions for planting.

Eat Fish in Lent

BY MRS. DORA L. THOMPSON
Jefferson County

A most rigorous observance of Lent might well be in order for everyone this year. Whether our religious convictions demand abstinence from meats, makes little difference. Farmers especially eat too much pork. Now that most meat is wholly or partly cured, we believe it would be a good plan to substitute fish occasionally. It probably is not so nourishing as meat, but fresh fish is more easily digested and makes an agreeable change. The changes possible are many when one considers the long lists of fresh and salt water fish, of red and white fleshed fish and of the prepared dry fish, salt fish, and fresh fish. We are told that the white fish is more easily digested than the others. White fish, cod, flounder, perch, pickerel and crappies belong to this class. For the red fleshed class, one readily thinks of salmon, shad and lake trout.

In Iowa there are several farmers' organizations that send to the coast for barrels of fresh fish. Even in warm weather, these fish, packed in ice, are bought in quantities and distributed among many. The cost is said to be no more than the usual price of fresh meat. The fish kept in the stores is less in price than most meats. Smoked halibut last year was 20 cents a pound. This year it is quoted to us at 35 cents a pound. About the cheapest fish is the spiced herring that is retailed at 65 cents for a 10 pound pail. White fish sells at 20 cents a pound in 10 pound pails; salmon in brine at 23 cents a pound. All fish are higher in price this year. One explanation given for the increased price is that the Norwegian fishers hesitate about venturing far.

If a fish is in good condition, the eyes are bright; the gills are a good clear red; the scales, shiny and the flesh, firm.

Some persons make a "big fuss" over cleaning a fish. An old bachelor brother who is an expert with the rod is equally skilled in cleaning his catch. We have watched him hold the tail of a scaly fish and scrape with a dull knife toward the head. The scales would fly in all directions and the work was soon done. If he were cleaning a catfish or one with a skin to be removed, he used a very sharp, fine-bladed knife. This is circled around the head and under the skin from this circle to the tail, making several long inch strips. He used a pair of pinchers to take hold of the loose ends and pulled off a strip at a time.

Large fish, like most coarse meats, are best when boiled or steamed. Medium sized ones may be baked or split and broiled, and small ones should be fried. Unless one has a suitable wire basket, a fish to be boiled is best placed in a piece of cheese cloth. This prevents the fish from boiling to pieces and also prevents the scum from adhering to the fish. Lemon juice or vinegar added to the water is said to keep the flesh white. One may judge when the fish is cooked by the ease with which the flesh may be separated from the bones. Fish to be steamed should be laid on buttered paper. At boarding school we have had steamed white fish and halibut steaks many Fridays.

Pike boiled in salt water for a few minutes is especially good if the bones are removed and the bits of fish placed in layers alternating with layers of bread crumbs and white sauce and baked.

Codfish that is usually boiled may be fried in balls. The ingredients needed are: One cup of salt cod, 2 cups of diced potatoes, 1 egg, 1 teaspoon of butter and a few grains of pepper. The fish should be washed, broken up into fine pieces and cooked in boiling water with the potatoes until the potatoes are done. They should be drained and mashed and the butter, pepper and beaten egg added and well beaten. The fat in the frying kettle should be very hot. It is well to dip the spoon in this hot fat and then into the fish mixture. Every spoonful of the fish that is dropped forms a ball which should be cooked to a golden brown and laid to drain on soft paper.

Begin ironing handkerchiefs in the center. Ironing hems first makes the middle of the handkerchief swell out so that it is difficult to fold properly.

Petunias Give Pleasure

If I were so busy that I could grow but one flower, I would choose the petunia. A continuous bloomer, it makes a fine display when massed, and readily responds to good care altho it will stand neglect and even abuse. Plant seeds of the best sorts and give them plenty of room, for petunias are greedy of space and will soon crowd out plants of less vigor. Petunias can be rooted from slips. Watch them this summer before a rain. They seem to shake out their green garments and lift up their pretty faces to greet the raindrops which they feel coming. They are real barometers.

But I must say a good word for another flower also, the Dianthus pinks with such wonderful colorings and markings that we eagerly watch the unfolding of the buds of every separate plant. They bloom continuously the first season and even more abundantly the summers following. The double sorts I think are prettiest.

A cheap, effective and not unsightly fence to protect flower beds can be made of pliable sprouts or willow switches. Sharpen each end and insert into the ground far enough to hold, forming an arch or loop of the desired height. Place another twig about 2 inches from the first and bend it down into the ground about 2 inches beyond the second end of the first. Continue in this way, interlacing the twigs, until there is a fence of the loops all around the bed. Fill in any dangerously large spaces with smaller loops. If you have children, let them help with this work. Teach them to read and love the great open book of nature and they will be better boys and girls and nobler men and women in consequence.

L. Ross.
Crawford Co., Kansas.

Girls Like Middy Dresses

Little girls like middy dresses they are so pretty and comfortable. The square neck and pockets of the middy blouse shown here are a new and attractive feature.



8202



The plaited skirt may be made of white like the blouse or of some color as blue or green. The pattern 8202, is cut in sizes 4 to 12 years. It may be ordered from the Pattern Department of the Farmers Mail and Breeze, Topeka, Kan. Price 10 cents.

Now for Your Petticoats

Petticoats of white saten will be more in favor for summer wear than underskirts of musin. The saten is softer and easier to wash and does not require starch. If the front and back gores are made double thickness it will not be necessary to wear more than one petticoat with thin frocks. These saten petticoats may be made with a flounce like those on ready made skirts, or without a flounce and with the lower edge scalloped and bound with a narrow bias band or buttonholed. An edge of single crochet over the scallops similar to the edge on handkerchiefs would be an easy, attractive finish.

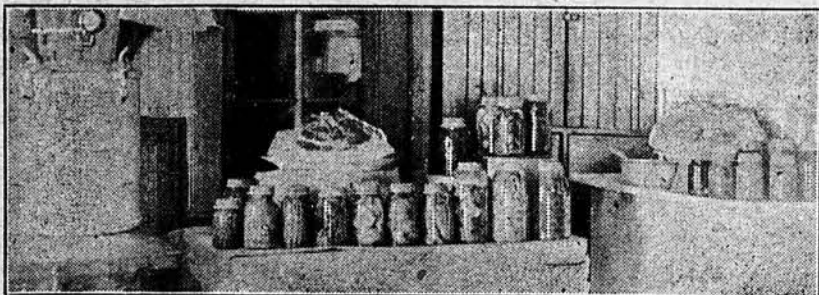
Where one wishes colored petticoats to match several gowns it is an excellent plan to make one plain straight petticoat of black saten and several flounces of silk or saten of the desired colors which fasten on to the skirt with snaps.

Say you saw it in the Farmers Mail and Breeze.

Start a Canning Campaign

Supply Your Table from the Farm, not the Factory

BY GRACE DIETZ



A Corner of Miss Dietz's Kitchen Showing Her Canner and the Results of a Morning's Work With It.

FARMERS who allow canning factories to supply their tables with food which should have been produced on the home farm are largely to blame for the increased cost of living, for themselves at least. Fresh and canned vegetables are selling at very high figures now, and it is said that canned fruits will be advanced 33 1/2 per cent above last year's prices. Most families are willing to do their part toward reducing prices if they only knew what to do or how to do it.

The first thing, of course, is to plant more gardens this year than has been done in previous seasons. Prominent men who have studied the situation are urging persons everywhere whether in cities, towns or country, to "plant, plant, plant" and to make every vacant lot and available plot of ground productive. But even if this is done, the relief will be only temporary unless the gardeners take to preserving their surplus products for winter use.

Can Meats for Summer.

Home canning is so practicable these days that farmers, with their almost unlimited facilities for production can supply their families the year around with almost everything needed for their tables. This includes meats as well as vegetables and fruits. I am well acquainted with every brand of protest that arises when home production and preservation of meats are urged. I am fully aware that many persons have had failures and losses when they did try to put up a supply of home canned meats for summer use but I believe the trouble was due more to carelessness or ignorance of methods than to a fault in the system. We have enjoyed for years the satisfaction that comes from knowing our shelves are filled with wholesome canned meats that keep perfectly thru the hottest weather and make unnecessary those long trips to town in summer to buy fresh beef and the attendant worry of keeping the meat without ice.

It is better to can one's meats in cool weather. We have just finished putting up our own supply for the summer. There are more than 200 quarts in all and we do not lack for variety as we have roast ribs, sausage, head cheese, liver sausage, tripe, roast pork, roast beef, chopped beef, hearts, tongues and pig's feet, all perfectly sterilized and ready to use at a moment's notice with absolutely no waste or loss. Doesn't that sound good? We have done canning in the summer but it was necessary to keep the fresh meat on ice until it was properly cooled.

Our meats are all put up in wide-mouthed glass jars. I used pint, quart and half gallon sizes. The latter contain the roasts which we expect to serve to our threshers and haymakers next summer. I cannot begin to tell you how well those threshers enjoy our canned roasts. Fresh beef could not be relished more and would take much longer to prepare at the time. We get double service out of our jars also as the meat is used up before time for late summer pickles and preserves.

Ten years of practical experience in canning have convinced me that the steam pressure method is best for meats and starchy vegetables. I prefer also, to have the canner retort generate a high pressure or temperature. Fifteen pounds pressure to the square inch or a temperature of 250 degrees Fahrenheit will sterilize meats perfectly in one hour. A temperature of 240 degrees for a period of from 30 to 60 minutes is sufficient for starchy vegetables.

I pack the meat, vegetables or fruits

in the glass jars, pouring over them water, gravy or sirup according to the recipe, cover loosely, then set the jars in the canner retort which is heated on the kitchen stove. My retort measures 12-by 18 inches and has a capacity of 14 quart jars arranged in two tiers, or 22 pint jars in two tiers. The canner will not admit two tiers of half gallon jars so I usually put one tier of pints on top of the half gallon jars.

Pin Money from Canning.

A wooden disk is placed between the tiers of jars and also on the bottom of the canner as the hot jars are likely to break if they touch one another or anything made of metal. A pair of these disks will be supplied with the canner instead of the customary crate if such specifications are made in ordering. The price of the canner is the same in either case. The size I use costs \$18. If one has time to do canning for neighbors who have no canner she can make the cost of the canner easily in one season. Several of my girl friends and I make our pin money in this way. My canner retort is fitted with a steam gauge by which to read the amount of steam pressure so that it is an easy matter to regulate the temperature.

Many persons ask me, "Do you think the wash boiler system is safe for meats, and do you like it for vegetables?" I should not think of using it myself as the temperature cannot be brought above boiling point, 212 degrees Fahrenheit and the dangers of the meat's spoiling are too great. With the steam pressure method the steam cannot escape and the temperature can be brought many degrees above boiling. Sterilization which can be effected in an hour or less with the steam requires from 2 to 4 hours with the hot water method. This increased length of cooking renders the meat or the vegetables insipid and tasteless and requires a great deal more fuel than is necessary with the steam. Meat and vegetables canned my way taste as good as the fresh product and are really richer in flavor than the food cooked in kettles as none of the juices are lost.

Think!

If you think you are beaten, you are;
If you think you dare not, you don't.
If you like to win but you think you can't,
It's almost a cinch you won't.
If you think you'll lose, you're lost;
For out of the world we find
Success begins with a fellow's will,
It's all in the state of mind.
If you think you're outclassed, you are;
You've got to think high to rise,
You've got to be sure of yourself before
You can ever win a prize.
Life's battles don't always go
To the stronger or faster man;
But soon or late the man who wins
Is the one who thinks he can.
—Child Betterment and Social Welfare.

Cleaning White Velvet

White velvet or plush trimmings may be cleaned without removing them from the hat or garment by using a paste of gasoline and wheat flour. Spread this paste thickly over the velvet and brush with a stiff brush until all the flour is removed. All cleaning with gasoline should be done in the open air. Using gasoline in a closed room is dangerous even tho there is no fire in the room when the work is done, since the fumes of the gasoline stay in the air for some little time afterward and may ignite if fire is brought into the room.

Use a pair of scissors to cut the rind from thinly sliced bacon and you will be delighted with the result.



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is only
30
Minutes
with the

HOOSIER KITCHEN CABINET

The first step towards quick meals, easy meals, good meals and on-time meals is to put the Hoosier Cabinet at work in your kitchen. A million women are doing your hour's work in 30 minutes with this lifetime kitchen helper.

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Majestic Manufacturing Co., Dept. 229 St. Louis, Mo.

Garden Time is Here Again

Girls and Boys Have Their Plans all Made and They'll be out Planting the Seeds before Long

I AM GOING to make a garden of about one-fourth acre. I shall plant onions, watermelons, muskmelons, cucumbers, lettuce, radishes, cabbage, tomatoes, pumpkins, and flowers. I am a graduate of the rural school here and wish to make money enough with my garden and chickens to help pay my way thru college. I intend to market part of my chickens and garden truck in our motor car and sell the remainder by parcels post.

Tully, Kan.

Rosye Murphy.

This Boy Raises Pumpkins.

[First Prize.]

I am now 10 years old and have made a little garden in the corner of mother's big garden every year since I was 5. I have always done my own planting, weeding and hoeing and given mother the vegetables.

I intend to plant about 1/4 acre of radishes, onions, string beans, peas, tomatoes, cabbage, pumpkins, and peanuts this year. We raised quite a large acreage of peanuts last year. Our first

I shall experiment with my corn by putting ashes on one part of the ground before it is plowed and lime on another part. Then when the corn is harvested I shall compare the results obtained to find out which soil is best for corn.

I shall keep an accurate record of all my expenses and of the vegetables I sell and what we can and use at home.

Abilene, Kan.

Lucile Hurley.

Make Straight Rows.

I am planning to make a garden of my own this spring. I shall use three rows at one side of mama's garden. I intend to plant peas in one-half of two rows and beans in the other half. I shall plant radishes and beets in the other row. I use a string to make the rows straight. When the plants come up I keep the weeds pulled and the ground hoed so they will grow fast, and if the ground gets too dry I water it every evening.

Duquoin, Kan.

Oliver Lewis.

Flowers for the Home.

[Prize Letter.]

Mama has promised to let me have one-third of her flower garden this spring. It will be about 9 feet wide and 13 feet long. I am going to plant sweet peas, nasturtiums, pansies, petunias, phlox, zinnias, and dahlias. I shall plant the sweet peas and nasturtiums around the fence and make beds of the phlox. Then I shall put a border of small stones around the edge of the beds to make them look pretty. I shall plant white petunias on the left side of the path and purple ones on the right side.

There is a cherry tree in my garden and I think I shall plant the pansies under it because mama says they must be planted where the hot sun cannot touch them. I intend to paint an old wooden tub white, fill it with rich loam, and plant marigold seeds in it. If the flowers bloom nicely I shall keep the house decorated all summer.

Oberlin, Kan.

Mildred Upson.

A Busy Girl.

I had a few rows of vegetables and flowers last year in my mother's garden. The rows in mother's garden are about 35 feet long and this year I am going to plant one row of red onions, one row of radishes, one row of peas, one row of carrots, and one row of turnips. Besides this I shall have a small bed of flowers, including pinks, poppies, nasturtiums, and pansies. I shall plant my seeds and care for my garden myself.

When the radishes and onions are big enough to use I shall pull them and get them ready to take to town by washing them and tying them in bunches of six and 12 each. The storekeeper is usually glad to get them and pays me 10 cents a bunch for the early ones. I am a member of the Capper poultry club and with my garden, chickens, dishwashing and other work I shall be a busy girl this summer.

Stafford, Kan.

Freda Slade.

Small Gardens Pay, Too.

[Prize Letter.]

I am a little boy 8 years old. Last summer I had a little garden 5 by 7 feet. I had four cabbage stalks, potatoes, beets and beans. I planted, hoed and weeded it myself. When the potatoes were grown I took them out and planted three tomato stalks. I got four good heads of cabbage altogether and 1 gallon of beans in one picking.

I am going to plant a larger garden this summer, about 12 feet square. I have some cabbage plants started in a can for early cabbage and shall plant radishes, lettuce, cabbage and potatoes.

Hope, Kan.

Cecil Engle.

Flowers Bring Cheer.

I am living with my aunties as my mother is very ill. I am planning to have a garden this summer 6 by 8 feet. I shall plant sweet peas, asters, nasturtiums, pansies, and violets. The sweet peas will grow on a trellis and I shall put the asters and pansies in cir-

cles, one on each end of the plot. I shall plant the nasturtiums in a diamond-shaped bed in the center between the beds of asters and pansies and fill in violets wherever there is an empty space. I shall give most of these flowers to mother.

Bern, Kan.

Allegra Franke.

Timber Land is Good.

[Prize Letter.]

I have had a small garden of my own the last year or two and am planning to have one this year. My father gives me the use of a plot of ground which was in timber for 40 years and has been cleared off lately. It is very rich soil. I have already bought my seeds, including onions, radishes, peas, cabbage, melons, lettuce, pumpkins, sweet corn, popcorn, and tomatoes. I care for my garden with a hoe, rake, and small weeder.

I shall have the soil plowed first, then disked and harrowed. I shall be careful not to cultivate the soil when it is too wet for this would spoil the garden. As soon as one crop is off I shall plant another. I intend to sell my garden truck if there is a market for it and buy some tools for use in my manual training at school.

Vernetta Fairbairn.

Muscotah, Kan.

Her First Garden.

I am a little girl 7 years old and live with my father and mother in a small town. I have never made garden but expect to this year. I shall plant onions, lettuce and radishes for early use and then raise beans, peas, tomatoes, and cabbage. I shall hoe my garden at least once a week. I intend to let mama use all the vegetables she needs and sell the others.

Hattie Grace Hawkins.

Amsterdam, Mo.

Mulch the Tomato Plants.

[Prize Letter.]

I am going to have a tomato garden. I bought a package of seeds at school with my own money. I intend to plant the tomatoes in a hotbed first and when they are large enough I shall transplant them to my garden. When the plants are about 12 to 15 inches high I shall mulch them so that they will hold the moisture better. I expect to put out about 100 plants.

I hope to sell my tomatoes but I shall let mama have all she needs for the table. I raised tomatoes last year but it was so dry the plants dried up and we did not get any. That is why I am going to mulch my plants this year.

Elden Hicks Stephens.

Norwich, Kan.

Indians Like Melons.

I had a garden last year and everything grew that I planted except two rows of flowers. I intend to raise things to eat this year. My garden spot is fenced in along with the big family garden but I take care of and plant it myself. My father has been giving the garden a coating of manure this winter.

I shall have a row of onions, then a row each of radishes, lettuce and beets. When it gets warmer I shall plant beans, watermelons and muskmelons. I think perhaps I can sell vegetables to the Indians for there are a number of them near us and they do not raise much garden stuff. Indians are very fond of melons, too.

Gotebo, Okla.

Delores Tucker.

Nothing but Tomatoes.

I have joined the girls' canning club and my garden will not contain anything but tomatoes. I have planted the tomatoes in boxes filled with rich dirt. I placed half egg shells in the boxes, filled them with dirt and planted a seed in each shell. After they get about 2 inches high I shall take up the shells and all and transplant the plants in the garden. I shall tie the plants to a stake when they are about 2 feet high and pinch off the tops so the strength will go from the vines to the tomatoes.

Antlers, Okla.

Lorena Smith.

Soak Sweet Peas before Planting.

[Prize Letter.]

I hope to have a vegetable and flower garden this year. I shall plant my vegetable garden first. It will be 12 feet

by 15 feet. I intend to do all the work myself except the plowing. My garden will consist of onions, lettuce, radishes, cabbage and tomatoes. I shall water it every evening if the weather is dry.

My flower garden will be 20 feet by 10 feet. I shall ask my father to put some fertilizer on the ground and then plow it under. I am planning to have a rose bed and shall plant what ground I have left to sweet peas, nasturtiums, verbenas and phlox. I always soak my sweet peas in water over night before planting.

Katherine Nemecek.

Wayne, Okla.

Have You a Hotbed?

I like to work in the dirt and am making plans now for my garden. It will be 25 feet long and 20 feet wide. I like to begin early so I make my hotbed about March 1 and plant my cabbage and tomatoes in it. I raise vegetables of all kinds and some flowers.

I have my garden plowed in the fall, put on a heavy coat of manure and then plow again early in the spring and harrow it several times which makes a good soft bed for the little seeds. I try to get good seed and always water my garden if we do not get enough rain.

Bazaar, Kan.

Edward Fillmore.

There's Going to be a Picnic.

The spot I have picked for my garden is a good sandy place about 3 rods north of the house. It is 3 rods long and 1 rod wide and is surrounded by an orchard. I intend to clean off all the leaves and sticks and then when father plows for his garden I shall get him to plow mine.

When all danger of frost is past I shall get father's garden plow and make some rows for the seeds. I shall plant three rows of radishes, two of lettuce, one of mixed flowers and the remainder in watermelons. I shall water and pull the weeds out of the garden every other day. When the melons are ripe I intend to invite the boys in and have a picnic.

Roland Saunders.

Lincoln, Kan.

Popcorn for Winter.

My garden is 20 by 40 feet and the ground is good and rich. I spaded it up last fall and spread manure over it. I am going to have four rows of popcorn on the east end and between the rows I shall plant several pumpkin seeds. Next to the popcorn I am planning to have a row of cabbage and a row of tomatoes and next to the cabbage and tomatoes a row of peas, a row of beans, a row of beets, six rows of potatoes, and a row of turnips. Then at the west end I shall have a bed of lettuce and a bed of radishes, and along



Charley and His Pumpkins.

planting did not come up on account of the dry spell so we planted some more, shelling them and soaking the seed in cold water about 2 hours before planting. Nearly all of the second planting came up and made good. To have good luck with peanuts you have to hoe often to keep the dirt loose around the hill.

We raised quite a number of pumpkins last year, too. My little brother and I hauled them to the house in our wagon and I am sending a picture of us taking a load.

Charley Bense.

Arkansas City, Kan.

A Three-Cornered Garden.

I am planning to have a three-cornered garden near a creek. I shall plant beans, peas, tomatoes, cabbage, lettuce, cucumbers, radishes and onions. I intend to plant flowers in the corners and on the ridges. I shall have the Burning bush in one corner. This bush is prettiest in the fall when it gets very red. I shall plant morning glories, sweet peas, and balsams along the wall and zinnias and nasturtiums on the edges.

Santa Rosa, N. M.

Ruby Irwin.

Lucile's Plan is Good.

[Second Prize.]

I intend to spend my summer in the open air, taking care of my garden. I shall run my garden on a systematic basis and have already rented an acre from papa. This land was an alfalfa field two or three years ago but was planted to corn last year.

I am planning to plant 1-10 acre of tomatoes in the northern end of the patch and running parallel to the tomatoes will be 1/4 acre of potatoes. The remainder of the acre will be planted to corn. I shall mulch my potatoes and tomatoes by covering them with fresh clean straw. This will conserve the moisture for both kinds of plants, will keep the ripe tomatoes off the ground, and keep the weeds down.



the south side some Castor beans. I shall save the popcorn until winter when we will have fun popping it and making popcorn balls.

Egbert Schuessler.

Valley Center, Kan.

Have a Slice of Melon.

Papa is going to fence off a corner of the yard for my garden and I am planning to plant sweet peas along the fence on the west side and Castor beans on the north side for a background, then poppies, pansies, verbenas, and

other flowers in rows according to their size. I shall keep them free of weeds and water them in the evenings after the sun goes down.

I am also going to plant watermelons and muskmelons and when they are ready to use I shall gather them in the morning and put them where it is cool until noon when we will eat them for dinner.

Esther Minger.

Bern, Kan.

Any Boy Can Make This House

I made the large bird house shown in the picture out of a tomato box which our grocer gave me. I used parts of a box I had for the partitions and roof and picked up the shingles and lath in the yard, so the whole thing only cost me 5 cents for nails.

I put partitions in the lower half of the box dividing it into four parts and nailed a floor onto it. Then I nailed on another set of partitions in the upper half of the box and put on another floor, thus closing the box. I



bored two holes in each side and end of the box with a 1½-inch auger and enlarged them with a red hot water pipe, making them 2 inches in diameter.

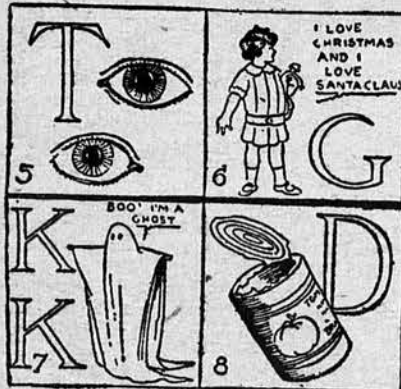
I made the chimney of a 2-inch block sawed on each side to look like brick. One end of the chimney is narrower than the other and the narrow end runs thru the roof and fits into a hole in the box which holds it firmly. I next made porches out of lath and last of all put on the shingles. There is one long room with an opening at both ends in the top of the house and four rooms upstairs and four rooms down.

Gridley, Kan.

Percy Swibold.

What are the Gifts?

Here are four common gifts. See if you can guess them. A package of postcards for the first five correct an-



swers received. Address the Puzzle Editor, the Farmers Mail and Breeze, Topeka, Kan., by March 31.

If I Knew

If I knew the box where the smiles are kept,
No matter how large the key
Or strong the bolt, I would try so hard
'Twould open I know for me.
Then over the land and the sea broadcast,
I'd scatter the smiles to play,
That children's faces might hold them fast
For many and many a day.

If I knew a box that was large enough
To hold all the frowns I meet,
I would gather them, every one,
From nursery, school, and street.
Then, folding and holding, I'd pack them
in,
And turning the monster key,
I'd hire a giant to drop the box
To the depths of the deep, deep sea.
—American Jewess.

If you have trouble keeping the shelf of the kerosene stove clean, cover it with oilcloth. The oilcloth can be removed and washed once or twice a week and will always look neat.

Sprinkle powdered orris root under the ironing sheet and the freshly ironed clothes will have a delightful, delicate perfume.

Say you saw it in the Farmers Mail and Breeze.

Raynster

Reg. U. S. Pat. Off.

Takes the Terror Out of Bad Weather

You cannot escape the bad weather, but you can protect yourself against it. Whether it rains, snows or blows, you will be snug and comfortable in a Raynster.

Look for this label on your coat



Reg. U. S. Pat. Off.

Buying a Raynster means getting something dependable—a coat that will last and keep its shape. That's the great big reason why you should call for the Raynster by name.

Service Coats for Farmers, Drivers, Workers

Raynsters come in a number of different styles, fabrics and colors, heavy and light weight—rubber surface coats, well suited to the needs of farmers, drivers and those who require general work and service coats. Also double and single texture Raynsters. Raynster is the name of a new line, better and safer than any weather coats ever before on the market.

Our special process of vulcanizing literally bakes the rubber into the strong fabrics of the rubber surface coat.

You can depend upon it, your rubber surface Raynster will be thoroughly waterproof. Other Raynsters in appropriate styles for men's dressy wear and for boys, girls and women. Also auto coats. If your dealer does not handle Raynsters, write to address below and we will tell you where they can be obtained.

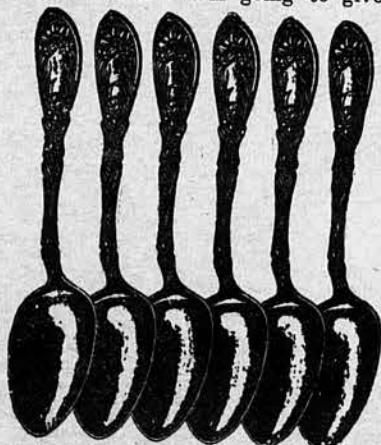


United States Rubber Company
(Clothing Division) New York



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I have just consummated a most remarkable purchase whereby I secured at a ridiculously low figure 5,000 sets of beautiful Silver Plated Narcissus Spoons made by the famous Oxford Silver Plate Company. Each spoon is extra heavy, full standard length, extra deep bowl and with beautifully embossed and engraved handles. I am going to give a



set of these handsome spoons absolutely free, postage paid, to all who send just \$1.25 to pay for a year's subscription to my big farm weekly, The Farmers Mail and Breeze. Send your subscription order at once and secure a set of these beautiful and serviceable spoons. State whether you are new or old subscriber. Time will be extended one year if you are already paid in advance. Address Arthur Capper, Publisher Farmers Mail and Breeze, Topeka, Kan.



WE BOTH LOSE MONEY IF YOU DON'T SELL YOUR HIDES

TO **T.J. BROWN** 126 N. Kansas Ave., TOPEKA, KANSAS

GREEN SALT CURED HIDES, No. 1, 21c HORSE HIDES (as to size) No. 1 \$8.00-\$8.50
No. 2, 20c " (as to size) No. 2 \$5.00-\$7.50
Write for prices and shipping tags. Payments made promptly.

Anthony Fence

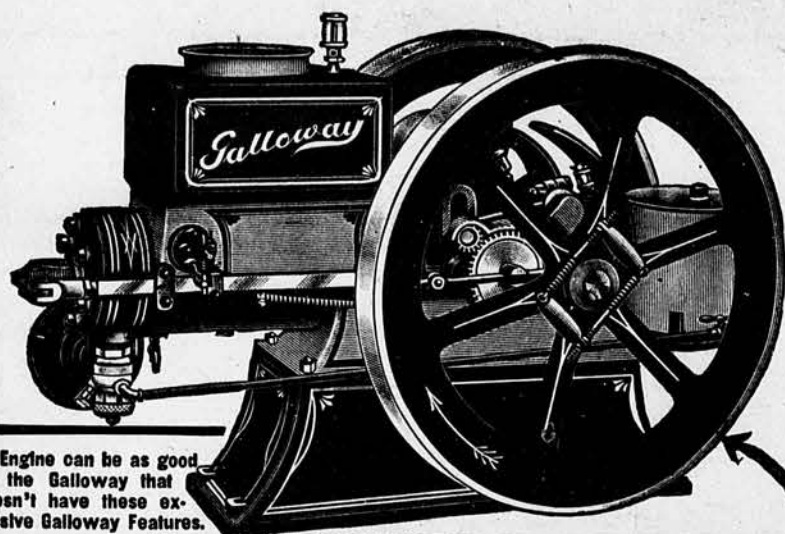
Under stress of action each wire within a considerable radius is brought into play, affording, to an extraordinary degree, the resistance of a flexible wall of steel—due to the perfectly balanced woven fabric, in which each wire is drawn under equal tension with machinery of special design. Thoroughly galvanized.

American Steel Fence Posts last a lifetime. Hold fence secure against all conditions.

Sent Free—Our Book, "How to Build a Fence." Dealers Everywhere

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Awarded Grand Prize at Panama Pacific International Exposition
The Supreme Award of Merit



No Engine can be as good as the Galloway that doesn't have these exclusive Galloway Features.



Valve in the Head Type Cylinder
Note large exhaust valve. Engine head perfectly water cooled. Valve stems also, can't warp. Large intake valve, means ample charge of gas, perfect combustion. No fuel waste. Automobile-ground valves insure perfect compression.



Arch-of-Strength Cylinder Head
Positive cannot blow off. Held by steel studs—cuts perfectly sealed. Insuring the greatest possible strength in a cylinder head. Absolutely gas-tight joint with end of cylinder. This type of cylinder head provides nearly double amount of water space round on other styles.



Sure-Fire Make and Break Igniter
Webster oscillating magnet makes blue-hot spark. Needs no batteries. Absolutely sure fire. Weather does not affect it. Eliminates all ignition troubles. Functions in continual operation for years without replacing. Gives least trouble from soot or carbon of any results and satisfaction in using this type on your engine at any time of year, winter or summer.



Economy Carburetor
Worth \$15 less on any engine, costs nothing extra on the Galloway. Cuts down fuel bills. Simple, positive air valve adjustment—regulated at will—easy starting in any weather. Mixes perfect fuel charge. Makes gasoline most perfect fuel. Has special cold weather valve which makes easy starting in cold weather. Also gets great power from small amount of gasoline. A great saver of high-priced fuel. Our own invention. Used on all Masterpiece engines. The logical carburetor for you to have on your engine, making it cheaper and better than kerosene.



One-piece Cylinder and Base
On all Galloway engines from 4 to 16 h. p. insures perfect alignment of cylinder, piston, connecting rod, crank shaft and flywheels. Absolute uniformity of wear. Only scientific and successful method of construction for large, heavy duty, heavy weight engines. Two-piece cylinders and frames cannot be kept in line.



GET THIS 1917 BOOK ABOUT ENGINES
I want you to have this new book about the famous Galloway Masterpiece engines. It tells you how to pick out, size up and judge an engine. Gives you engine secrets and facts. Tells why to insist on heavy weight, large bore, long stroke and low speed—why light weight, high speed engines are not to be compared with Masterpiece engines and why you are asked four profits for some engines no better. Tells why we sell direct from factory to farm or shop at wholesale. How to install an engine and hook up machinery. How Galloway engines are built. How to lay out and build a cheap, efficient power house. Why our prices on high class stationary and portable engines and saw rigs are so low—considering quality. The truth about engines is all set down in black and white. This book is a guide to saving money on every farm. That's why I want you to get it. If you expect to buy an engine I'll pay the postage and be glad to send the book. Ask today. A postal will do. Address me as below.

LOOK! THIS 1917 MODEL!

Go over it point by point, feature by feature, compare it side by side with any other make of engine of the same size and stroke! You will decide for years and years!

QUICK SHIPMENT
LOW PRICES
HIGH QUALITY

For hard, tough jobs, for year in and year out satisfaction they have no equal at higher or lower prices. If you pay less for an engine than a Galloway Masterpiece you could not possibly be getting as good an engine. If you pay more it would only be paying too much. Large bore, long stroke, simple design, heavy weight, mechanical perfection in their building make them power masters in their field. No matter what size or style engine you want I build them here in Waterloo in my own great chain of factories to fill every need. My 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

SIX 1917 SELLING PLANS

-CASH OR TIME
No matter which way you want to buy I have a plan that will suit you—Cash, Bank Deposit, Half Cash—Half Note, All Note, Installment, and No Money Down, to responsible people. Galloway's guarantee is absolute satisfaction or your money back, and he pays the freight both ways. Remember my

\$25,000 LEGAL BANK BOND

ABSOLUTELY PROTECTS
you and every one of my prospective customers and proves my willingness to have every claim and statement I make fully investigated. I want you to try a Galloway engine on your farm—in your own shop. That's why I have prepared my new 1917 special proposition. I want a Galloway Masterpiece 1917 model gas, kerosene or distillate engine in every township in every state between now and June 1st, and my new 1917 prices and selling plans will get them.

NOTE 1917 IMPROVEMENTS

Adjustable bearings, no lost motion, develops way above rated horse power. Economy carburetor, worth \$15 more on any engine, costs nothing extra on the Galloway—cuts down fuel bills. Large valves in head, exactly like highest class automobile motors, perfect scavenging, admits perfect combustible mixture. Double ball governor. Large, heavy flywheels. Big bore, long stroke, heavy weight, perfect balance, smooth running. Perfect lubrication, winter or summer. Webster magnet (extra) supplies blue-hot spark. Make and break igniter, never misses fire. Easy started, no cranking, needs no batteries. Cylinder and water pot frost proof. Galloway engines honestly rated, scientifically, accurately and handsomely built. Our description the truth. Shipments made from Waterloo, Council Bluffs, Kansas City, St. Paul, Chicago, wherever is nearest you.

GET THIS 1917 BOOK ABOUT ENGINES

I want you to have this new book about the famous Galloway Masterpiece engines. It tells you how to pick out, size up and judge an engine. Gives you engine secrets and facts. Tells why to insist on heavy weight, large bore, long stroke and low speed—why light weight, high speed engines are not to be compared with Masterpiece engines and why you are asked four profits for some engines no better. Tells why we sell direct from factory to farm or shop at wholesale. How to install an engine and hook up machinery. How Galloway engines are built. How to lay out and build a cheap, efficient power house. Why our prices on high class stationary and portable engines and saw rigs are so low—considering quality. The truth about engines is all set down in black and white. This book is a guide to saving money on every farm. That's why I want you to get it. If you expect to buy an engine I'll pay the postage and be glad to send the book. Ask today. A postal will do. Address me as below.

WM. GALLOWAY, Pres.,
THE WM. GALLOWAY COMPANY
45 Galloway Station Engine Manufacturing Waterloo, Iowa
Specialists

Answers to Farm Questions

(Continued from Page 13.)

ganic acids which act on the otherwise unavailable salts in the soil, making them available to the plant.

Fifteen to 40 tons of horse or cow manure to the acre would be a very satisfactory amount to apply to the land. Put it on the soil in the fall as a surface application and plow it under. If it is not applied until spring, fresh cow manure is preferable; cow manure is slower acting, will not burn and does not as a rule produce a rank growth.

An average sample of manure carries about 10 pounds of available nitrogen, 3 pounds of available phosphorus, and 8 pounds of available potash. It is easily seen then that manure is not a well balanced fertilizer, being low in phosphorus. Our soils usually are, also. Therefore, after the grower has built up his soil with manure, he can profitably add commercial fertilizers.

About the Cream Separators.

Which cream separator is best? How can I manage a separator for the best results? Montgomery Co. W. K.

Which separator is the best? This question is asked over and over again by all who have occasion to use a separator. It also is a most difficult question to answer; in fact, there is no single answer to it. There are a great many makes of separators on the market, and most of them will do efficient skimming if they are run and cared for properly. If a separator fails to do good work, it often is the fault of the operator. No matter how well a separator may be constructed, if it is abused by improper usage it will soon fail to do properly the work for which it was designed.

The following suggestions may be of help to separator operators:

1. Set the separator level on a solid foundation and bolt it down firmly. It is well to have a piece of rubber packing under every leg of the separator to serve as a cushion for absorbing vibration.
2. See that all bearings are clean and well lubricated. Clean the bearings occasionally with gasoline or kerosene to remove all grease that may have become gummy.
3. Use only the best hand-separator oil. Never use common machine oil.
4. Be sure to turn the separator at the proper speed. Time it with a watch or speed indicator.

5. In cold weather run about a gallon of warm water thru the bowl to warm it before turning on the milk.

6. Separate the milk as soon after milking as possible for the milk is then warm and in good condition for clean separation. No separator will skim cold milk as well as warm milk. The milk should be at least 75 degrees Fahrenheit in temperature.

7. When thru skimming, flush the bowl with about 2 quarts of skim milk. In cold weather, warm water may flush the machine more effectively.

8. Wash the separator every time it is used. Wash all separator parts first with moderately warm water containing washing soda. When all parts are clean, scald with boiling water and place in a warm oven to dry. Be sure the oven is not too hot, as it is likely to melt the tin plating from the bowl parts. Allowing the separator to go unwashed not only causes the bowl parts to deteriorate but also injures the quality of the cream. It is a filthy practice.

9. When a separator is running, the bowl should spin like a top, with no vibration. If the bowl does vibrate, examine the bearings to see if they are loose or worn.

Care of the Young Orchards.

What care should a young orchard get? Shawnee Co. D. G. R.

Soon after the young trees are set a cone of galvanized screen wire should be placed about the main stem of each. The wire can be fastened together before being placed about the tree, and the branches pulled together enough to allow the slipping of the cone over the top. The wire should extend below the surface 1 or 2 inches and cover 18 or 19 inches of the stem above the ground.

This screen will serve as a protection for the tree against borers, rabbits and other young tree pests. About the first of June cheap cotton should be stuffed in the top of the wire cone as a further protection against borers. After the tree has been set and before it begins its growth in the spring it should be headed.

The chief object in the care of the young orchard is to keep down all weeds. Trees need cultivation. Constant cultivation in the young orchard will induce a deeper rooting system in the trees. It is natural that where there is a great surface growth, as would be the case where the trees are set in sod ground, the most moisture would be about the roots near the surface, and the tree would never root deep enough to make it strong or the most productive.

During the winter the trees should be pruned. There usually will be from six to eight side branches, and these should be thinned until not more than four or five are left. These are to form main branches, and several points should be considered in their selection. They should be the most vigorous and healthy branches on the young tree, and arranged so they form no crotches. This last may be guarded against by selecting the branches forming equal angles about the central stem and preferably several inches apart.

The branches which are left should be headed back from $\frac{1}{2}$ to $\frac{3}{4}$ their length, cutting off the growth just above a bud growing toward the outside. It is the usual tendency in growth to produce the strongest shoot from the terminal bud, and the growth should be directed toward the point where the leader should be grown. A stub should never be left in removing

the tip of a branch, as this dies back and causes decay in the heart.

After pruning has been done properly there is little to do except to see that the ground is cultivated in the best manner. Trees stunted in early growth seldom recover properly, and never make the success that a well cultivated tree will.

If the new orchard is located near an old one it may be necessary during the second summer to protect the young trees against blotch and other diseases by spraying them. For this purpose a 2-3-50 solution of Bordeaux mixture will be found most beneficial. Spraying the young trees is not usually necessary, but it is advisable in order to give them the best opportunity to develop.

K. S. A. C.

F. S. MERRILL.

Germination of Garden Seeds.

How can I determine the percentage of germination of my garden seed? T. H. Johnson Co.

Before seeding crops it is imperative that we know how viable the seeds are. The longevity of seeds varies from 1 to 10 years, depending on the variety, age, health of parent plant, maturity of seed at gathering and subsequent treatment of the seed. After the seed has arrived, test every variety to determine the percentage which will grow, which will likewise tell you the quantity to sow. There is a marked difference between seeds which will sprout and germinate and seeds which will grow.

Count out 25 to 100 seeds and place them between sheets of moist blotting paper and place the paper between two plates. The tester is then removed to a place favorable to germination, and in about a week to 10 days, depending on the variety, the seeds which are viable should be germinated. By counting the seeds which sprout, one easily can determine the percentage of germination. This usually is 75 to 90 per cent, depending on the vegetable.

There is a great difference between a seed which will sprout and one which will grow. It is far better, therefore, to sow a fixed number of seeds in a flat of soil and place them in a suitable place which is warm. In due time, with proper care, they will break thru the soil, and when the first true leaves have all appeared, count the number of such plants. This will give an authentic record of the seeds which will actually grow.

Testing seeds is of the utmost importance to all farmers, especially to such an intensive grower as a gardener. After knowing the viability of the seeds purchased, it is not hard to know how many seeds to plant in a row, provided, of course, that we know the proper distance the mature plants should stand apart in the row.

Crops for Silage in Allen.

What crop will give the best results for silage in this section? E. A. B. Allen Co.

Three crops should be considered in Southeastern Kansas for the production of silage—corn, kafir and sweet sorghum. In feeding value these crops differ but little if they are harvested at the proper stage of maturity, as has been shown by extensive feeding trials conducted at the Kansas Experiment station. The crop to grow for silage should therefore be determined by the relative yields and by the expense of growing and harvesting. Extensive tests have been conducted in Southeastern Kansas in co-operation with farmers in comparing the three crops for silage purposes. These 15 tests extend over three seasons—1914, 1915 and 1916—and include work in Allen, Miami, Linn and Montgomery counties. The acre yields in tons have been as follows:

Locality.	No. of Tests.	Corn.	Sorghum.	Kafir.
Allen county.....	5	10.2	13.2	10.8
1915.				
Miami county.....	1	9.5	26.4	10.3
Linn county.....	1	14.2	15.1	14.1
Allen county.....	4	4.5	11.1	9.1
Montgomery county 1	7.5	12.8	8.6	
1916.				
Miami county.....	1	2.3	8.8	7.7
Allen county.....	1	2.9	9.7	4.5
Montgomery county 1	8.6	10.0	8.0	

Average 15 7.5 13.4 9.1

As an average of the 15 tests, corn has made a yield of 7.5 tons an acre; Blackhulled white kafir, 9.1 tons; and Kansas orange sorghum, 13.4 tons. In every test sorghum outyielded both corn and kafir, and in every test but two kafir produced more than corn. In 1916, corn was almost a complete failure, due to drought in Allen and Miami counties, but under these conditions both kafir and sorghum produced very satisfactory crops.

In the light of these facts, corn cannot be considered a satisfactory crop to grow for silage in Southeastern Kansas except on fertile bottom land. As a rule, a variety of sweet sorghum like Kansas orange or Sumac will produce the greatest quantity of silage and should be grown for this purpose except where the crop grows too rank and lodges. Under such conditions kafir will prove more satisfactory.

K. S. A. C.

L. E. CALL.

In rendering lard run the fat thru the meat chopper and cook it in the oven. It will require no stirring and leave few cracklings.

Say you saw it in the Farmers Mail and Breeze.

FORTUNES HAVE BEEN MADE

by advertising. Everyone knows that so well that it isn't necessary to insist upon it. We are not arguing that you will make a fortune by advertising in Farmers Mail and Breeze. But we do claim that there is no reason why you should not do what others are doing, add substantially to your income by advertising in the columns of this paper and we are not sure you may not find yourself on the way to a fair fortune. Look over our advertising columns, the display and the classified columns. You know what our readers buy that you have to sell, poultry and eggs for hatching, hogs, cattle, horses, land, seed corn and good seeds of about every kind. One man sold \$3,000 worth of seed by spending \$5 for advertising space in one of the Capper Papers. That is an extreme case, of course, but there is a big market for what you have to sell. Our readers will furnish the market. Rates are given in this paper. They are low for the circulation. If the rates are not clear to you ask us for them, addressing Advertising Department, Farmers Mail and Breeze, Topeka, Kan.

Notes from Johnson County

BY ROBERT McGRATH

We began sowing the timothy and clover March 1. We used a wheelbarrow seeder, pushing it along before us. The day was one of calm and the seed fell direct to earth. It rarely happens that one can get a day in spring that is a perfect sowing day. The sowing job was finished on the snow and the track could be more easily seen altho with the proper mellow condition the ground was in, there was scarcely any trouble in seeing the track before the snow. We sowed on wheat ground. Timothy was planted there last fall but we feared it would do no good in face of the severe climatic conditions the plants passed thru.

The snow is the life of the wheat. It was thought by some that the heavy freezes had killed the crop. But just before the snow we dug down in our wheat and found that the roots were alive even if the tops looked brown. The snow will benefit the wheat, and with warm days it appears only a question of time until it will be called back to its original greenness.

The seed firms that advertise in the agricultural papers are a good class to deal with. We have yet to experience one dishonest dealing with them. Our timothy and clover mixed was shipped in at a distance. We got good weight and an honest mixture of seed.

We finished bringing from the fields the last shocks of corn, thus clearing the fields for action. We piled the fodder so as to be handy for feeding to the cattle. Under the shocks a number of mice were noticeable and these damaged the ears some. We have always found that late removal of shocks from the field means the loss of grain from mice and rats.

The cattle do not relish the fodder this year as in other years. That probably is because the animals at all times have had the standing stalks to browse over, and plenty of good straw and hay at their disposal in the lot. The feed costs are low. There is feed enough in the country. As proof of this we cite the selling of fairly good timothy hay here at \$6.50 a ton.

One of the best signs of spring we have yet seen was a flock of robins looking for early worms behind the plow.

The spring sales have begun. Everything is selling high. One bidder thought he was getting a bargain when he paid \$30 for a 150 pound sow. Cows sold at about \$100 each. We noticed the high price at which old pieces of machinery sold, doubtless due to increase in cost of new machinery.

Very little moving was done here March 1. In most cases the landlord was willing to give his tenant another trial. We believe it pays for landlords to have a good understanding with their tenants. Good treatment of tenants will lead to permanent tenancy, which should be the aim of every landlord, as a tenant will not do well on a farm on which he does not remain long.

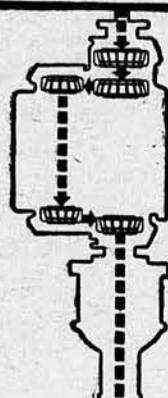
In hauling the manure to the potato patch we threw it in heaps. Soon these ridges will be scattered out, then plowed under. We have had great success this way, growing good crops successively on the same ground.

We are trying a new way of combating the borers and curculio in the orchard. On the trees subject to attack, we wrapped cardboard strips 6 inches wide somewhat from the base and painted the outside of these strips with tar. The aim is to entrap the insects as they crawl upward from the bottom. In the city parks we have observed the same plan worked successfully on elm trees and other kinds.

Help for Writers

If you wish to write for publication; if you have a paper to prepare for your institute or the Grange; if you are to make a speech or write an essay for the school teacher, Dillon's Desk Book will be a constant help. It answers all the bothersome questions. It contains 48 pages of valuable instruction. The price is 50 cents, postpaid. The third edition has just come from the presses of the Mail Printing House, a branch of the Capper Publications. Address Charles Dillon, Managing Editor, Capper Building, Topeka, Kan.

Say you saw it in the Farmers Mail and Breeze.



TIMKEN

ROLLER BEARINGS

At Every Turn on the Roadway of Power

The power developed by an automobile engine turns several corners on its road to the rear wheels.

It may turn from the main shaft to the countershaft and from the countershaft back to the main shaft in the transmission. It turns again at the differential and then goes to the wheels.

At each of these turns there is a chance for a leak.

If the gears are not held rigidly in mesh and shafts perfectly in line, power goes to waste—and that means wasted gasoline and wasted dollars.

Furthermore, this looseness causes wear throughout the entire mechanism of the car which soon results in expense for repairs.

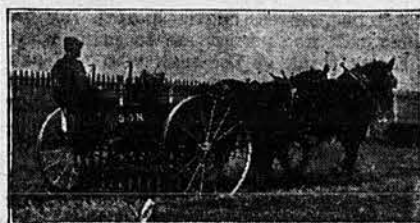
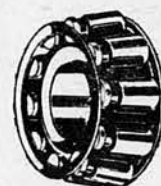
But if these gears and shafts are mounted on Timken Roller Bearings, you are protected.

For with Timken Bearings even the slightest wear can be taken up by a slight adjustment. Timken Bearings will prevent power-waste for the entire life-time of your car.

We will be very glad to explain this to you in greater detail—simply ask us for free booklets K-5 and K-6 which tell you why Timken Bearings are used in the majority of high grade cars at the points of severest service.



THE TIMKEN ROLLER BEARING COMPANY
Canton, Ohio



Drill Seed at Even Depth Bigger Crops

E-B patented extension spring pressure plants grain at uniform depth. Closed delivery opener deposits it in bottom of furrow. E-B patented feed cup prevents grain bunching or cracking. Dust proof disc bearings. Write for catalog and ask dealer to show you the E-B Drill.

Look for the E-B trade mark on the implements you buy. It's our pledge of quality and your guide to more profitable farming.



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Plows	Hay Tools	Tractors, Gas
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Name _____
Address _____

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That's what every man does who owns Properly Terraced, Ditched, Tile Drained or Irrigated Land. And if you don't want to sell, your increased yearly profits are just like turning waste land into cash. Progressive land owners in every State and practically every county in the Union have discovered that the only way to bring their land up to the desired state of production is to get a

Bostrom \$15 Farm Level

and make spare days the most profitable days. Also fills the bill for Grading, Road Building, Foundation Work, etc.

The Bostrom Farm Level has been on the market over thirty years, the latest improved having a Telescope with Magnifying Lenses which enable you to see the cross on the Target a quarter of a mile away. Man Size Tripod, Leveling Rod, Target, Plum-Bob and full instructions included. Weight, 15 pounds. It is used and endorsed by Agriculture Schools and U. S. Farm Demonstration Agents, and you will endorse it, too, after using it—if not Your Money Back, including express both ways. Write today for description of Level and Telescope, details of our Money Back Guarantee and names of nearest Jobbers to you.

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Not—and if you have a Sharples Suction-feed Separator you don't have to, for it skims equally clean *whatever* speed you turn. But with every other separator you must turn the crank at just *exactly* the speed stamped on it, or you will lose cream—every time! The wonderful Sharples Suction-feed varies the milk feed in *direct proportion to the separating force*—never more milk in the bowl than it can *perfectly* separate.

All other separators have a fixed milk feed. Thus when turned below speed much of the milk runs out without being perfectly separated, and some gets into the cream, making it thin and uneven. Thousands of actual tests have proven that 19 out of 20 persons do turn too slow most of the time, and that *everybody* turns too slow some of the time. Get a

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- the *only* separator that delivers cream of unchanging thickness—all speeds
- the *only* separator you can turn faster and finish skimming quicker
- the *only* separator with just *one* piece in the bowl—no discs, easiest to clean
- the *only* separator with knee-low supply tank and a once-a-month oiling system

Sharples is positive insurance against carelessness and its consequent cream waste. We realized that it was far from sufficient that a separator *could* skim clean when properly handled. It was vitally necessary that it *would* skim clean—even when improperly handled. If any of the old-style fixed-feed separators would adopt a device for the purpose of notifying the operator when he is turning too slow, it would be an acknowledgement of the *vast superiority* of Sharples, which automatically *prevents* losses from irregular turning instead of simply announcing them. Write today for catalog to Dept. 15.

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Made with either 4 or 6 inch boards, double-bolted between 8 angle steel uprights—not screwed or nailed. No nails to gather rust or pull out—no wood joints to collect water and rot. Can be furnished with Sliding Attachment.
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TOM McNEAL'S ANSWERS

Lending Money to Husband.

If a wife lends money to her husband and he gives her his note is it binding legally, the same as if he borrowed from a neighbor and gave a note therefor? A. O. F.

Yes. However if the husband is in debt to other persons and is trying to avoid payment on the ground that his wife was his first lien, the transaction always is looked upon with suspicion.

Cousins Forbidden to Marry.

In what states are first cousins forbidden to marry and what is the penalty? OLD SUBSCRIBER.

First cousins are forbidden to marry in Alaska, Arizona, Arkansas, Illinois, Indiana, Kansas, South Dakota, Missouri, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Washington and Wyoming. In most of these states such a marriage is declared incestuous and void. In Kansas contracting or solemnizing such a marriage, knowing the relationship, is a misdemeanor punishable by fine or imprisonment or both, the fine to be not more than \$1,000 and not less than \$100 and the imprisonment to be not less than three months and not more than five years.

Line Fences.

1. A owns the northeast quarter and B the remaining three quarter sections in the same section. B says that A must put in half of the fence or he will put a fence in a few feet on his land, and then A must put a fence all around his land. A says that B must put in all the fence as he uses his land for pasture and must keep his stock off A's cultivated land. How about it?

2. Is there any law that makes any difference whether land is cultivated or pastured so far as fence building is concerned?

3. Where can a book of Kansas laws be obtained? W. N.

If your county is what is known as a herd law county, A's contention would have been correct up to the time of the amendment of the herd law by the legislature of 1915. Chapter 353, Session Laws of 1915, in effect repeals the herd law and enables B in the case at hand to compel A to build his half of the partition fence.

2. No.
3. Write to secretary of state for revised statutes.

Rights of Property.

1. If I am correctly informed the laws of Kansas permit a married woman to earn money in any honest way she chooses and also gives her the privilege of spending the same without her husband's knowledge or consent. Suppose she invests her earnings in furniture necessary to the comfort of the home, can the husband sell this furniture without her consent?

2. Suppose a woman saves a penny now and then can she start and control a savings bank account if her husband objects?

3. If a woman works hard and earns merchandise coupons what do you think of the man who asks her to let him spend them? V. WRITER.

1. You are correctly informed. The wife has a right to earn money and to spend it as she sees fit.

2. She would have the right to buy furniture with her own money and claim it as her own individual property. Her husband would have no right to sell it without her consent.

3. She can start a savings bank deposit and have full control over it.

4. The United States postal regulations will not permit me to print what I really think of the man who will ask his wife to turn over to him the money or merchandise she has earned by her own labor.

The Torrens System.

1. Please explain the method of recording land titles under the Torrens system.
2. How and where should the money derived from the tax on automobiles be used according to law? WILLIAM DUTTON, Burlingame, Kan.

The Torrens land registration system derives its name from Robert Richard Torrens who introduced what was known as the "Real Property Act" in the South Australian parliament in 1857. Briefly the plan is to establish a basis for land titles back of which investigation is necessary and which in most cases the state or government is supposed to guarantee. In some states registration under the Torrens system is compulsory and in others is voluntary. Only estates in fee simple are entitled to first registration and only absolute titles are registered. Here is a summary of the course to be pursued where a title is to be registered: Summons is served in what amounts to an action to

quiet title. Nonresidents who may be interested are served with notice by publication. If there are objections to the title as declared they are heard and passed upon by the court. If there are no objections after a certain period the court enters a decree directing the registration of the title subject to whatever encumbrances there are and a certificate of title is issued in duplicate. The decree of the court becomes absolute within a certain prescribed period fixed by statute. This period varies in different states. For example, in Colorado and Washington it is 90 days, in Minnesota six months; in Illinois and Oregon two years and in California five years.

Upon all subsequent transactions with registered property, title vests upon registration. In other words it is intended to obviate the necessity of long and expensive abstracts.

2. The money derived from the tax on automobiles may be used in maintaining and repairing roads. The law does not seem to authorize its use in building roads.

Wants Information.

What is the number of the present Congress? Who is the Speaker of the National house of representatives? Who are the Kansas senators? Would also like a list of the officers of Kansas. READER, Carbondale, Kan.

The whole number of members of the 65th Congress is 435 members of the lower house and 96 Senators, divided politically as follows: In the lower house, Democrats 213, Republicans 122, Progressives 2, Prohibition 1, Independent 1, Socialist 1. Four seats contested and undetermined. In the Senate there are 54 Democrats and 42 Republicans. The Kansas Senators are Charles Curtis, Republican, and W. H. Thompson, Democrat.

The names of the state officials of Kansas are Governor, Arthur Capper; lieutenant governor, W. Y. Morgan; secretary of state, J. T. Botkin; treasurer, Walter L. Payne; Auditor, Fred W. Knapp; attorney general, S. M. Brewster; superintendent of instruction, W. D. Ross; commissioner of insurance, C. J. Wilson; state printer, William Smith.

Members of the supreme court, William A. Johnston, Rousseau A. Burch, Henry F. Mason, Silas Porter, Judson S. West, John Marshall and John S. Dawson.

The 64th Congress expired by limitation March 4. The 65th Congress, unless called together in extra session by the President will not convene until the first Monday in December, consequently at this time there is no Speaker of the Lower House. The Speaker of the Lower House in the 64th Congress was Champ Clark of Missouri.

Telephone Lines.

Some farmers are planning a telephone line to connect with the exchange in town and with another rural exchange. Would they do better simply to make it an individual affair; that is each farmer furnishing his part with no organization, or would they do better to organize in the regular way according to law? How should they proceed under the state law to organize as a telephone company and how much would it cost? How about taxes under the two methods? WESTERN KANSAS.

Your first suggested plan, is simply a voluntary partnership, and if all members will do their duty and keep up their part of the necessary expenses it may work as well as any other way. I have heard of a few cases of that kind where it seemed to work fairly well, but in most cases the corporation plan has been adopted, for the reason that it is more workable and more systematic. If you decide to organize a corporation write the secretary of state at Topeka and ask him to send you the necessary blanks.

After determining the amount of your capital stock make your application for a charter. The application will set forth the general scope, purposes and capitalization of your company. The secretary of state will give you specific instructions. The cost of obtaining the charter will depend on the amount of your authorized capital stock.

As to taxes if you form some sort of an organization, as I apprehend you must even if you do not incorporate, the individual telephones probably would be charged to each of the individuals participating while the property used in common such as poles, wires, office furniture, would be charged to the association. Unless your lines cross the county line the local assessor would determine the matter of how the property should be assessed.

Say you saw it in the Farmers Mail and Breeze.

The Dairy Barn is a Pantry

Be Sure to Keep Equipment and Air Clean in this Room, Where Milk Must be Exposed

AN OLD demand, with new emphasis, is being made upon the farmer. It is for clean milk. Dealers, consumers, and boards of health ever are becoming more critical in their requirements for a product free from contamination. College graduates are being employed as milk inspectors. In many communities dairymen are obliged to have a special producers' license from the city where the product of their cows is sold. But the farmer will be paid for his extra pains. His efforts to establish high standards must result in an increased demand and better prices. Milk is appetizing and its food value is widely known. People will use more when they can feel safe in drinking it.

There is a more or less general belief that expensive equipment, high priced cows, and much extra labor are required to produce a high quality milk. This is not the case. With a healthy herd, quarters easy to keep clean, and careful attention to details nothing else is required to produce a milk which is at once highly nutritious and wholesome, according to E. H. Farrington, dairy specialists, of the Wisconsin experiment station.

The dairy barn must be considered more as a kitchen than as a stable. Smooth white washed walls and ceiling and a cement floor, easy to clean, are of prime importance. Clean straw, sawdust, or shavings are found best for bedding, which should be dry and odorless.

One of the easiest ways to keep out the dirt while milking is the use of the covered pail. Sixty per cent less dirt and from 25 to 90 per cent less bacteria get into the milk when covered pails are used, careful trials have demonstrated. Layers of cotton and wire gauze placed over the small-topped pail do the business.

The good dairyman's vigilance is not relaxed when the milk leaves the stable, nor indeed until it is out of his hands. The cans, pails, and other utensils receive all the attention that the neatest housewife gives to her kitchen ware. To get rid of that sour smell takes thorough scrubbing and scalding. The rinsing water should be so hot that there is no need of drying with a cloth.

No matter how much care has been used in handling the milk it still will contain a large number of bacteria, which, if allowed to grow, taint and sour the milk. Cooling prevents this. Set the cans in cold water, or use a milk cooler, which allows it to pass in thin sheets thru pipes surrounded by well or ice water.

Every up-to-date dairy farm is provided with a milk-room. The convenience of this building for storing milk and keeping it cool until delivered to the buyer is well understood. The best location is a well-drained place not too handy to the pig-pen and the barnyard. A floor and watertank of concrete give the best service.

The chances are that when butter made from farm skimmed cream does not sell for the top market price it is because the separator is not taken apart and thoroughly cleaned after every skimming. In addition to this precaution, careful dairymen rinse the milk-receiving can and separator bowl with a quart or two of hot water just before running milk into the separator.

A rich cream testing 35 per cent fat or more is the most satisfactory to farmer and factory. The best separators will skim a rich cream as efficiently as a thin cream. More skimmed milk is left on the farm when a rich cream is sold.

There are other things besides the position of the cream screw which cause a variation in the butter fat test. A thin cream comes from the separator when:

The milk is excessively warm;
The speed of the bowl is too slow;
Milk is forced thru the separator too rapidly;

An excessive amount of skimmed or warm water is used to flush out the bowl when thru skimming;

A reduction is made in the richness of the milk skimmed.

A rich cream is obtained by:

Skimming cold milk;
Increasing the speed of the separator bowl;

Reducing the flow of milk into the separator bowl;

Keeping the bowl flushings out of the cream can;
Increasing the richness of the milk skimmed.

Cows from the Isle of Guernsey

The origin of the Guernseys so far as known is the same as that of the Jersey. The breeder has selected and bred for utility alone and has therefore developed a type of cow larger and more rugged than the Jersey. She is a heavier producer of milk, somewhat lower in butterfat content than that of the Jersey.

It has not been until recent years that Guernseys have been imported to America. Their popularity is so great at the present time, however, that greater numbers of them now are being brought in than of any other breed. Altho there is a comparatively small number of Guernseys in this country, rapid gains are being made. Their adaptability to our conditions and their general excellence have made these cows one of the most popular dairy breeds.

Colors are varying shades of red or fawn and white, the darker color predominating. Mature bulls weigh from 1500 to 1800 pounds. Cows range from 800 to 1100 pounds and give a fair amount of milk, averaging 5 per cent butterfat. The breed is similar to the Jersey in economic production of butterfat. A rich, yellow color is characteristic of Guernsey milk and butter and the breed is preferred by many because of that fact.

Feed Grain to the Cow on Pasture

A cow will produce more milk if fed grain while on pasture. If a large yield is of more importance than economy of production, grain certainly should be fed. The cow that gives a small quantity of milk will produce but little more, if fed grain while on pasture. However, with the heavy producing cow the case is quite different and it is necessary that she be fed grain or she will not continue on the high level of production long. A Jersey cow that is giving as much as 20 pounds or 10 quarts a day, or a Holstein or Shorthorn giving 25 pounds or more daily should be given some grain. Our practice in regard to feeding on pasture is about as follows:

Jersey cow producing—
20 pounds milk daily..... 3 pounds grain
25 pounds milk daily..... 4 pounds grain
30 pounds milk daily..... 5 pounds grain
35 pounds milk daily..... 6 pounds grain
40 pounds milk daily..... 8 pounds grain
45 pounds milk daily..... 10 pounds grain

Holstein, Shorthorn or Ayrshire producing—

25 pounds milk daily..... 3 pounds grain
30 pounds milk daily..... 4 pounds grain
35 pounds milk daily..... 5 pounds grain
40 pounds milk daily..... 6 pounds grain
45 pounds milk daily..... 8 pounds grain
50 pounds milk daily..... 10 pounds grain

It must be kept in mind that this applies only when pastures are abundant.

C. H. Eckles.

Is Your Cow from a Good Family?

No amount of feed or skill in handling will make a profitable cow out of one that does not inherit a strong tendency to give milk. This is why success with dairy cows depends so largely upon selection of the individual animal by keeping records of milk and fat production. On the other hand no matter how good a producer a dairy cow may be by inheritance she cannot give results without the proper feed and management.

C. H. Eckles.

Dairy Cows Work for Everybody

Whether as milk—raw, malted, powdered, or condensed; whether as cream—plain, whipped or iced; whether as butter, alone or in combination with other oils; whether as cheese in its many brands and varieties; whether as butter-milk; as kumiss, or as confection, the call for dairy products is one of the most insistent, universal, and exacting of all the demands of trade. An infant necessity, a standard food, a common luxury, is the milk of the dairy cow.

Eugene Davenport.

Say you saw it in the Farmers Mail and Breeze.

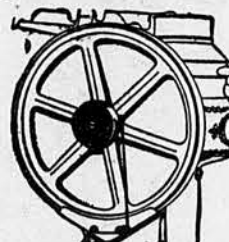
See the Difference BETWEEN THE NEW DE LAVAL AND OTHER CREAM SEPARATORS



YOU can see the difference between a NEW DE LAVAL and any other cream separator right away.

And five minutes spent in comparing the bowl construction, the size, material and finish of all the working parts, the manner of oiling, the tinware and the frames, will surely convince you of the superiority of De Laval construction and workmanship.

Then if you go a step farther and turn the cranks of the two machines side by side for fifteen minutes, running milk or water through the bowl, you will see still more difference.



Every New De Laval is now equipped with a Bell Speed-Indicator, the "Warning Signal" which insures proper speed and uniform cream.

Speed Indicators can be furnished for use on old style De Laval machines at a cost of \$3.00 each.

And if you will run the two machines side by side in practical use, as any De Laval agent will be glad to have you do—the De Laval one day and the other machine the next—for a couple of weeks, you will see still greater difference in the work of the two machines.

There is a De Laval agent near you who will be glad to explain all the improvements and advantages of the NEW De Laval, and who will set and start a machine for you on your farm and let you prove the difference for yourself.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for any desired information.

New Catalog will be mailed upon request

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"I have used three other makes. Yours beats them all. Costs a third less, skims closer and runs lighter." A. Andrews, Clinton, Oklahoma.

"It skims close and runs easy, is a dandy looker. Does more than claimed for it. You saved me \$50." W. M. Wickham, Flagler, Colo.

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Lily and Primrose separators skim down to the last drop of cream in each gallon of milk. You can't beat them for close skimming. They turn easily. The bearings oil themselves as you run the machine. They don't get out of adjustment—that is important. By turning a screw on the outside of the separator once in six months or so, you keep the bowl at the correct height, and this is positively the only adjustment necessary.

Next time you go to town, drop in and see the obliging dealer who handles **Lily or Primrose cream separators**. In the meantime, drop us a line, and we will send you some interesting reading matter about separators.

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Kow-Kure has a record of over twenty years' success in the prevention and cure of such diseases as Abortion, Barrenness, Retained Afterbirth, Milk Fever, Scouring, Bunches, etc. Most of these diseases spring from disordered digestive or genital organs, and Kow-Kure has strong medicinal qualities which tone up and permanently strengthen the entire system.

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FOR USE ON GENERAL IGNITION

Manufactured by NATIONAL CARBON CO.

National Carbon Co.
Cleveland, Ohio

Fahnestock spring-clip binding posts, no extra charge.

What Shall I Do, Doctor?

BY DR. CHARLES LERRIGO.

A Fine Suggestion.

I have just been over to see the governor of Kansas in behalf of you folks. I'm not exactly positive that I put things to him very clearly—I get rattled when I have to confront dignitaries—so I am going to take another turn at him right here, for it is an article of religion with the governor to read the paper from kiver to kiver. You see I've had a number of letters revealing home tragedies. One woman wrote me for advice about her 11-year-old boy who has never been able to walk, speak, or in any way exhibit human consciousness. Another case almost similar, was brought to my notice, in which for 20 years a mother has cared for a hydrocephalic child, without any aid or advice save that she procured at her own expense from local doctors. Several have asked advice about cases on the borderline of insanity. I have answered these letters with such comfort and advice as I could give, but it isn't enough. Aid from local doctors isn't enough. The treatment of mental diseases is something that requires expert knowledge. The only way to get it at present is to have the local doctors call an expert into consultation, a very expensive matter as to traveling and consultation fees.

Meantime our state hospitals have a staff of experts whose attention is confined wholly to the inmates of the institution with which they are connected. The many "borderline" cases, the cases of threatened trouble, the cases of actual trouble where the family refuses to let the beloved patient go, all must be wholly deprived of the valuable equipment and staff of our hospitals until they have actually been thru the proceedings of the probate court and a commitment procured.

I want the governor to have the state hospitals do "Extension" work, somewhat as the University of Kansas does it. These mothers should not be obliged to care for their defective children thru the long, dreary years without a word of advice from anyone. An arrangement whereby they might be in touch with the experts at the hospital by correspondence, or even by an occasional visit from one of the staff, would be of tremendous value in such cases. I venture to say it would result in many patients being cared for at home who now are lodged at the state expense.

So I am asking the governor to see that someone is appointed on his new board of administration who will take this matter as his especial charge and see that the forces already at the state's command are fully available to the general public. It is quite practicable as regards imbecility, insanity, and epilepsy, and I rather think it could even be extended to all chronic disabling infirmities, in connection with the medical department of the university.

Chicken Gizzards.

I should like you to give me the address of some house that makes medicine out of the lining of chicken gizzards. A. C. K.

Some of the big pharmaceutical houses make a preparation from the lining of chicken gizzards for use in the vomiting of pregnancy. The firm of William Warner, manufacturing chemists, Philadelphia, Pa., sells such a preparation under the name of Ingulin.

Epilepsy.

I have always been rather of the opinion that epilepsy is a very serious disease quite difficult of cure. A few weeks ago I published a letter from an epileptic and gave such advice as I could offer. Since then I have been surprised to find how many cures there are for this difficult disease. From 12 to 15 persons wrote to me asking that I instruct the patient to buy certain medicines which were a positive cure. Had these friends united on one or even two remedies I might have been greatly impressed. Unfortunately all named different remedies save two writers who did not give the name of the remedy but desired direct communication with the patient. Now, see what a position this poor unfortunate would have been in had I complied with the requests of my correspondents! She would have had to take at least 10 different remedies, all guaranteed to cure. You will see by this why I have not changed my opinion

that there is no specific cure for epilepsy. Most of the "cures" have certain bromides as a base. They do good to some patients and harm to others. By taking treatment of your family doctor you can get all the good they will give you, and may be saved the harm.

The Effects of Iron.

What effect does tincture of iron have on the blood? Can a person take too much iron and how should it be taken? What effect does oil of sassafras or a tea from the bark of sassafras have on the blood, and is too much of it injurious to the health?

AN INTERESTED READER.

Iron, in repeated doses, causes an increase in the number of red blood-corpuscles thus improving the quantity and quality of the blood. It is prepared in a hundred ways, but all of them are more or less astringent. It is therefore very likely to cause constipation and digestive disorders. The chief indication for its use is in anemia, especially in young girls at puberty and after wasting illnesses. Small doses are more efficacious than large. The best way to know how much to take is to follow a doctor's prescription.

As to oil of sassafras and the tea made from the bark, there is no special harm or good in taking it. The oil is capable of producing narcotic poisoning if taken in excess but the amount commonly used is quite harmless.

Care for the Scalp.

I am not 19 years old yet but as long as I can remember my hair has been easy to pull out even in combing. My scalp itches and is tender. I may have inherited this. Do you think you can get some remedy to cure this even if it is inherited? I want your honest opinion about it. Please give me a simple but good remedy. My hair is not so thick as it might be. What kind of hat do you advise to wear, felt or straw, low or high crown? A SUBSCRIBER.

Loss of hair is influenced to some extent by family tendency, but there is no reason to give up and let it go. It is necessary to keep the scalp clean. Some persons are so afraid of the effect of water upon the hair that they do not wash the head oftener than three or four times in a year. This is a mistake. The scalp and hair should be washed from once a week to once a month. Thorough massage of the scalp with the fingers should be practiced daily. Every day, too, there should be a good brushing with a brush stiff enough to stimulate the scalp without wounding it. Close-fitting hats that make the head sweat should give way to those that are light and well ventilated. At night the pillow should not be soft enough to allow the head to sink in and become moist with sweat; let it be of some firm material such as hair. A shampoo composed of glycerin, alcohol and tincture of green soap may be used every one to three weeks. After the shampoo the scalp should be anointed with a bland ointment or with equal parts of lanolin, glycerin and rose-water.

Erysipelas.

My mother has had the erysipelas on the face. Is it very contagious and can the disease be carried on the clothing? How long do the germs remain active, and is it necessary to fumigate the room and bed-clothing? Would you advise an operation for cataract? My mother is 74 years old and has been blind for about nine years. She can just distinguish light. Is there any way to know whether an operation would be successful? MRS. C. E. W.

Erysipelas is very contagious. I do not think germs would long survive the exposure of being carried on ordinary street clothing but it is well to be very careful. All sheets, towels, pillow-cases, should be boiled before going into use again. Be especially careful of exposing any cuts or other open wounds. Fumigating the room will do little good but everything in it should be scrubbed and cleaned as well as possible, and the sunlight given free admission.

A cataract operation at the hands of a competent man usually is successful. An experienced eye doctor will not operate unless the case is ready.

Health Notes.

L. J.:

The symptoms indicate a disease of the heart rather than gall-stones. Chest troubles in which shortness of breath is a marked symptom are more often due to functional derangement of the heart than anything else. Do not take any guess-work for so serious a matter. Correspondence is a poor way to diagnose heart disease. Have a thorough examination.

Here's Another.

Mrs. W. H. B.:

Note reply to "A Subscriber." When hair is very oily it is helped by a lotion composed of 1 ounce alcohol, 1 ounce rose-water and 2 drams lactic acid.

Butter and Eggs are CheaperBY W. H. COLE
Cowley County

Butter and egg prices have taken a tumble. Thruout the winter when we went to town with a market basket filled with nice, yellow rolls of butter we had no trouble in getting 35 cents a pound for it. If butter ever was worth that amount it is such butter. It is just as good now, but the price, at least locally, is around 25 cents. When good butter sells below that figure there ceases to be a profit in its production and one would better sell the cream and let the other fellow make the butter.

Just why eggs and butter, about all the farmers are selling now, should be so much cheaper is quite beyond the comprehension of the farmers who depended on the revenue thus derived to help offset the high cost of living.

We needed some harness oil recently. A dealer said it would cost \$1.50 a gallon. In another store we bought 2 gallons for 85 cents a gallon. Afterward a neighbor told us that the agent for a large oil concern had sold to him 5 gallons of the best harness oil for \$2.25 for the whole lot. It pays to inquire before buying.

We told about setting posts in concrete in a former issue. Now a reader wishes to know how we do it. The task is simple, and easier, we think, than tamping the dirt around the post, and is also much more satisfactory. We referred to setting the corners and brace-posts. Line posts seldom require reinforcing in this manner. It used to be the custom in setting corner posts for hog fencing, to dig a hole about 2 feet square and fasten a crosspiece on the bottom of the corner post. On this crosspiece was piled some flat rocks or oak planks, and by tamping the dirt well over these a very secure corner was made.

Such a corner required much work. Where one wished to set the post $3\frac{1}{2}$ feet deep, and none should be set less, it was the work of a half a day to get the work properly done if the ground was hard and dry.

We select for corner posts a hedge about 6 or 7 inches in diameter, and as straight as it is possible to get. The length may vary according to the depth which it is desired to set it and may also be determined somewhat by the height of the fence. Around the base of the post, about 6 inches from the bottom we cut a deep notch entirely around the post.

In digging the holes for the corner posts we use a 9-inch post auger and dig the holes usually 4 feet deep. After that depth has been reached a tiling spade is used to enlarge the bottom of the hole. The larger it is the better the post will hold, tho we think it unnecessary to enlarge it more than 6 or 8 inches. After this is done the dirt may be all taken out of the hole and the post put in place. Coarse broken stone may be tamped around the base of the post, and the remainder of the space filled with a good mixture of concrete and chat or gravel. A mixture of 1 part Portland cement, 2 parts of sand and 3 of chat or gravel gives very good satisfaction in such work.

The brace posts are placed in the same manner except that with them the enlargement of the hole is made at the top as that is the point where the most strain occurs upon them. With corners and braceposts erected in this manner, reinforced by good braces mortised in at both ends, one need have no fears of pulling them out with the most powerful stretchers.

We received recently, from an Iowa seed house, a bag of Northern oats bearing the fancy name of Regenerated Swedish Select. To give them a chance to live up to their name and reputation we are devoting considerable time and labor in getting them seeded in a fitting manner. The patch where we shall sow them is rich and has been double-disked, then plowed and harrowed. We shall roll it and it will then be drilled in such a manner that the oats may be cultivated. To do this the drill box is so fixed that only every fourth grain spout will allow the seed to run out. By putting on a half bushel to the acre a reasonably good stand should be obtained in every row. Such an adjustment will make the rows 21 inches apart.



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"On four gallons of kerosene it does more work than my neighbors' rigs do on five gallons of gasoline. Gasoline costs just twice as much as kerosene here."

—THOS. TAYLOR, Earl, N. D.

That is *real* saving—the kind that puts money in your pocket. And not only this man but *every* owner of an OILPULL has that kind of a cost cutter.

You want a kerosene burning tractor—make sure you get a *real* one.

We know what the OILPULL will do and for your protection we give an absolute written guarantee with every OILPULL tractor.

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We have a special catalog on the OILPULL—ask our nearest branch.

The same shops that build the famous OILPULL make the Advance-Rumely "8-16" two-plow tractor, the "12-24" three-plow and the well-known Rumely Ideal Separators, Hullers, Huskers, and Engine Gang Plows

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LA PORTE

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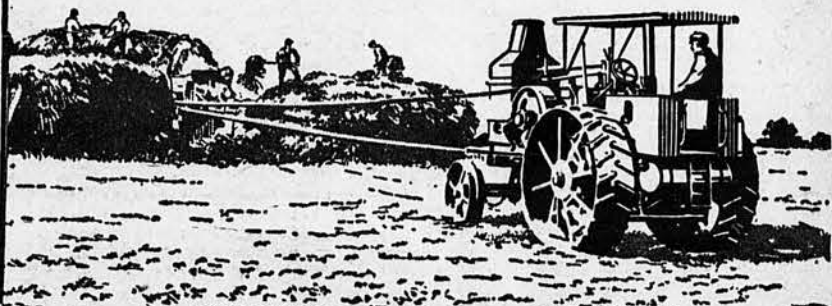
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Kills Prairie Dogs, Ground Squirrels, G. Hogs, Pocket Gophers. Saves alfalfa. Expensive installations approved. 1400 tablets, P. P. \$1.25. Warranted. Mole Tablets, 75c. Ask Druggist or send direct. Booklet Free. Ft. Dodge Chem. Co., Ft. Dodge, Ia.

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Stock need a spring tonic

Their whole systems have been *weakened* by winter conditions; yet now *all* animals need strength—for it is *freshening* time, *farrowing* time and *plowing* time. My Stock Powders are the most powerful tonic you can use—quickly put digestion in perfect condition, expel worms and purify the blood.

Dr. LeGear's Stock Powders

make cows yield more milk, meat animals gain weight faster, work animals stronger. Here's evidence:

"I began feeding Dr. LeGear's Stock Powders to 25 cows and within 2 weeks they were yielding 16 gal. more per day."—H. J. Koch, Sec'y, St. Louis Dairymen's Ass'n.

"Dr. LeGear's Stock Powders have proven the most valuable of all agents I ever used in the treatment of worms and general debilitated conditions in horses."—Dr. H. F. Dickson, President, Tipton Co. Board of Health, Covington, Tenn.

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Dr. LeGear's 112 page Stock and Poultry Book
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Dr. LeGear's Poultry Powder will make your birds develop faster, lay sooner and keep them healthy.

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Sure Hatch Chicks Make Money

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You get your money back and a nice profit too from the Sure Hatch in a few weeks. Be on the safe side. Sure Hatch Chicks are strong and healthy; that's the kind you must have to succeed.

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Do not send stamps or money. Just a postal with your name and address. We will send you our big, interesting and valuable Sure Hatch Catalog. Pictures and describes fully the Sure Hatch. Shows the photographs of many owners. Maybe some of your friends are there. Gives the secrets of successful Chicken Raising and Poultry Profits. Tells all about our Generous Offer of Free Fixtures. Free Uncle Sam Poultry Book and Freight Paid. Send that postal to us today. Early hatches pay best.

THE SURE HATCH, Box 14, Fremont, Nebraska
"Sure Hatch Chicks Make Sure Profits"

RESULTS

FROM EVERY HATCHABLE EGG. STRONG, HEALTHY, ROBUST CHICKS THAT LIVE! MAKES POULTRY BUSINESS PAY—MATCHES NEAREST OF ALL THE NATURAL PROCESS OF THE SETTING HEN.

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BUILT OF GENUINE CALIFORNIA REDWOOD. Egg chambers surrounded with special insulator having hundreds of air cells guard against temperature change. Corrugated copper hot-water heater, automatic ventilation and regulation. No dry, hot blasts to kill chicks in shell. Machines complete. Money back guarantee if not satisfied. Big Free Book explains all special details.

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155 EGG
Ready to Use

\$985 FOR BOTH

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1917 is going to be the biggest year known for poultry raisers. Start right—Get the Cyphers Book—A mine of information which shows the way. Write for free copy.

Cyphers Incubator Co.
Dept. 92 Buffalo, N. Y.

Tells why chicks die

E. J. Reefer, the poultry expert, 4583 Reefer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhea and How to Cure It." This book contains scientific facts on white diarrhea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

What a City Girl Did

This is my first year on a farm. Knowing nothing at all about the poultry business all my ideas have been gleaned from newspapers, principally the Farmers Mail and Breeze. I have 60 Barred Plymouth Rock hens. I sold none last fall as I did not understand how to cull my flock successfully, and the price in the early spring is so much higher than in the fall that I concluded to keep all of them and try to produce eggs when eggs are high.

Our henhouse was large enough but was built very poorly. There was no foundation so I had it banked with earth entirely around the outside. Then a 6-inch layer of straw was put on the inside and the nests were filled with straw after being lined with newspapers. There were four windows on the south. The panes were nearly all broken so I had these removed and the spaces covered with bran sacks in imitation of the open front idea. A load of straw was also placed in the yard upon which to feed the hens.

I always feel better when I can get outdoors, so unless the day is extremely bad I let the hens out. Every morning and evening I give them five ears of corn and a quart of oats. These are mixed in the straw so that the hen has to work to get her meal. Always I keep before them a dry feed of bran, shorts, and meat scraps in equal parts. Not having a self-feeder I had some large mesh chicken wire put over the top of a shallow pan in which to keep this feed. Grit and oyster shells are always before them. In addition I give them 6 quarts of clabber milk and plenty of fresh water. When the weather is extreme I give them warm water four times a day.

These hens, from October 1 until the present, have produced an average of a dollar a day in eggs. I sell all my eggs to buyers who want strictly fresh eggs and never keep an egg longer than a week even during this weather. I have averaged about 40 cents a dozen for them.

This is not a great achievement but I have had little experience and also have had to get along with the inferior equipment of a rented farm. But I certainly think it pays to winter the hens.

Linnie Marshall.

Basehor, Kan.

A Menu for Little Chicks

We keep about 250 purebred Rosecomb Brown Leghorns which laid 2,781 dozen eggs from January 1, 1916 to January 1, 1917. We sold 2,541 dozen, receiving \$556.80 and the rest were consumed on the farm. I use two 150-egg incubators, setting them three times last year with 843 chicks hatching.

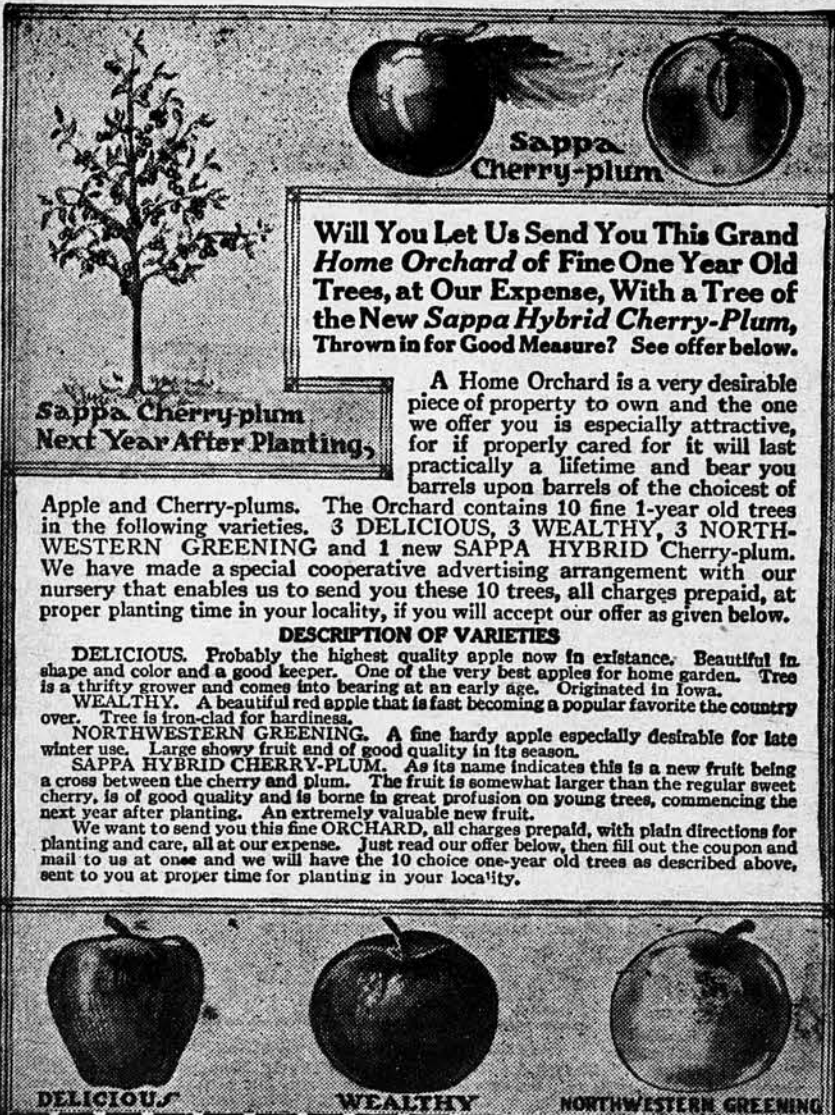
We pick out our best hens February 1, and to every 15 hens we have one rooster. We do not inbreed as that makes weak chicks. I start my incubators about February 10 to get the chicks out early, for early hens make the winter layers. We choose nice, even shaped eggs, start the incubator, and let it run until we get a steady temperature of 101 degrees. Then the eggs are inserted and I hold the temperature between 102 and 103 the first week and for the rest of the hatch turn three times a day, morning, noon, and night, and the last week air until the eggs feel cool to the back of the hand. Stop turning and airing the eighteenth day, and don't move the tray until the hatch comes off. Hold the temperature at 104. When the hatch is finished take out the tray and leave chicks in the incubator for 48 hours with the door partly open. Then take chicks out and put in brooder and feed sand first, then give rolled oats and hard boiled eggs mixed with cornmeal. Sprinkle feed with a little black pepper five times a day. Water one hour after feeding. Feed rolled oats and cracked corn, wheat, and kafir, until 6 weeks old; add a bran mash at that time of 8 parts bran and 2 shorts mixed with sour milk. From then on keep them on full feed, and the pullets if properly fed will be laying in from six to seven months.

Mrs. H. Lee Smith.

Kanopolis, Kan.

SAVE YOUR CHICKS—FREE.

The Wight Co., B. 17, Lamoni, Iowa, wants to give every Poultry raiser a 50c box of Iowite White Diarrhea Remedy for a few minutes' work at home. Write for offer.—Advertisement.



Sappa Cherry-plum

Will You Let Us Send You This Grand Home Orchard of Fine One Year Old Trees, at Our Expense, With a Tree of the New Sappa Hybrid Cherry-Plum, Thrown in for Good Measure? See offer below.

A Home Orchard is a very desirable piece of property to own and the one we offer you is especially attractive, for if properly cared for it will last practically a lifetime and bear you barrels upon barrels of the choicest of

Apple and Cherry-plums. The Orchard contains 10 fine 1-year old trees in the following varieties. 3 DELICIOUS, 3 WEALTHY, 3 NORTHWESTERN GREENING and 1 new SAPPA HYBRID Cherry-plum. We have made a special cooperative advertising arrangement with our nursery that enables us to send you these 10 trees, all charges prepaid, at proper planting time in your locality, if you will accept our offer as given below.

DESCRIPTION OF VARIETIES

DELICIOUS. Probably the highest quality apple now in existence. Beautiful in shape and color and a good keeper. One of the very best apples for home garden. Tree is a thrifty grower and comes into bearing at an early age. Originated in Iowa.

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NORTHWESTERN GREENING. A fine hardy apple especially desirable for late winter use. Large showy fruit and of good quality in its season.

SAPPA HYBRID CHERRY-PLUM. As its name indicates this is a new fruit being a cross between the cherry and plum. The fruit is somewhat larger than the regular sweet cherry, is of good quality and is borne in great profusion on young trees, commencing the next year after planting. An extremely valuable new fruit.

We want to send you this fine ORCHARD, all charges prepaid, with plain directions for planting and care, all at our expense. Just read our offer below, then fill out the coupon and mail to us at once and we will have the 10 choice one-year old trees as described above, sent to you at proper time for planting in your locality.

DELICIOUS WEALTHY NORTHWESTERN GREENING

Farmers Mail and Breeze, Topeka, Kansas.

I enclose \$1.40 for which send me the Farmers Mail and Breeze for one year and the 10 guaranteed one year old trees, postpaid, as my premium.

Name.....

Postoffice.....

R. F. D.Box.....State.....

The Prize List is Growing

Many Friends in Kansas are Backing Poultry Club Girls

BY MARY CATHERINE WILLIAMS, Club Secretary

HERE'S more good news for the Capper Poultry Club girls. Every week so many interesting things happen I scarcely know what to tell you about first, but this time I think you will all agree the biggest and best thing is the \$100 worth of breed club prizes offered by our kind friends from all over the state. We are proud and glad to have these valuable trios and cockerels but the part we value most is the friendship and good wishes that prompt the offers. There is nothing that puts heart and inspiration into folks so much as the knowledge that someone believes in them and has faith that they are going to do their best and come out on top, and there is not a girl in the Capper Poultry Club but will find added joy in the care of her chickens and the keeping of her records because she knows there are so many good friends backing her and wishing her success.

Of course you wish to know who these friends are and the breeds in which prizes are offered. Don't think the breeders who offer the \$5 cockerels are any less generous than the ones who give the \$10 trios, for everyone who wrote offered the trio first and then the cockerel in case he was too late for the trio to be accepted. Here is the list:

Single Comb White Leghorns.
Trio—C. E. Heaton, Partridge, Kan.
Cockerel—Mrs. Roy Brown, Fredonia, Kan.
Single Comb Brown Leghorns.
Trio—Detwiler Egg Farm, Jewell, Kan.
White Wyandottes.
Trio—S. Peltier, Ideal Poultry Farm, Concordia, Kan.
Cockerel—H. C. Nielsen, Osborne, Kan.
Silver Laced Wyandottes.
Trio—Earl Wood, Grainfield, Kan.
Rose Comb Rhode Island Reds.
Trio—R. E. Wooten, Cedar Hill Poultry Yard, Goodrich, Kan.
Cockerel—Guy McAllister, Lyons, Kan.
Buff Rocks.
Trio—J. K. Hammond, 315 South Green St., Wichita, Kan.
Cockerel—Mrs. Will Kowing, Winfield, Kan.
Mottled Anconas.
Trio—Mrs. Clara McPheeters, Baldwin, Kan.
Single Comb Black Minorcas.
Trio—Victor E. Hawkins, Randolph, Kan.

Counting trios at \$10 and cockerels at \$5, we have \$100 right here and I should not be at all surprised if we have several prize offers in other breeds and varieties to report next week.

When to Figure Prices.

Now for some questions that have been asked since last time. You do not need to stop to figure up the cost of feed every day when you put down the amount used. Once a week is often enough to work these little problems in arithmetic. Once a week is often enough also to put down the value of the eggs used on the family table. Put down the number every day, however, or else ask mother to have a special place to keep the eggs for cooking and tell you every time she uses a dozen.

Fully a third of the girls now enrolled in the Capper Poultry Club have sent in their farm flock report blanks and begun to keep records. Please don't put this off too long, those of you who haven't begun, because when you let a thing drag and drag along you are likely to lose interest. And don't wait too long to decide about your 20 purebred chicks.

If you are going to send away for eggs you had better be doing it because it may take a few days for the order to be filled. It is best to order a few more than 20 eggs so as to be sure of having 20 sound chicks hatched. Accidents will happen, you know, even with the best of us. I am advising the girls to wait until the 20 chicks are about 10 days old before filling out the entry blanks because if a chick dies after the purebred flock is entered it cannot be replaced.

Here is a letter you will be glad to read from Dollie Kill of Nemaha county. She says, "I told my schoolmates about the Capper Poultry Club today and some of them are eager to be members and said they would ask their parents about it and let me know tomorrow. I have two blanks and I shall get another Saturday for I have been saving every copy of the Farmers Mail and Breeze since the club began. I will work as hard as I can to get other members. I have written to Bess Randall of Corning. I wanted to get acquainted with her and I am eager to know what breed of chickens she has."

"Our chickens are doing fine. I wish you could see them, they are so pretty. The first week in March our 36 hens laid 141 eggs. I feed them well and they keep me busy carrying water to them. I had better stop writing now, but I want to say one thing more. I think Governor Capper is just grand and sometime I hope to see him." If Dollie keeps on showing this much enthusiasm she will make a good county leader, I think. Don't you? Her hens are doing mighty well, too, aren't they? Let's hear how many eggs some of the rest of the girls have gotten since they began record keeping.

Just Like Crackerjack.

Leona Peltier of Cloud county is another girl with lots of pep. Leona wrote, "My chickens are doing fine for this time of year and it is great fun to keep a record of what we make from them every day. Record keeping is like crackerjack. It says on the box, 'The more you eat, the more you want,' and the club is the same way. The more you write, the more you like it, and the more you read about the Capper Poultry Club, the more you want to read. I can hardly wait for Saturday to come to get the Farmers Mail and Breeze to see what is going on about the club."

We have no more full counties to tell you about this time, but at least a dozen counties need only one more girl. These counties are Atchison, Brown, Clay, Dickinson, Douglas, Greenwood, Lyon, Pottawatomie, Reno, Riley, Sherman, Sumner and Washington. Let's see if the girls in these counties haven't pep enough to get the missing member in time for their names to be printed next week. We want five girls in every county in Kansas to join us. You do not have to wait to be asked. All you need do is to fill out the blank here and mail it to the club secretary. The first five girls in a county who apply are the ones accepted.

Say you saw it in the Farmers Mail and Breeze.

The Capper Poultry Club

Mary C. Williams, Secretary, Capper Building, Topeka, Kan.

Please consider my application for membership in the Capper Poultry Club. If chosen, I will comply with all the club rules and will do my best to win a prize.

My name is Age

R. R. Postoffice County

I approve this application and agree to help the contestant if she is chosen.

..... Mother or Guardian.

Secure the Signatures of Two Farm Women Here.

The applicant is personally known to us. She is in every way worthy of consideration for membership. If selected, we believe she will do her best and will make a record that will be an honor to our county.

Age limit 10 to 18 years. Only one girl in a family eligible to membership.

Wins in the Two BIGGEST HATCHING Contests Ever Held

Why take chances with untried machines when for only \$11 we guarantee to deliver safely, all freight charges paid (East of Rockies), BOTH of these big prize winning machines fully equipped, set up ready for use?



150 EGG

Galvanized Iron
Asbestos
Insulated Board
with cheap, thin
metal and painted
like some do, to
cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't class this galvanized iron covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boilers, self regulator, Tyco's Thermometer, glass in door, set up complete ready for use and many other special advantages fully explained in Free Catalog. Write TODAY or order direct from this advertisement.

Both for \$11 Freight Paid East of Rockies

30 Days Free Trial

Money Back if not Satisfied

MADE OF CALIFORNIA REDWOOD

150 Chick Brooder

IRONCLAD INCUBATOR COMPANY, Box 107, Racine, Wis.

109 Chicks From 118 Fertile Eggs

"My first X-Ray hatch is 109 fine, sturdy chicks from 118 fertile eggs."

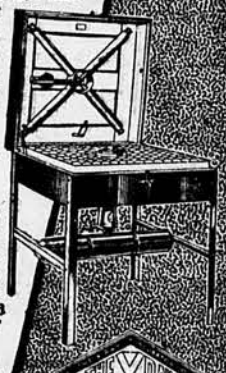
MRS. J. B. WERNETTE, Remus, Mich.

Learn why the 1917 X-Ray Incubator is the greatest incubator ever created. Five New 1917 Innovations—the new X-Ray Egg Tester, the new X-Ray Nursery Tray, the new X-Ray Gas Arrestor, the new Quick-Cooling Egg Tray and the new Handy Height design at no increase in price.

The 1917 X-Ray Incubator Has 20 Exclusive Hatch-Increasing Improvements

Completely hatches on one gallon of oil (one fill-ing). Fill the tank, light the lamp, and you are through. Duplex Central Heating Plant—directly underneath, furnishes natural, moist Mother Hen Heat. X-Ray Automatic Trip regulates the flame—no cold corners—no overheated sides. Express prepaid to practically all points. Write Right Now for Free 1917 Book.

X-RAY INCUBATOR CO., Des Moines, Iowa



\$9.25 Buys 140-Egg Size World's Champion Belle City Incubator

The Prize Winning World's Champion Model with Fibre Board, Double-walled Construction—Hot water—Copper Tank—Thermometer

Holder—Deep Nursery—Self-regulating—same as used by Uncle Sam and America's most successful Poultry Raisers—that has led the field for over ten years. Over 524,000 satisfied users—When ordered with my \$5.25 Double-walled—Hot-water—Roomy—140-chick Brooder—Both cost only \$13.50.

Freight Prepaid

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Conditions easy to get biggest prize. Start early—order now. With this wonderful hatching outfit and my complete guide book for setting up and operating, you are sure of success. And with it comes my Big Catalog, "Hatching Facts", or I will send this book free for the asking. Write me today. Jim Robson, Pres.

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If Ordered Together, Freight Paid East of Rockies. Hot water copper tanks, double walls, dead air space, double glass doors, all set up complete, or 150 Egg Incubator and Brooder \$12.75. FREE Catalogue describing them. Send for it TODAY or order direct.

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Steel Liceproof Galvanized Nests. Send name today for booklet "POULTRY PROFITS PROTECTED" Catalog of Steel Liceproof Nests, Coops, etc. These nests will pay for themselves in more eggs. Satisfaction Guaranteed. Acorn Sheet Metal Mfg. Co. 3809 E. 18th St., Kansas City, Mo.

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White Diarrhea is caused by a germ, transmitted through the yolk, which multiplies rapidly after the chick is hatched. There is scarcely a hatch without some infected chicks, and before you learn which ones are affected, they have infected the whole brood. The germs can be killed by the use of preventives and they should be given as soon as chicks are out of the shell. The only practical, common-sense method is prevention.

HOW TO PREVENT WHITE DIARRHEA

Dear Sir: I have raised poultry for years and have lost my share of little chicks from White Diarrhea. Finally I learned of Walker's Walko Remedy for this disease, so sent for two 50c packages to the Walker Remedy Co., L. 6, Waterloo, Iowa. I raised over 500 chicks and never lost a single one from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor—they develop quicker and feather earlier. I have found this company thoroughly reliable and always get the remedy by return mail. Mrs. L. L. Tam, Burnetts Creek, Indiana.

DON'T WAIT.

Don't wait until White Diarrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send for 50c box on our guarantee—your money back if not satisfied. Walker Remedy Co., L. 6, Waterloo, Ia.—Advertisement.

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Beat it with a FISH BRAND REFLEX SLICKER \$3.50

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Without obligation send me free catalog, copy of guarantee, sample and booklet "10,000 Miles on One Set of Tires."

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Hatching With Hens is a Trouble

I prefer the incubator for several reasons. The hens are a lot of trouble to manage, and, then, I can have a hundred or more chicks of the same size and hatch them while the hens are all laying, and in three weeks hatch another hundred. There is much to know about running an incubator that must be learned by experience and careful observation. I have had very good success with mine, having used it for several years. I once hatched 123 guineas from 125 fertile eggs.

I select the best eggs I can obtain when using an incubator. My machine holds 150 eggs, and while saving enough to fill it I turn them once a day. I have the incubator ready for use, so I fill the tank with hot water, fill and light the lamp, turn the flame medium high, put a newspaper in the bottom of the wire tray, lay the thermometer on paper, adjust the regulator and close the doors. I leave the machine alone for a few hours, then look at the thermometer, which should register 102 degrees. If the temperature is too high I turn the flame down a little.

When I get the machine to running at the right temperature for about twelve hours, I take out the wire tray and close the doors. Then I set the tray on top of the incubator, carefully lay the thermometer to one side, take out the newspaper and place the eggs on the tray in rows with the little ends all one way. Then lay the thermometer on the eggs about the center of the tray, put the tray back in the incubator and close the doors. In about four or six hours I look at the thermometer. The book of instructions that goes with the machine will tell you exactly how to adjust the regulator.

I run my incubator at 102 degrees for the first two weeks, then the animal heat from the chicks will run the temperature up to 103 or 103½. I take the egg tray out and turn the eggs with both hands, one row at a time. I let them air every morning while I am filling and cleaning the lamp. Several times a day I look at the thermometer to see if all is going well. I turn the eggs twice each day until they begin to hatch. The temperature will run up several degrees at this time, and if the weather is warm the flame should be turned down a little. I take the empty shells out at intervals to give more room on the tray and to keep them from slipping over the other eggs and causing the chicks to die in the shells.

When a good many are hatched and well dried, I take them out and put them in a warm box and set them on top of the incubator. I do not take out too many, as that will cause the temperature to fall, which hinders the others from hatching well. When I decide that all are hatched which are fertile I put them in boxes or baskets and set them on top of the incubator to keep warm. I keep the lamp burning for two or three days and nights if the weather is cold, as I have no brooder. When they are 24 hours old I give them a drink. I put them in a pen outdoors when they are 2 days old if the weather is not too cold. When they want to be hovered I put them in a warm room. If the weather is very cold I put an extra covering over the top of the box. My chicks always grow rapidly, and do well. Mrs. W. W. Weaver.

Bryan, Tex.

Hatching Ducklings

Most ducks do not sit until late in the season, consequently the eggs must be hatched either in incubators or under hens. We breed the Buff Orpington ducks which start to lay in January and continue steadily until July or August before becoming broody. The eggs are large and average a third more in size than chicken eggs. We place about 100 duck eggs in our 150-egg incubator. The temperature should be about 102 the first week and 103 the remaining time.

We do not turn or cool the eggs for the first three days. Then they are turned twice daily until the seventh day when we test, removing all that are clear. After this we cool and turn the eggs twice daily, allowing them to cool about 10 minutes before turning and gradually increasing the time of cooling until the twenty-fifth day, when the machine should be left closed until the hatch is completed.

Remember that it will take a duckling about two days to come out of the shell after the egg is pipped.

After the eggs have been tested, now

and then an egg will have a marble appearance; all such eggs should be removed. Another important thing in hatching duck eggs is the question of moisture. Most incubators are equipped with moisture pans, and we keep these full of wet sand from start to finish.

The eggs are sprinkled about once daily after the eleventh day with water heated to 105 degrees; this is discontinued after the twenty-fifth day. Duck eggs generally are fertile and it is no uncommon occurrence to hatch 90 strong ducklings from 100 eggs.

Mrs. Fred Sieglinger.
Stillwater, Okla.

Incubating the Duck Eggs

Nearly everyone understands how to manage chicken eggs with incubators, but little is written about hatching duck eggs. The duck business is becoming important and profitable. Most ducks do not get broody until late in the season, consequently the eggs must be hatched in incubators or under hens.

We breed the Buff ducks, which start to lay in January and lay steadily until July or August before becoming broody. The eggs are large and average a third larger than chicken eggs. We place about 100 of the duck eggs in our 150-egg size incubator. The temperature should be about 102 degrees the first week and 103 the remaining time.

We do not turn or cool the eggs during the first three days. After this we turn the eggs twice daily until about the seventh day, allowing them to cool only while turning. Then we test the eggs, removing all that are clear. After this we cool and turn the eggs twice daily, allowing them to cool about ten minutes before turning and gradually increase the time of cooling until the twenty-fifth day, when the machine should be left closed until the hatch is completed.

Remember that it will take a duckling about two days to come out of the shell after the egg is pipped.

After the eggs have been tested, now and then an egg will have a marble appearance. All such eggs should be removed. Another most important part in hatching duck eggs is the question of moisture. Most incubators are equipped with moisture pans, and we keep these full of wet sand all the time.

After the eleventh day we sprinkle the eggs about once daily with water heated to 105 degrees until the twenty-fifth day. Duck eggs generally are fertile and it is no uncommon occurrence to hatch 90 good strong ducklings from 100 eggs.

To secure a good hatch from the hen, dip the eggs in lukewarm water about the seventh day and replace at once under the hen. Do this every five or six days. This helps to produce a good hatch and increases the vigor of the ducklings. This rule also applies to goose eggs. Sunny Slope Farm.

Stillwater, Okla.

Feeds for the Chicks

I start my incubator and run it until I understand how to keep it regular before putting any eggs in. I turn the eggs half over twice one day and once the next for 10 days; after that they need no turning at all. Few cripples hatch. In the hot air incubators a saucer of moistened sand is placed under the tray and needs to be wet a little every day; the hot water machines do not need the wet sand. I leave my little chicks in the tray until dry. They are not watered nor fed until 36 hours have passed, and the first feed is scorched egg shell and sand with stale light bread crumbs. I continue feeding lightbread crumbs until they are about a week old.

Then kafir is parched in the oven, letting some of it burn so they will be sure to have some charcoal. The kafir is ground in a coffee mill and is fed with a little lightbread, plenty of clean water, and grit of any kind. This is the menu until the chicks are about 3 weeks old. I am careful not to feed too much at one time until the chicks get a good start. When 3 weeks old I quit feeding the chicks lightbread, but about once a week I put a pinch of salt in the drinking water. About ¼ of a level teaspoonful to 1 gallon of water is enough. Gradually the chicks learn to use raw feed. It is not necessary to grind the feed when they are able to eat it easily. Chicks cared for this way will not have bowel trouble, as the charcoal keeps it off. Mrs. Carrie Dazmang.

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Canada Offers 160 Acres Land Free to Farm Hands Bonus of Western Canada Land to Men Who Assist in Maintaining Needed Grain Production

The Demand for Farm Labor in Canada is Great. As an inducement to secure the necessary help at once, Canada will give one hundred and sixty acres of land free as a homestead and allow the time of the farm laborer, who has filed on the land to apply as residence duties, the same as if he actually had lived on it. Another special concession is the reduction of one year in the time to complete duties. Two years instead of three as heretofore but only to men working on the farms for at least six months in 1917. This appeal for farm help is in no way connected with enlistment for military service but solely to increase agricultural output. A wonderful opportunity to secure a farm and draw good wages at the same time. Information as to low railway rates may be had on application to

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Better Results With Alfalfa

BY L. E. CALL

An experiment to determine the best method of treating soil formed from interbedded sandstone and shale to prepare it for alfalfa has been conducted in Allen county near Carlyle. Alfalfa was sown in the fall of 1914 on ground that had previously been inoculated, about one-half of which had been underdrained with tile. A series of plots laid off to extend across both the drained and undrained areas of the field were treated, before seeding, with manure, lime and commercial fertilizers. The manure was applied at the rate of 10 tons an acre, ground lime rock at the rate of 3,000 pounds an acre, acid phosphate at the rate of 250 pounds an acre, and muriate of potash at the rate of 50 pounds an acre. The manure and lime were applied before seeding only, but the commercial fertilizers have been applied every season. The following table gives the average yields of the alfalfa with different treatments and the average yield of the drained and undrained acres for 1915 and 1916.

Fertilizer.	1915.	1916.	Total
Unfertilized.....	1233	1975	3208
Lime.....	1805	2960	4765
Manure.....	2653	3827	6280
Manure and Lime.....	2851	4720	7571
Acid Phosphate and Lime.....	2130	3763	5893
Acid Phosphate, Potash and Lime.....	2219	3880	6099
Drained.....	2551	3855	6406
Undrained.....	2149	3415	5564
Difference.....	402	440	842

The alfalfa on the unfertilized ground has produced a total yield of 3,208 pounds. The crop made a poor growth, was very weedy, and the alfalfa plants weak and sickly. This plot undoubtedly will be taken by weeds in another season. When lime alone was used the yield was 4,765 pounds and the plants were much more healthy. Barnyard manure alone increased the yield to 6,280 pounds and where used with lime to 7,571 pounds. The plot receiving acid phosphate and lime produced 5,893 pounds while potash in addition to lime and acid phosphate increased the yield to 6,099 pounds. The underdrained ground produced, on the average, 842 pounds more hay than the undrained ground.

The test shows that alfalfa cannot be grown successfully on unfertilized soil of this character but that lime, manure, or fertilizer greatly improves its growth. Lime or manure alone will insure a profitable stand, but the combination of the two is much better. When manure cannot be obtained, acid phosphate or some other commercial fertilizer supplying phosphorus can be used profitably. Potash was not profitable, altho it increased the yield slightly. Underdraining produced a marked increase in yield and undoubtedly will extend the life of the crop.

Potatoes That Will Pay

Potatoes may be planted in Kansas any time between March 10 and April 1, according to F. S. Merrill, assistant professor of horticulture in the agricultural college.

"In the Kaw River Valley potatoes are planted as soon after March 17 as possible," said Mr. Merrill. "In the Eastern part of the state they are cut so a seed piece contains one well developed eye, while the growers in the Western part prefer to plant two-eye pieces."

"Only clean seed typical in form for the variety wanted should be selected for planting. For this purpose Northern grown seed usually is preferred as the home grown seed stored under average conditions has been found to be less productive."

"If the seed is affected with scab it should be treated before planting by dipping from 1½ to 2 hours in a solution made from 1 pint of 40 per cent formaldehyde and 30 gallons of water. The seed should then be spread out and allowed to dry in the sun before cutting."

"The ground should be prepared carefully and if possible should be fall plowed. The seed must be planted from 3 to 5 inches deep. The distance between the rows varies from 32 inches in the Eastern part of the state to 3½ feet in the Western part."

Better wells are needed on most places in Kansas. They provide drouth insurance of a most valuable kind.

Frozen cream will not make the best butter.

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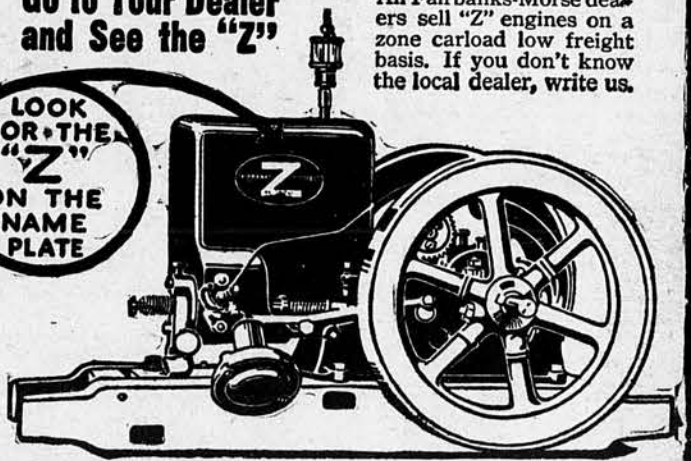
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All Fairbanks-Morse dealers sell "Z" engines on a zone carload low freight basis. If you don't know the local dealer, write us.

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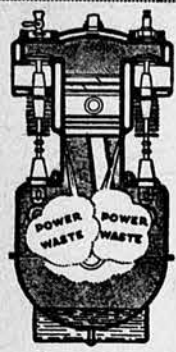
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THE only thing that sends power through the engine is the gas explosion.

If the combustion chamber is sealed tight the explosion acts with full force on the piston head.

But unless the combustion chamber is kept tightly sealed, part of each explosion escapes. The result is weakened power, and wasted gasoline.

Right here sealing the piston rings comes in as an important factor. Only one thing can prevent escape of power past the piston rings. That is a proper piston ring seal.

Your lubricating oil must provide this seal. But piston clearances vary in different types of motors—from .002 of an inch to .010 of an inch. Different motors therefore demand oils of different body.

Today thousands of cars are wasting power and gasoline with every piston stroke—simply because their lubricating oil does not properly seal the piston rings. Compression is lost. Part

of each explosion escapes past the piston rings.

This power-loss means waste of gasoline on level roads. It means also lessened power on the hills.

In the chart below you will find the correct grade of Gargoyl Mobiloils for your car. Among the many important factors entering into the determination of the correct grade, the piston clearance in your motor was given careful consideration. The oil specified will give your engine a proper piston ring seal.

If your car is not listed, a copy of our complete Lubricating Chart will be sent you on request.

Remember—a proper piston ring seal means more power on the hills—more mileage from your gasoline.

An Economical Demonstration

It will probably cost you less than a dollar to fill your crank case with the correct grade of Gargoyl Mobiloils. The results will speak for themselves.

In buying Gargoyl Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyl on the container.

For information, kindly address any inquiry to our nearest office.



Mobiloils

A grade for each type of motor

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Gargoyl Mobiloil "A"
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Gargoyl Mobiloil "E"
Gargoyl Mobiloil "Arctic"

In the Chart below, the letter opposite the car indicates the grade of Gargoyl Mobiloil that should be used. For example, "A" means Gargoyl Mobiloil "A," "Arc" means Gargoyl Mobiloil "Arctic," etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.

Model of	1917	1916	1915	1914	1913
CARS	Summer	Winter	Summer	Winter	Summer
Abbott-Detroit (8 cyl)	Arc	Arc	Arc	Arc	Arc
Allen (Mod. 33-34-35)	A	A	A	A	A
Apperson (8 cyl)	A	A	A	A	A
Auburn (6 cyl)	A	A	A	A	A
Avery (Mod. 58 C 1 ton)	A	A	A	A	A
Briscoe (8 cyl)	A	A	A	A	A
Buick Cadillac (8 cyl)	A	A	A	A	A
Cadillac (8 cyl)	A	A	A	A	A
Casa (Mod. 6-30)	A	A	A	A	A
Chandler Six	A	A	A	A	A
Chrysler	A	A	A	A	A
Cole (8 cyl)	A	A	A	A	A
Dart (Mod. C)	A	A	A	A	A
Detroit (8 cyl)	A	A	A	A	A
Dodge	A	A	A	A	A
Dort	A	A	A	A	A
Empire (4 cyl)	A	A	A	A	A
Federal (6 cyl)	A	A	A	A	A
Ford	A	A	A	A	A
Franklin	A	A	A	A	A
Grant	A	A	A	A	A
Haynes (12 cyl)	A	A	A	A	A
Hudson	A	A	A	A	A
Hudson (Super Six)	A	A	A	A	A
Hummel	A	A	A	A	A
I.H.C. (air)	A	A	A	A	A
I.H.C. (water) (2 cycle)	A	A	A	A	A
I.H.C. (water) (4 cycle)	A	A	A	A	A
Interstate	A	A	A	A	A
Jeffery (6 cyl)	A	A	A	A	A
Kim	A	A	A	A	A
Kim (8 cyl)	A	A	A	A	A
Kim (6 cyl)	A	A	A	A	A
Model of	1917	1916	1915	1914	1913
CARS	Summer	Winter	Summer	Winter	Summer
Kiesel Kar	A	A	A	A	A
Com? (Mod. 48)	A	A	A	A	A
Leaumont	A	A	A	A	A
Locomobile	A	A	A	A	A
Marmon	A	A	A	A	A
Maxwell	A	A	A	A	A
Mitchell	A	A	A	A	A
Mitchell (8 cyl)	A	A	A	A	A
Moline	A	A	A	A	A
Monroe	A	A	A	A	A
Moore (4 cyl)	A	A	A	A	A
National (12 cyl)	A	A	A	A	A
Oakland	A	A	A	A	A
Oldsmobile (8 cyl)	A	A	A	A	A
Oldsmobile (6 cyl)	A	A	A	A	A
Overland	A	A	A	A	A
Packard (12 cyl)	A	A	A	A	A
Com? (Mod. 36-38)	A	A	A	A	A
Paisley	A	A	A	A	A
Com? (Mod. 36-38)	A	A	A	A	A
Pathfinder	A	A	A	A	A
Peerless (8 cyl)	A	A	A	A	A
Pierce Arrow	A	A	A	A	A
Com? (Mod. 36-38)	A	A	A	A	A
Premier	A	A	A	A	A
Royal	A	A	A	A	A
Reo (8 cyl)	A	A	A	A	A
Saxon	A	A	A	A	A
Sears-Knight	A	A	A	A	A
Stephens (8 cyl)	A	A	A	A	A
Studebaker	A	A	A	A	A
Seutz	A	A	A	A	A
Vellie (4 cyl)	A	A	A	A	A
Westcott	A	A	A	A	A
White	A	A	A	A	A
Willys-Knight	A	A	A	A	A
Willys Six	A	A	A	A	A
Winton	A	A	A	A	A

YOUR TRACTOR

also may be lubricated efficiently with Gargoyl Mobiloils. On request we will mail you a separate Chart specifying the correct grade for each make and model of tractor.

VACUUM OIL COMPANY, Rochester, N. Y., U.S.A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

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The "Six" Drives In

My car is a Studebaker "6", 1914 model and it was driven home from St. Joseph, June 1, 1914. It is a 7-passenger car and in some ways I think a lot of these big heavy cars, and in others I am not so fond of them. There is plenty of space between the seats. Many times when we go to town we take two 30 dozen cases of eggs and a can or so of cream, in addition to the family of five or six persons. Sometimes when we start home we will have flour, sugar, empty egg cases, bundle after bundle and a few boxes of freight hauled from the depot, as we farm folks always try to accommodate our neighbors as well as ourselves.

On the other hand these long, heavy cars represent too much money to be used in chasing over the roads for everything that comes along as the upkeep gets rather heavy in time. Then, too, we can't go over all kinds of roads as some persons do with lighter and shorter cars. My opinion is that if one has a heavy type car he should have a light cheap car to do the knocking around with and to drive in bad weather.

Speaking of the upkeep on my Studebaker, we get an average of 10 miles to the gallon of gasoline. I use the Red Crown but in cold weather I prefer gasoline of a higher test. It costs a little more but is worth more as we not only get more mileage but it is more satisfactory in other ways. In using cylinder oil I always thought we use too much as we must have a quart for every 40 to 45 miles. I always have used Polarine until last year when I began using Monomobile oil because it is a little heavier and after a car has been used for more than two years I think heavier oil should be used than when it is new. After the piston rings get worn some of the oil passes them more and there is more smoking in the exhaust pipe, so heavier oils are better.

When my car was purchased it was equipped with 34 by 4 Goodrich tires and I bought a Mansfield for the extra. We ran 5,500 miles before a tire blew out

When sickness in the family or some other cause creates a heavy drain on his income, the average citizen economizes. Not so with those who now have their hands on the national treasury. With a 300 million shortage in Uncle Sam's pocket-book, more than 800 millions called for this year by the regular preparedness program; and war or no war, probably a billion of extra war expenses to be incurred besides the effort to fasten universal conscription and a huge standing army of from 1 to 2 million men on the country—no move is being made whatever toward reducing other governmental expenses. The 38-million-dollar public building graft, the 38-million-dollar rivers and harbors graft are drifting thru Congress just as if the supply of public money was unending and unlimited and as if the taxpaying citizen had more cash than he knew what to do with.

and we never had a puncture. In 6,640 miles travel we have stopped but three times on account of tire trouble and the other times were because of lack of pressure. The Goodrich tires are still on and apparently good for another 1,000 miles at least. When we had tire trouble we simply put on the extra tire and when we got home the Goodrich was put on again.

Our tires were only guaranteed for 3,500 miles but after almost twice the guaranteed mileage they still are good. We always are careful to keep the tires inflated and if the car is to stand for more than a week without use, tire saving jacks are placed under every wheel. I have four jacks so when we drive in the garage it only takes about 2 minutes to place them under, then the weight is off the tires and they are ready until we want to go again.

Like all car owners I have had some minor troubles but we do all our own repairing except what must be done in the big shops, and that keeps down expense. But now after using a car for so long it seems as if it would be almost impossible to get along without one, and judging from the loads we haul it seems as if it should be a big car, too. I have hauled empty 55 gallon gasoline

barrels, and have taken veal calves to market. In fact, most of us farmers do our running around in the "automobilius wagon." I hope the Missouri Ruralist's experience meeting will be a good one and I shall be interested in finding out if any other car owner has set of tires that can exceed mine in mileage. One front tire never has been off the rim.

R. 2, Rea, Mo.

L. R. Crockett.

Six Years Faithful Service

Yes, we like our old motor car fine. It is a Maxwell, purchased in 1910. We have driven it more than 10,000 miles and are not inclined to consider the investment a bad one. During the more than six years use we have not paid out more than \$175 for new tires and repairs. And the expense for gasoline and oil has been very reasonable. We would not do without a car at any price and believe every farmer should have one if possible as the farmer needs a car more than does the business man in the city.

The folks at our farm are very busy and we do not "joy ride" much but we use the car whenever we can both for business and pleasure. Cost of upkeep can be kept down by careful driving, especially when traveling over bad roads. We try to miss most of the glass and wire in the road. There is no need to be in a great hurry as one can get over a lot of ground in a day even if the speed limit is 15 miles an hour.

It is a wonder how some motor cars hang together the way drivers jam them around. I think the motor car is almost a necessity on the farm, but it should be handled intelligently. Good cars can be purchased so cheaply now that almost any good farmer would be justified in buying one. Our car has not cost us as much as a team and buggy would for the same length of time.

Arbela, Mo.

F. M. Riebel.

Sudan Grass for Kansas

Eight years ago the United States Department of Agriculture obtained from the agricultural inspector at Khartoum, Egypt, 8 ounces of the seed of a grass which the natives there called "garawi." This garawi was grown under cultivation in the lower valley of the Nile River, but its real home is farther up this great river in the semiarid Sudan, where it has been found growing wild by travelers. The natives seem not to value this grass highly either in Egypt or in Sudan, and the inspector at Khartoum was surprised at the enthusiasm it awakened in the United States.

Sudan grass belongs to the same botanical group as the cultivated sorghums, and is related closely to ordinary sorghum. The grass is now well known thruout Kansas. Practically all the Sudan grass in the United States has come from this 1/2-pound sample obtained in 1909. No other introduction of the department ever sprang into such immediate popularity.

Sudan grass is not a money crop in the ordinary meaning of that term, nor is it a soil improver. It must be used, therefore, to supply roughage or hay for farm stock. There may come a time when it will be grown for the Kansas City and Fort Worth markets, but there seems to be no immediate prospect of this. I can readily see where such a practice might be found profitable. If a man's corn crop has been ruined by continued wet weather during the planting season or his wheat crop has been destroyed by the Army worm or the Green bug, there would yet remain time to plant and grow a crop of Sudan grass hay. No market rating has been established for Sudan grass hay, but there is little doubt that it could be sold at a fair price on any of the Western hay markets if it were properly cured and baled.

The farmers in Eastern Kansas will use it frequently as a catch crop, seeding it in preference to millet when they feel the need of an emergency hay crop. In the Western part of the state where alfalfa and other tame hays cannot be produced successfully, Sudan grass should be quite generally grown. Properly handled it is quite as dependable a crop as sorghum or millet, and the quality of the hay is better than that of either of these crops. These statements are based on actual experiments at the Hays and Tribune experiment stations.

Why not state-owned fuel alcohol plants?

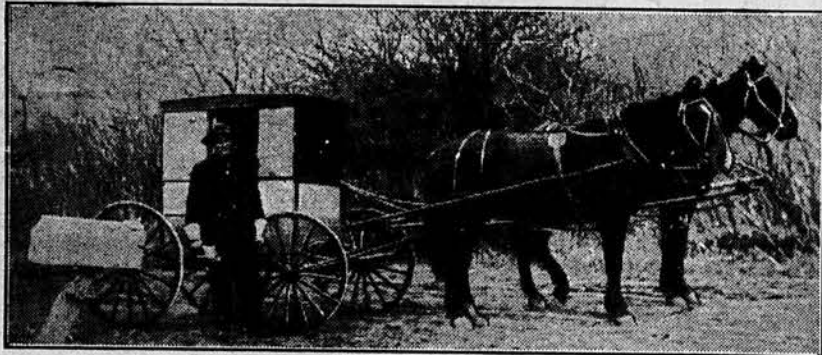
Rural Delivery Helps Farming

The growth of the rural delivery service has been one of the constructive developments in rural life in the last 20 years. It has done more for the upbuilding of the agriculture of Kansas than is appreciated generally. It will do a great deal more in the next few years, with

assistance and counsel in matters in the interest of labor:

We wish to take this opportunity of expressing our sincere appreciation of the interest, counsel and consideration which you have given legislative matters of interest to the different labor bodies of the state. Your untiring activity in our behalf we believe has been of great help in securing what legislation finally was passed in the interest of labor.

We also wish to take this opportunity of



The Rural Free Delivery of Mail Has Done More for the Progress of the Agriculture of Kansas than is Appreciated Generally.

the growth of the parcel post business.

Much of the success of the rural route service in Kansas has been due to the high standards of the men in this work. With almost no exceptions they have been faithful and efficient. They are using the same high intelligence in developing the parcel post end of the service.

Higher Prices for Eggs

Higher prices can be obtained for eggs from the average community if better marketing methods are used. Good suc-

cess is being produced in many places by co-operative organizations. Other men are selling by parcel post. No matter how one sells it pays to market the eggs promptly, and to get them to the consumers in a clean, attractive condition.

expressing to you our belief in and support of the course you have chosen in administering the affairs of state during your term of office. We believe the businesslike methods you have adopted have proved successful and of great value to the state and its citizens. Your example could well be followed by other governmental officials and bodies.

Therefore, we extend to you not only our hearty thanks for the able assistance you have given us as representatives of labor, but also our genuine appreciation, as citizens of Kansas, of the manner in which you have conducted yourself as governor of our state. We further wish to promise you our hearty support and co-operation in the further services you may render to the state of Kansas and her citizens.

The note was delivered to Governor Capper by Glen Willett, of the Brother-



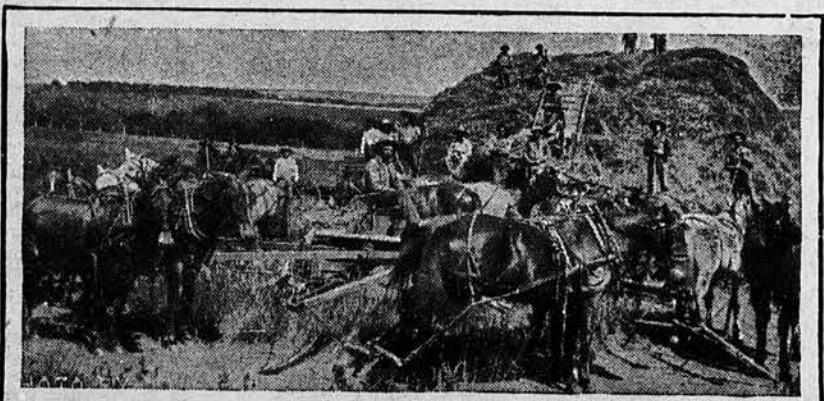
If You Were the Consumer Instead of the Producer, Which Tray Would You Buy From? Apply the Golden Rule.

cess is being produced in many places by co-operative organizations. Other men are selling by parcel post. No matter how one sells it pays to market the eggs promptly, and to get them to the consumers in a clean, attractive condition.

Power from the Horses

Kansas farmers are past the day when the threshing power must be developed by horses. That is a fortunate thing, especially for the animals. The develop-

ment of the progress of grain separation from the days when power was supplied by horses to the era of the tractors of today represents a great step in progress.



Threshing with Horse Power, Before the Day of Steam and Gas Engines. Many Horses Were Injured at This Work.

ment of the progress of grain separation from the days when power was supplied by horses to the era of the tractors of today represents a great step in progress.

Labor Thanked the Governor

Representatives of the labor organizations who have been working for labor legislation before going home at the end of the session, addressed this note of appreciation to Governor Capper for his

of Railway Trainmen; Glen Willett, Brotherhood of Locomotive Firemen and Engineers.

Baste small squares of lawn under lace where buttonholes are to be worked and cut away the surplus when the work is completed. This gives firm, durable buttonholes.

Pour boiling water over potatoes to be baked, drain them and place them in the oven and they will bake in less time and have a better flavor.



What happens when your automobile oil gets heated

Sediment test shows how ordinary oil is destroyed by heat and causes friction. 60c to make test will save you over \$50.

The heat in your automobile engine, tractor engine, or in any internal combustion engine, ranges from 200° to 1000°. All ordinary oil breaks down under this terrific heat. After only a few hours of running a large volume of sediment is formed. The heat causes about one-half of the oil to lose all lubricating value.

The sample of oil shown here was taken from a crank case after 500 miles of running. It is by no means the worst example. It is typical of all ordinary oil.

Engineering tests show that about 50% of ordinary oil is turned into sediment in ten-hour runs and the engine loses four to five horsepower.

How sediment causes permanent damage

If you look at the inner surfaces of your automobile engine with the naked eye you will say that they are perfectly smooth. But if you examine them under a microscope you will find they are actually covered with sharp points and depressions. These metal surfaces will slide easily against each other only when covered with a substantial film of liquid lubricant.

Oil that contains sediment causes metal to metal friction because the sediment takes the place of a large part of the liquid oil. Then the metal surfaces are pressed together. And the microscopic teeth grab and cut in. That means friction, wear and expense.

How to reduce sediment 86%

The small test bottle shown to the left, contains a sample of Veedol, the lubricant that resists heat. This sample was also taken after 500 miles.

Notice that there is only 5% or 6% sediment in Veedol as against 50% in the case of ordinary oil. This means that Veedol reduces sediment 86%.

The Faulkner Process

Veedol is unlike ordinary oil because it is made by the Faulkner Process. This is a new discovery used exclusively by this company, that gives Veedol its remarkable heat-resisting and wear-resisting properties. New equipment for this process cost over \$300,000.

• Ordinary automobile oil cannot be

made like Veedol and cannot have the same lubricating properties. Veedol resists heat, does not evaporate rapidly, does not carbonize if your motor is in good condition—and finally, reduces sedimentation 86%.

60c to make test will save you over \$50

Five gallons of Veedol will only cost you about 60c more than five gallons of ordinary oil. And with five gallons of Veedol you can drive 2000 to 5000 miles—possibly two or three times the mileage you get from ordinary oil. Thus you can easily compare costs.

Since sediment is the chief cause of friction and wear, when you eliminate 86% of the sediment you save friction and save expense. Users of Veedol say these savings run from \$50 to \$115 a year.

Make the test as follows:

Clean out the crank-case of your engine. Fill it with kerosene. Run your motor at thirty seconds under its own power. Draw off all kerosene and refill with Veedol.

Then make a test run over a familiar road, including steep hills and straight level stretches. You will find your motor has acquired new pickup and hill-climbing ability. It will have less vibration and will give greater gasoline mileage.

Veedol is the ideal lubricant for all gasoline engines—automobile, motor boat, tractor and stationary engines. One test will prove to you the efficiency of this wonderful heat-resisting lubricant.

Buy Veedol today

Over 12,000 dealers sell Veedol. Each dealer has a Veedol Lubrication Chart which specifies the correct grade of Veedol for your car or tractor for both Winter and Summer use. If you cannot get Veedol, write for name of dealer who can supply you. Buy a can of Veedol today.

A convenient pouring device is supplied with each metal container.

Supplied in—

Sealed Cans

1/2-gal., 1-gal., 5-gal.

Steel Drums

15-gal., 28-gal., 55-gal.

Oak Barrels

28-gal., 50-gal.

Guaranteed when sold in the original package.

Send 10c for 88-page Book

Send 10c for our new 88-page book on the construction and lubrication of automobiles, motor boats, tractors and stationary engines. No other book at any price contains as much information on this subject.

PLATT & WASHBURN REFINING COMPANY

1878 Bowling Green Building

New York

Use Grease of Tested Quality

The Sediment Test shows you how far Veedol exceeds ordinary oil; Veedol Grease is equally superior to ordinary grease.

There is a Veedol grease for every purpose:—

1. VEEDOL CUP GREASE, where the housings are not tight.

2. VEEDOL GRAPHITE GREASE—For general lubrication, springs and water pump.

3. VEEDOL-TRANS-GEAR COMPOUND—For gears

where the housings are not tight.

4. VEEDOL-TRANS-GEAR OIL—For gears enclosed in tight housings.

For washing your car try Keal, the new soap.



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Once Grown
Always Grown

213 bushels of shelled corn to the acre. That is the record one farmer made with Maule's Improved Mastodon Corn. Our 40th Anniversary Offer to American farmers is seed for this phenomenal cropper. Packet 10c., 30c. per pound postpaid. By express or freight not prepaid; pk. 85c., bu. \$3.00.

The Maule Seed Book
176 pages full of valuable
gardening information. Free

Every lot of Maule's seed is tested for germination. Our direct-to-planter method insures economy and freshness of seeds.

WM. HENRY MAULE, Inc.
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CLOVER \$4.75 Per Bu

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DECIDED BARGAIN—INVESTIGATE and Save Money
Red Clover and Timothy mixed—the standard grasses, cannot be surpassed for hay or pasture. Contains 1-3 clover, just right to sow. Thoroughly cleaned and sold on approval, subject to government test. Ask for this mixed seed if you want our greatest bargain. Have Pure Clover, Sweet Clover, Timothy and all Field and Grass Seeds. Write today for free samples and 100-p. catalog. A. A. BERRY SEED CO., BOX 535 CLARINDA, IOWA

TREES SAVE 40 Per Cent.

Don't plant a tree, vine or shrub till you get our "cut-to-the-bone" prices. Everything for orchard and farm at saving of at least 40%. **FREE FRUIT BOOK** also Seed Booklet, sent postpaid. Forty years of experience stands back of our guaranteed. **WICHITA NURSERIES & SEED HOUSE**, 200 Sehell Bldg., Wichita, Kans.

Buy Trees At Wholesale

and Save Agents' and Dealers' Profits.
Apple trees \$7.00 per 100; Peach \$7.00 per 100; Cherries \$11.00 per 100; Concord Grapes \$2.00 per 100; Dunlap Strawberries \$2.25 per 1000; Everbearing Strawberries \$2.50 per 100. Everything in Fruit trees, Plants and Ornamentals at money saving prices. Send for our **FREE CATALOG**
HOLSINGER BROTHERS NURSERY, BOX 108, ROSEDALE, KANSAS.

HYDE'S TESTED SUDAN

Hyde's Sudan is tagged—Showing exact purity and germination. Why take a chance? We ship direct from farm to farmer. Hyde's pays the freight and refunds your money if not entirely satisfied. **FREE CATALOG** and Price List sent postpaid—Write at once.
HYDE SEED FARMS, 300 Hyde Bldg., Pattonburg, Mo.

50 CONCORD GRAPE VINES \$1

25 Budded Peach Trees, \$1.00;
25 Grafted Apple Trees, \$1.00,
and many other bargains in exceptionally high-grade nursery stock. Vigorous, hardy, guaranteed. On request, we'll send you our illustrated catalog and a due bill for 25c free. Write today.
FAIRBURY NURSERIES, Box J, Fairbury, Nebraska

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You need good, fresh, reliable Seed for Garden, Field or Flowers. Write for our 1917 catalog and price list. It is mailed FREE.
David Hardie Seed Co., Dallas, Texas

100 Everbearing Plants \$1.75

Progressives, Americas & Superb.
200 \$3.00, 500 \$6.50. Spring plants 200 \$1. Everbearing Red Rasp. 25 \$1. Cat. full of fruit bargains free.
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NOW! All This For Only \$2

Six 1-year cherry trees, \$1.50.
Twenty 1-year peach trees, \$2.00. Regular value \$3.50. Order now and get all for \$2—cash with order. Big bargain. Quick.
BIG FRUIT BOOK Send your name for Free Fruit Book. **FREE** Fine! Interesting! Filled with bargains.
KANSAS CITY NURSERIES, 420 Reliance Bldg., Kansas City, Missouri

RELIABLE WINFIELD TREES

PURE-BRED—TRUE TO NAME
Direct from Grower at Wholesale Prices. New FRUIT BOOK with Colored Plates FREE.
COOPER & ROGERS, Box E, Winfield, Kansas

Potatoes Saved by Dynamite

BY F. S. MERRILL

One of the most practicable demonstrations of the value of dynamite on the farm was shown by Grant Kelsey of Kiro, Kan., during the summer of 1915. Mr. Kelsey is one of the leading potato growers of the Kaw Valley. Thru his intensive methods of cultivation and crop rotation he had always been successful in producing paying crops during the seasons of insufficient rainfall, but these were not adequate in competing with the conditions that existed in 1915. This period was marked by an unusual amount of rainfall, the station at Manhattan reporting as follows for the potato season:

March, 1915	2.1 inches
April, 1915	2.14 inches
May, 1915	9.45 inches
June, 1915	6.69 inches
July, 1915	12.01 inches

Because of his careful system of soil management the fields were well drained during the lighter rains of the early part of the season. Many growers had lost nearly their entire plantings, but Mr. Kelsey had maintained a good, healthy growth of both the vines and the tubers until the crop was nearly mature.

At about this time an unusually heavy downpour completely flooded the fields, and the subsoil, already water-soaked by the earlier rains, was unable to absorb the excessive amount of surface water, which in many of the lower spots was nearly a foot deep.

Every experienced potato grower is well acquainted with the results of such a condition and knows that if the water is not drained off immediately the vines will be destroyed and the nearly mature tubers in the ground will rot before they can be dug and marketed. This fact had been previously demonstrated to the potato growers of the Kaw Valley during the floods of 1903 and 1907. The heavy rains had also filled the roadsides, so they could not serve as

by the standing water. The value of the work did not cease here, however, for the subsequent rains and resulting ponds were as speedily drained away by the first set of drainage holes. These resembled small craters after the water had been drained away, and during the time the work was being done, the water passed thru as readily as thru a drain pipe. While these may not serve as permanent drainage assets, since the plowing and cultivations have since filled in the upper parts of these channels, nevertheless, during the spring of 1916, the drainage was much better where the work had been done than in other parts of the field.

Altho Mr Kelsey was able to save the crop from his entire field, many of the other growers throughout the valley were less fortunate, for wherever the fields were undrained the vines were killed in a few days and the entire crop was lost.

In speaking of the work, one of his neighbors stated that he firmly believed it would have been possible and very profitable to have practiced the same method of drainage and thereby have saved the crops on poorly-drained spots. The success of this work has created many followers to the standards of vertical farming, and has definitely demonstrated that the uses of dynamite are manifold, even on a well-managed farm.

Grazing Maintains the Fertility

BY LYMAN CARRIER.

There is no system of agriculture that maintains the fertility of the soil better than grazing, especially where the animals are kept continually on the pastures. Some of the best pastures in Southwestern Virginia have been grazed for at least 100 years. Many of them have never been plowed. The difficulty in getting a good sod on land that has been cropped with grain for a few years has proved the wisdom of keeping the land permanently in grass. It must be borne in mind that there are striking differences in methods of grazing. Where beef cattle or sheep are grazed, all of the resulting manure is left on the pastures, and the land is further enriched if the animals are given additional feed during the winter. This usually is not the case on dairy farms, where the cattle spend much of the time in yards or stables. It is often remarked that "the pastures are robbed to keep up the fertility of the plowed fields."

Perhaps one of the greatest sources of loss of fertility from pasture soils results from the poor location of the shade trees and brush. These should always be set on the higher portions of the field, and not along the banks of running streams, as so often is the case. With good grass, the animals do not graze more than one-third of the time; the rest of the time is spent lying down or standing in the shade fighting flies. Hence, much of the manure that is made does not get back directly on the land that produced the grass. If the manure produced while the animals are not grazing is deposited on the tops of the hills, its beneficial effects on the grass may be noted for several rods down the hillsides. It is easy to believe that if one-half to two-thirds of the manure is lost from pasture fields and none is added, the crops must gradually deteriorate.

Very little labor is necessary to keep a good pasture in first-class condition. All loose stones and rubbish that are removed give that much more space for grass plants to grow. All brush or trees not needed for shade or other purposes should be cut or deadened by girdling.

In addition to the above suggestions, all tall-growing weeds should be mown at least once a year, preferably just before they form seed. It is a common practice in Central Kentucky and in some other sections of the bluegrass region to mow the weeds. This is done with a mowing machine if the fields are sufficiently smooth; otherwise, by a man with a scythe. The difference in the appearance of fields in localities where weed mowing is practiced and where it is not is very striking. Mowing usually will hold in check most of the common weeds, such as ragweed, oxeye daisy, thistles and briars. A few sheep on cattle pastures have been found very efficient in keeping down many troublesome weeds.

Say you saw it in the Farmers Mail and Breeze.

FREE Sample SEED CORN

15 varieties of Seed Corn are shown on our FREE price list—write for one TODAY. Plant Stocker seeds and get the results you want. Before you buy be sure and get full details from us. A postal card brings the price list and free sample.

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true to name. Well grown Cherry trees only 10 cents each—Reduce the high cost of living by planting fruit and berries—have all the canned fruit and jellies you need.
SEED CORN Standard varieties per bushel.....\$1.75
Everything at bargain prices. Send for our free catalog—chuck full of bargains. A postal will do.
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GOOD SEEDS

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

Corn Saver Beet

Double your hog profits. Feed them Corn Saver Beets this year. Great for cattle, especially dairy cows. Keeps them healthy. Costs less than half of corn or grain feed. Imported originally from Germany. Rich in sugar and other fat-producing qualities. Grow large—as big as 25 pounds. Our largest yield was 40 tons per acre. Write us today and let us tell you more about it.
Write for Big, New 1917 Seed Book
A postal brings it to you free, postpaid. Worth having. Full of Garden and Field Seed bargains. It also about our many new varieties, such as Rhoad's Kaffir Corn, White Rhoad's Oats, White Wonder Millet, etc. Come to headquarters for your seed. Buy Lincoln Brand Seeds and get the best. We are biggest dealers in alfalfa. Write us. Get our Special Seed Supply Catalog. Address
GRISWOLD SEED AND NURSERY CO.
Dept. X 139, Lincoln, Neb.

SEED CORN

ECHTENKAMP'S BIG
yielding Seed Corn was picked before freeze. Each ear is fire dried on a rack with air and steam heat. Sure to grow because germ is preserved. Also Clover, Alfalfa, Oats, Rye and Garden Seeds. Write for catalog—it is FREE and it will save you money. Address
Echtenkamp Seed House, Arlington, Neb.

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With your order for any one of the following assortments at 75c per assortment, we will send absolutely free one handsome Mallow Marvel. For 75c we will send your choice of 12 grafted Apple Trees; 12 Budded Peach Trees; 12 Rhubarb; 100 Strawberries; 12 Raspberries; 25 Asparagus; 12 Blackberries. Send for Free Catalog—its full of bargains.
WELLINGTON NURSERIES, Box 351, Wellington, Kansas

SEED The Guaranteed Kind CORN

Raid's Yellow Dent and Boone County White. Hand selected, Butted and Tipped, Shelled and graded, \$2.50 a bu.; 5 bushels or over \$2.00 a bu. Cash with order. As I have only a limited amount to offer, better order right now while you're thinking about it and not be disappointed, and remember it's absolutely guaranteed or your money back.
S. G. TRENT, BOX B, HIAWATHA, KAN.

EVERGREENS

38 Hardy Tested Varieties
Best for windbreaks, hedges and lawn planting. Protect buildings, crops, stock, gardens and orchards. Hill's Evergreens are Nursery grown and hardy everywhere. From \$1 to \$10 per hundred. Hill's Evergreen book and 50 Great Bargain sheet sent free. Write today. World's largest growers. Est. 1855.
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SEED CORN

ELLER PRIZE-WINNER
The best ever offered. The sensation at Ames Corn Show. Produced 139 bu. to acre in 1914, 1st prize again this year. Only 6,000 bu. to sell. Selected from 35,000 bu. Properly dried, carefully tested and guaranteed. Several standard varieties. Get Free Catalog today. Read about the wonderful corn. Order early. Get best selection for bumper crops.
ELLER SEED CO., 407 McKinley St., Jefferson, Tenn.

The Little Farm

There's a little farm that nestles in the shadow of a hill;
It's a lonely spot in winter when the earth is white and still;
When the tempest makes your heart ache with its bitter, wailing sigh,
And the roads are all unbroken, and a storm is in the sky.

There's a rocky bit of pasture where the huckleberries grow;
It's a quiet place in winter, 'neath the ghostly sheet of snow;
And the vines that twine their tendrils all about the stony wall
Are the wraiths of creeping woodbine that was scarlet in the fall.

There's a time I can remember at the twilight of the day,
When the shadows growing purple, look like forms that kneel to pray;
When a little mother standing in the window strikes a light,
And the lamp-shine glimmers golden all across the winter night.

There's a little farm that nestles in the shadow of a hill,
And a group of memories haunt me—I am sure they always will.
For a boundless love, far reaching, stretches toward me where I roam,
And my heart is lonely, sometimes; for that little farm is home!

—Christian Herald.

Give Gardens a Chance

The production from the average garden in Kansas can be increased greatly if more work is done on it. The high cost of living makes it all the more important that the gardens should yield a larger share of the food for the family. This will be a good thing, as it will aid in conserving health and in creating more satisfactory living conditions.

The main thing needed with the farm gardens in Kansas is to give them more

and it is worked thoroly and made clear of weeds. Any soil that will grow root crops is good for strawberries. I use hen manure as a fertilizer. This supplies the nitrogen. No other manure is so rich in the substance required by the plant to insure abundant foliage, and it aids in the setting of fruits. My main source of potash is wood ashes from the furnace. I apply the fertilizer early in the spring before time to plant. This insures a thoro incorporation with the soil before it is time to set the plants.

There are many varieties, both early and late, but I have found the Wilson strawberry is the best. This variety is early and is a good yielder and a strong grower. It will give a fairly good crop, even when abused. I usually gather from 3 to 6 quarts a day. We eat strawberries three times a day and have some to sell to the neighbors.

Chanute, Kan.

W. B. Jolly.

Short Time Lease an Evil

After a careful survey of conditions affecting the tenant farmer in our county I find that the one ambition of the renter is to own a farm. The land owner expects the tenant today to produce interest and taxes on \$100 land under the same conditions that affected the owner when the land was worth only \$30 an acre. It can't be done without plenty of capital, and if the tenant possessed the capital he'd be a land owner instead of a tenant.

The tenant farmer's bugaboo is the one year lease. The only repairs he can afford to make are temporary repairs. The land owner doesn't want to buy posts so you must go out in the timber pasture and cut persimmon stakes or a scrub oak, which may last until fall if you don't get too much rain. My land owner also is my boss. The upkeep on this place never is temporary, but it is an exception.

A square deal and a liberal application of the golden rule might help the land owner and I am sure it would be a big boost for the tenant. Some day I hope to own a farm but I will not get it on the one year lease plan. Reasonable rent and a longer lease is the one and only remedy for prevailing evils, tenant farmers and soil robbers. We might use cheaper money, but that is a subject for another story.

C. W. G.

An Inning for the Cows

(Continued from Page 9.)

2:40 p. m.	Lyndon	4:10 p. m.
5:00 p. m.	Melvern	6:30 p. m.
Friday, March 23.		
8:30 a. m.	Saffordville	10:15 a. m.
10:35 a. m.	Strong City	12:05 p. m.
12:30 p. m.	Clements	2:10 p. m.
2:35 p. m.	Florence	4:20 p. m.
4:45 p. m.	Peabody	6:15 p. m.
Saturday, March 24.		
8:30 a. m.	Marion	10:10 a. m.
10:35 a. m.	Hillsboro	12:05 p. m.
12:30 p. m.	Canton	2:00 p. m.
2:35 p. m.	McPherson	4:10 p. m.
4:50 p. m.	Little River	6:20 p. m.
Monday, March 26.		
8:30 a. m.	Webber	10:00 a. m.
10:30 a. m.	Courtland	12:00 noon
12:40 p. m.	Concordia	2:10 p. m.
2:25 p. m.	Aurora	3:55 p. m.
4:15 p. m.	Miltonvale	5:45 p. m.
Tuesday, March 27.		
8:30 a. m.	Barnard	10:15 a. m.
10:40 a. m.	Ada	12:10 p. m.
12:40 p. m.	Minneapolis	2:25 p. m.
3:30 p. m.	Manchester	5:15 p. m.
Wednesday, March 28.		
8:30 a. m.	Salina	10:15 a. m.
10:45 a. m.	Solomon	12:15 p. m.
12:35 p. m.	Ablene	2:10 p. m.
3:05 p. m.	Hope	4:35 p. m.
5:05 p. m.	Burdick	6:35 p. m.
Thursday, March 29.		
8:30 a. m.	Alma	10:00 a. m.
10:35 a. m.	Eskridge	12:05 p. m.
12:40 p. m.	Burlingame	2:10 p. m.
2:30 p. m.	Carbondale	4:00 p. m.
4:35 p. m.	Topeka	6:15 p. m.
Friday, March 30.		
8:30 a. m.	Meriden	10:15 a. m.
10:45 a. m.	Valley Falls	12:30 p. m.
12:55 p. m.	Nortonville	2:40 p. m.
3:20 p. m.	Atchison	5:20 p. m.
Saturday, March 31.		
8:30 a. m.	Potter	10:00 a. m.
10:35 a. m.	Leavenworth	12:35 p. m.
1:30 p. m.	Bonner Springs	3:00 p. m.
3:25 p. m.	De Soto	4:55 p. m.

Kansas is going thru a dairy and poultry revival. Larger cash returns are coming. When 772 persons visit a train, as they did at Kangman, it indicates a healthful interest in better methods, and a belief in the future of agriculture. The train which Mr. Bainer is running is a happy idea, and it is being operated at a most fortunate time.

The grafter and his money soon connect.

Say you saw it in the Farmers Mail and Breeze.



Garden Work Pays Well.

attention. They have been neglected on most places; on some farms a garden gets no more labor than an equal amount of land used for corn or kafir. Despite this fact it produces food worth several times that obtained from the field crops. If a proper amount of labor is placed on the land there will be a great increase in the quality of the food and also in the quantity.

A Higher Strawberry Yield

I have a plot 20 by 24 feet in our garden which I have used in raising strawberries. This plot is divided into two beds of the same size. I plant one of the beds every season with strawberry plants, so the whole plot is in berries every year. The bed planted last year will be the best producer this season, altho a fair crop will grow in the lot planted two years ago.

As soon as the berries have been taken off the old bed next summer the ground will be prepared and planted to potatoes, set with late cabbage or sown with turnip seed. The plants used in making a new bed are taken in the spring from the old bed. I get a better and larger crop of berries the following season by planting in the spring. Every three years I purchase plants from a reliable dealer.

The soil is black loam, well drained,

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Description of the Climbing Roses

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A pure white sprout of well-known Dorothy Perkins, of same habit of growth and freedom of flowering; a splendid companion for the pink variety, as it flowers same time. A valuable addition to the class. Awarded gold medal National Rose Society, and award of merit Temple Show, England.

Tausendchön

Tausendchön, which in German means Thousand Beauties, is a beautiful rose with colors running from delicate salmon or tender rose through the intermediate shades of bright rose and carmine, with white, yellow and various other delicate tints showing. Strong and hardy.

Dorothy Perkins

Beautiful shell pink. A rapid grower, frequently developing shoots from 10 to 15 feet long in one season. Hardy, withstanding the severest winters without injury. Blooms in clusters, flowers double and large.

White Baby Rambler

This is a true ever-blooming Crimson Rambler. There has been a widespread demand for a Crimson Rambler that would bloom more than once. Here you have it. Every one knows how Baby Rambler is always in bloom. This is simply a climbing form of the Baby Rambler, embracing all its good qualities.

Shower of Gold

Color deep golden-yellow and orange. A very vigorous grower. The foliage is beautiful in form, in color, and in its high metallic luster. Produces a mass of bloom. One of the finest, leaving little to be desired in a yellow.

Excelsa

A distinct variety in color, form and habit. The color is an intense crimson-maroon, with tips of the petals tinged scarlet. Flowers large and double, 30 to 40 on a stem, and almost every eye on a shoot produces a cluster of bright blossoms.

SPECIAL OFFER We will send six of these beautiful Climbing Roses free and postpaid to all who send us 60c to pay for a THREE year subscription to the Missouri Valley Farmer. New or renewal subscriptions accepted on this offer.

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Average Hereford Price \$308

The average price paid at the second annual Kansas Hereford Breeders' sale in the pavilion of the Kansas State Agricultural college last Saturday was \$308, an increase of \$73.09 over the average price last year. The sales aggregated \$23,716, an increase of \$10,796 over last year. The highest price for any animal bred and raised by the college was \$445. This sale resulted in sending 16 purebred Herefords out of the state. Three went to New Mexico, one to South Dakota, one to Illinois, one to Indiana, seven to Missouri, and three to Texas. All of these cattle were inspected before the sale by members of the animal husbandry department, in order to insure the buyers that the cattle were representative of the breed and of the herds from which they came. Animals from the college herd not listed were sold at the close of the sale at a total price of \$2,150.

This sale under the management of the animal husbandry department of the agricultural college, not only gives the small breeder an opportunity to sell to advantage in competition with other breeders, due to the fact that each breeder is limited to six head, but it is of educational value to the students in animal husbandry. At the close of the sale half of those who consigned animals asked to have places held for them in the next annual sale.

The cattle were divided into four classes—bulls calved before September 1, 1915; bulls calved after September 1, 1915; cows calved before January 1, 1915; and cows calved after January 1, 1915. The American Hereford Journal offered premiums in addition to a prize ribbon for the first three animals in each class. Awards were as follows: young bulls, won by Dandy Star, bred and owned by E. S. Jones, Emporia; old bulls, won by Beau Onward, bred and owned by Klaus Brothers, Bendena; young cows, won by Bellairs Queen A, bred and owned by C. G. Steele, Barnes; old cows, won by Miss Billy, owned by J. O. Southard, Comiskey.

Motor Cars Aid Country Life

Motor cars have done far more to aid country life than was expected. They are placing rural living in Kansas on a new basis. A car that is kept properly on the average farm pays in direct fi-



A Part of the 1,140 Motor Cars in the Quarter Stretch at the County Fair Last Fall at Hays; These Came from Many Counties.

nancial returns, to say nothing of the pleasure that it brings. Motor cars are especially abundant in the Western part of the state; take Pawnee and Ellis counties for examples.

Manure Helped the Alfalfa

BY L. E. CALL.

Barnyard manure applied at the rate of 2½ tons to the acre annually on the agronomy farm of the Kansas State Agricultural college has been worth \$2.71 a ton and has increased the yield of alfalfa 85 per cent; applied at the rate of 5 tons annually, it has increased the yield 129 per cent and has been worth \$2 a ton. Barnyard manure applied on wheat as a top dressing in the winter has increased the yield of wheat 37 per cent and has been worth \$1.42 a ton.

Work was started two years ago to determine the best time to cut alfalfa hay. This work consists of a series of plots where alfalfa is cut at different stages of growth to determine the effect of time of cutting on the yield, permanency of stand, chemical composition, and feeding value of the hay. Alfalfa has been cut at four states of development—first, when the buds are formed but before the flowers appear; second, one-tenth in bloom; third, full bloom; and fourth, after the seed has formed. The bud stage hay was cut six times in 1914 and five times in 1915, the one-

tenth bloom five times in 1914 and four times in 1915, the full bloom four times both seasons, and the seed stage three times each season. The yields of hay have been as follows:

Time.	No. cuttings, pounds	Yield
	1914	
Bud	6	6,909
1-10 bloom	5	8,769
Full bloom	4	5,385
Seed	3	4,266
	1915	
Bud	5	7,723
1-10 bloom	4	10,633
Full bloom	4	12,706
Seed	3	9,309

The first season—1914—the highest yield and the largest total amount of protein were obtained when the alfalfa was cut in the bud stage. The difference, however, in yield between the alfalfa cut in the bud and the one-tenth bloom stage was not sufficient to pay for the extra labor involved in cutting the bud stage an extra time. At the end of the season of 1914 the alfalfa that had been cut in the bud stage was less vigorous, while the vigor of the plants increased as the time of cutting was delayed, the most vigorous plants being those that had been allowed to produce seed.

In 1915, the greatest yield of hay and the largest quantity of protein were produced on the plots cut in full bloom, while the plots that had been cut through the two seasons in the bud stage produced the smallest yield, producing less hay in the five cuttings than the seed stage plots produced in three cuttings. The plants on the plots cut in the bud stage had at the end of this season become so weakened in vitality that the fourth cutting of this hay was 30 per cent grass and the fifth cutting was 85 per cent grass.

It appears from the results up to this time that alfalfa cut continuously too early (that is, before the crop is one-tenth in bloom) will be reduced greatly in vitality and yield and that in time will be run out by crab grass, foxtail, and bluegrass. In Eastern Kansas where there is difficulty in holding a stand of alfalfa because it is crowded out by bluegrass in the course of a few years, it would appear advisable to delay cutting until the alfalfa plants reach full bloom.

The vitality of the alfalfa has not been injured by allowing it to pass into full bloom before cutting or even to form seed. In fact, this practice has increased the vitality of the plants. The strongest, healthiest, and most vigorous plants are those that have been cut in

the seed stage. It would not be advisable, under most conditions, to allow alfalfa to stand this long before cutting because of the loss of leaves, decrease in the quality of the hay, and decrease in total yield secured when compared with earlier cutting, but if unfavorable weather or rush of work prevented earlier cutting, the hay could be left without fear of injuring the vitality of the alfalfa plants.

The Better Thing

It is better to lose with a conscience clean Than to win by a trick unfair;
It is better to fail and to know you've been, Whatever the prize was, square,
Than to claim the joy of a far-off goal And the cheers of the standers-by,
And to know down deep in your inmost soul
A cheat you must live and die.

Who wins by trick can take the prize, And at first may think it sweet,
But many a day in the future lies When he'll wish he had met defeat.
For the man who lost shall be glad at heart And walk with his head up high,
While his conqueror knows he must play the part
Of a cheat and a living lie.
The prize seems fair when the fight is on, But save it is truly won
You will hate the thing when the crowds are gone,
For it stands a false deed done.
And it's better you never should reach your goal
Than ever success to buy
At the price of knowing down in your soul
That your glory is all a lie.
—E. A. Guest, in Detroit Free Press.

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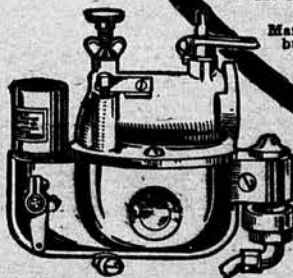
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We will send this book free and postpaid to all who send only 30 cents to pay for a year's subscription to our big farm and home journal, *The Missouri Valley Farmer*. Address, **Valley Farmer, Dept. C-6, Topeka, Kan.**

Hard Wheats are Best

There are many fields of soft wheat in the hard wheat belt of Kansas. Most of it has been injured by the unfavorable winter. This was to be expected, for west of the line shown on the map hard wheats will, on the average, give better yields and a better quality of grain than any other kind. This difference becomes greater the farther west one goes. On bottom lands in the eastern part of this area soft wheats quite frequently give the best yields. On the

posed even for a minute or two to the sun or wind. A seedling should not be lifted from the soil until it is ready to be planted. The hole should be dug large enough and deep enough so the roots will not be compressed, but will lie in their natural position. The seedlings should be set in the ground a little deeper than they stood in the nursery. The soil should be pressed in against the roots as well as downward, so no air spaces will be left. The earth should be made firm about the tree but not packed so tightly as to exclude

CHEYENNE	RAWLINS	DECATUR	NORTON	PHILLIPS	SMITH	JEWELL	REPUBLIC	WASHINGTON	MARSHALL	NEOHO	BROWN	POSSUMAT
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WALLACE	LOGAN	GOVE	TREGO	ELLIS	RUSSELL	LINCOLN	OTTAWA	BRIDLE	JACKSON	MITCHELL	MITCHELL	MITCHELL
GREELEY	WICHITA	SCOTT	LANE	NESS	RUSH	BARTON	RICE	MYNERS	MARION	CHASSE	COFFEY	ANDERSON
HAMILTON	KEARNEY	FINNEY	HODGEMAN	RAWNEE	STAFFORD	RENO	HARVEY	BUTLER	GREENWOOD	WOODS	WALLACE	BOURBON
STANTON	GRANT	WASKELL	GRAY	FORD	EDWARDS	PRATT	KINGMAN	SEDERBERG	BLK	WILSON	NEOHO	CHANDLER
NORTHON	STEVENS	SEWARD	MEADE	CLARK	CONWAY	BARTON	HARPER	SUMNER	COWLEY	CHANDLER	CHANDLER	CHANDLER

West of the Heavy Line the Hard Wheats Will on an Average Give the Best Yields and the Better Quality of Grain.

uplands, however, and usually on the bottom lands also, hard wheats are decidedly the best. This fact is indicated by tests conducted by the agronomy department of the Kansas State Agricultural college in various counties in the state. In Cowley county two tests were conducted last season, one on bottom land and the other on upland. In one the best variety of hard wheat produced 25.6 bushels an acre and the best soft wheat 22.1 bushels an acre. In the other test the hard wheat produced 48.8 bushels and the soft wheat 38.4 bushels an acre.

In Dickinson county the best hard wheat yielded 28.6 bushels and the soft wheat 23.3 bushels an acre. In Marshall county the best hard wheat produced 32 bushels and the best soft only 24.7 bushels; in Lyon county the yield of the best hard wheat was 59.1 bushels and the best soft wheat 46.6 bushels. In another test in the same county the yield of the best hard wheat variety was 15.4 bushels and of the soft wheat 12.6 bushels. Of all the tests conducted in this area not one showed a distinct advantage for soft wheat and in most cases the hard wheats produced from 3 to 13 bushels more an acre. In some of the tests there was too much rain for the best growth of wheats. This would give the advantage to the soft wheats since they are better able to stand wet weather. It is quite likely that in a series of years the hard wheats would have more advantage than is shown by the tests.

How to Plant Trees

BY J. A. FERGUSON

The best time to plant the seedlings is as soon as possible after the frost has left the ground and when the spring rains have begun. Damp, cloudy days should be selected, and bright, dry, windy days avoided, because of the danger of drying the roots. The seedlings should not be pulled up from the nursery but should be lifted with a spade so as not to strip the tender bark from the roots. They should be placed at once in buckets half full of water so the roots will be covered entirely at all times.

As a guide to the planters in planting the trees, rows should be marked on the ground or else stakes set to give the line. With small plantings it is well to mark the rows both ways of the field so the trees will be spaced evenly. In large plantings no attempt is made to space the trees exactly in the rows but the rows should be kept as straight as possible. The planting crew is made up usually of two men, one to dig the hole with a mattock or spade and the other to plant the seedlings. Where the ground is hard or rough and stony one man planting can keep up with two men digging. Where the conditions are favorable two men should plant an acre a day.

Roots of the seedlings should be kept immersed in water in the pails at all times. This especially is true with conifers. They will die if the roots are ex-

posed even for a minute or two to the sun or wind. A seedling should not be lifted from the soil until it is ready to be planted. The hole should be dug large enough and deep enough so the roots will not be compressed, but will lie in their natural position. The seedlings should be set in the ground a little deeper than they stood in the nursery. The soil should be pressed in against the roots as well as downward, so no air spaces will be left. The earth should be made firm about the tree but not packed so tightly as to exclude

moisture, and it should not be heaped up about the seedling in a mound as this would tend to carry the moisture away from the tree. Any dirt or sod left over should be piled on the south

side of the planted seedling to give some protection from the sun.

The plantation should be cultivated several times a year. This will prevent the young trees from being choked by weeds and grass and will help to conserve the moisture in the soil. This is necessary especially in the prairie regions and on dry situations. A mulch of hay, straw or leaves can be used where cultivation is not feasible. It will prevent the growth of grass and weeds, check evaporation and prevent baking of the soil. But since a mulch causes the trees to develop their roots close to the surface of the soil, there is danger of the tree being killed by drying when the mulch is removed, so it is not generally advised.

Cultivation should not be deep but should be frequent and the dirt should not be heaped up about the seedlings. It should not be continued far into the fall as it will stimulate the trees to late growth. Cultivation should be continued for three or four years or until the crowns begin to touch and to shade the soil. From that time until it becomes necessary to thin out the trees, the young plantation will need no attention except protection from grazing and fire.

Learn to discriminate in your work as well as in other things. No one has the right to wear out health and nerves over non-essentials.

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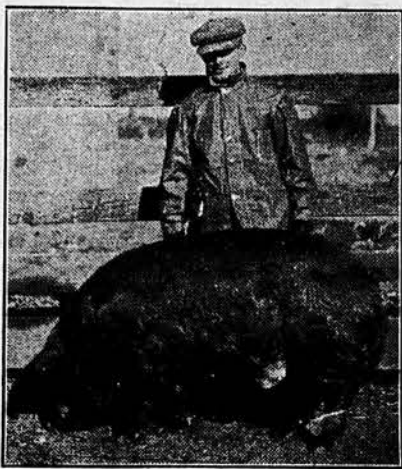
Pork at a Profit

BY L. A. WEAVER

The higher the price of grain the more care is required in feeding hogs. It is not profitable to feed corn alone. It should be supplemented with some feed like tankage or linseed oil meal.

Tankage has perhaps received more attention by experiment stations and by practical feeders during the last few years than any other protein supplement. Its composition makes it almost an ideal supplement to corn for hog feeding. The high protein content, derived from an animal source, along with a high mineral of ash content makes it particularly valuable when fed with corn, which is noticeably lacking in these nutrients.

Experimental work shows that better results are obtained with the breeding herd when some tankage or meat meal is added to a corn ration. Not only are more pigs farrowed but those farrowed are stronger. It has been found for ex-



Hogs Need the Protein.

ample that gilts fed corn alone farrowed an average of 7.6 pigs a litter as compared with an average of 8.5 pigs farrowed by the gilts fed a ration of corn 10 parts and tankage or meat meal 1 part. Sixty-eight per cent of the former were strong as compared with 98 per cent of the latter.

Not only does the addition of some feed like tankage increase the efficiency of the breeding herd but it also decreases the time required to get the pig to a marketable weight. This is shown in a list at the Missouri Agricultural Experiment station where one lot of hogs fed for 120 days on a ration of corn 10 parts, tankage 1 part gained on the average 1.15 pounds a head a day, while a similar lot fed on corn alone gained only 1.11 pounds. This would indicate that it would require about a month longer to make a 100-pound shote weigh 250 pounds, if corn alone is used as the ration than when a ration of corn and tankage is used. In the trial mentioned it required 436.4 pounds of corn plus 43.6 pounds of tankage to produce 100 pounds gain on the one hand as compared with 580 pounds of corn where corn alone was used. These results are reported in Missouri Bulletin 136 which may be obtained by writing to the Director of the Missouri Agricultural Experiment Station at Columbia, Mo.

Breeding and Feeding Hogs

We fed our first carload of hogs in the winter of 1896-7. They were a mixed lot, all sizes from 100 to 500 pounds in weight, all colors that could be made with red, white, and black, and all kinds from shotes to old sows and stags. We sold this load to a shipper for \$2.70 a hundred.

You may think that we lost money but we did not. We got pay for our work. This is how we did it. The corn crop was light that year and the cob was not very hard. We bought a grinder and ground cob and corn together and fed shorts with it, to help balance the ration. We did not grind the cob fine enough for the hogs to eat it all, but they ate some of them and the coarse pieces were in their way, and they could not gulp the soft feed down. So they chewed it longer and got the full benefit of the feed. We bought some corn for 30½ cents a bushel delivered, shipped from Kansas City.

We went on raising hogs and while they went up, so did feed. In the fall of 1900, we had on hand 140 feeders and as many fall pigs and brood sows. Feed was much higher and it looked as tho we would lose money if we fed them out.

Most farmers were turning loose every hog they had, and we were undecided what to do. And here is where we made some figures and worked to them. We figured we could feed these hogs from November 5 until March 10. Knowing what they weighed, we fed 20 days and weighed and increased the feed, and so on until the last date. They were calculated to weigh 300 pounds, average. We carried out the plan and they averaged 303 pounds.

We fed shorts and corn chops until January 10, and then corn chops alone. We paid from 56 to 77 cents for corn and sold the hogs for \$6.50 a hundred after shipping to market. The grain fed brought us about 85 cents a bushel so you can see we lost no money. We stayed in the business and reaped a harvest next year as we bought corn at 52 cents and sold hogs at \$7.55.

Some years you have to work both mind and body overtime to keep from losing money and other years there is a good margin of profit. The idea is to stay with the job. At present people are getting uneasy. While hogs are very high feed is high, and some are turning loose, so that will keep hogs high for a while, and we will stay with the pigs.

We have our pigs come as near as we can in March and April and September and October. We use all the pasture we can; alfalfa, wheat, oats, rye, and Sudan grass. We feed some tankage, shorts, and bran, and then balance up with corn. We aim to market spring pigs the next spring when about 11 months old, as then we generally have a good market and the winter run is over. They have good growth and become 300 pound hogs profitably. The fall pigs are sold the next July, generally the highest market of the year.

By following this system we never have lost money on feeding hogs, tho thru the period leading up to selling time, we would sometimes have lost money if we had sold.

Stick to the hog, feed a balanced ration regardless of the high cost, and I am sure you will win out in the end. We don't think it would be the proper thing for everyone to breed and feed hogs on a large scale, but we do think that everyone should raise his own meat and some to sell. We started on a rented farm and stayed on the same farm 9 years; started without capital and in debt and have made a home, and the hog has been the mainstay in the operation. We have also had losses from disease to overcome, but we immune our hogs now.

Ed. Edmondson.

Clinton, Custer Co., W. Okla.

Be Careful Whom You Pay

The attention of city marshals and subscribers is again called to the fact that they should be careful to whom they pay their subscriptions for the Daily Capital and the Farmers Mail and Breeze. There are still a few dishonest solicitors in Kansas. The following district managers are alone authorized to solicit subscriptions. Do not pay subscriptions to anyone except those whose names are mentioned below.

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Soils of the Future

This story was written by Loyal Hunt, 15 years old, in his class in agriculture at the Coldwater High school. It indicates the excellent work that is being done in the teaching of agriculture in that school. Loyal is the son of Mr. and Mrs. J. I. Hunt, who live on a farm northwest of Wilmore.

The entire population of the world depends on the soil for life. The animals used for meat, excepting fish, live upon the products of the soil. All vegetable foods are products of the land. Cotton and wool, from which clothing is produced, come from the soil.

The industries of the world rest upon the raw material produced by the soil. Packing houses and canning factories take their raw material from the land. Railways depend upon the products of the soil, in the territory thru which they pass, for their business. The thousands of persons connected with the lumber business are entirely dependent upon the soil, which produces the stately pine and towering oak.

Almost the entire business of the world refers back to the soil and its products. Oil stocks, which depend on the sale of oil, which runs farm machinery, which in turn tills the soil to produce farm products depend to a large degree upon the soil for regulation. The products of the vast steel works are largely farm machinery, making that industry depend upon the soil. When several failures of farm crops follow one another, a general business depression, quite often a panic, is the result. In other words, when the soil fails to perform the work required of it, the greater part of the business world is affected.

The soil, the foundation of mankind, is diminishing rapidly in quality. Carelessness in former times has reduced large areas of soil to an almost worthless condition. This soil can be rebuilt but it will take years of careful work and much money to replace the constituents necessary to make it once more a source of profit.

It is important to improve the soil by fertilizing. The nitrogen, phosphorous and potassium, the keys of the soil's value, are rapidly removed by successive farm crops, causing it to wear out quickly and surely. Intensive farming seems to be approaching and with it a lack of sufficient ground to support every man engaged in farming at the present acre production.

It is comparatively easy and cheap to maintain soil fertility. Almost enough fertilizer goes to waste on the average farm every year to replace the constituents removed by one crop. Large amounts of stable manure are allowed to accumulate near the barns and sheds exposed to the weather, which will in a short time cause it to lose a large part of its value to the soil. Vast quantities of straw and soil improving stubble are burned by careless and unqualified farmers. Crop rotation is an effective and economical method of preventing the soil from losing its value. The Chinese have tilled the soil for thousands of years and it is yet as productive as it ever was. They have used no commercial fertilizer. Instead, they have used the waste and garbage of their cities on the land. Modern farmers of today might profit by copying the methods of this backward race in saving and realizing a profit from common garbage and refuse, which is a detriment to the city but a blessing to the hungry soil.

Since the soil is of so much importance, it should receive the attention of the government. A stricter set of laws should be passed and enforced, governing and regulating the use of it, and abolishing as much as possible its present abuse.

The public is beginning to realize and appreciate the value of the soil. It is emphasized in the teaching of modern agriculture, which is now a required subject in the public schools. In connection with better farming and less wasteful methods, it is believed that the next generation will see many changes in the general management of the soil, the most valuable and most highly developed resource of the world.

Take Pride In Your Work

I know two men both close to the period of life when they may be said to live on "borrowed time." One of them is as sour as a pickle. I think this man had opportunities when he was younger, but he never seemed to grow into any of them. They tell me that he took up one thing after another, until it got a little hard and monotonous, and then

dropped it and took something else. Thus when the bloom of youth had been rubbed off this man found himself only able to tinker at a few inferior jobs. He was master of nothing, because he had not dug down to fundamental principles, and could put no spirit into his work. You should hear this man complain about the condition into which life has crowded him.

The other man has, all his life, done what most of us call inferior work. Yet there is a curious thing about it. Does anyone in town want a garden spaded up, a front yard cleaned, a path dug through the snow or a cord of wood cut up, there is competition and demand for this man's services, as there would be for service from the leading lawyer or the expert doctor. For this man always does a clean, neat job, and is good-natured and accommodating. I never hear him growl about conditions. I have seen him walking about on Sunday afternoons looking with some show of pride at the work he had done in garden or yard. Ask him how he is able to be content with his humble lot, and how he can put pride and reputation into such "inferior" work, and he will tell you something like this:

"I know that I am better qualified (with my age and powers) to do this kind of work than any other. I made up my mind I would do it better than any other man in town. I have been able to do that because I take joy in my job."

As I write this I glance at a book shelf on which I can see 50 volumes of Dr. Eliot's "Harvard Classics," says the editor of The Rural New-Yorker. Here we are supposed to have the wisdom of the ages—the words which should not die—sifted out through a mesh so large that only the gigantic thought would not pass through. For example, out of all the Bible Dr. Eliot has selected the Book of Job, the Book of Psalms, Ecclesiastes, the Acts, the Gospel of St. Luke and the two Epistles to the Corinthians! Yet, in all the nearly 2 million words of this sifted classic wisdom I find no lesson of life truer to human nature than these seven words of the humble worker—"I take joy in my job."

There you have the whole story. The man who takes joy in his job puts spirit and love into it, and these are the unconscious things which make the job living and vital. I have seen a fisherman hauling up his nets and lobster traps—wet and tired, with torn and bleeding hands—looking off over the boiling ocean as the sun comes up out of the east with a look on his face which showed the "joy in the job"—for he was working for home and family. I have seen the same look on the face of a farmer who stopped the plow for a moment to look across the valley to the farmhouse among the trees or on the face of a workman on a high city building looking over the country where he hoped some day to have a home. It is the "joy in the job" which lifts the man and his work out of discontent and drudgery.

The man I spoke of who has grown sour and bitter as the years went by has made all his jobs joyless and dry because he has put no spirit or personality into them. Any one of half a dozen jobs which he has taken up offered him the chance for taking joy in it, but he couldn't find the joy. You cannot find any so-called "great" man or any fair approach to a happy man, who did not find his greatness or his happiness in "the joy in the job." I might go on for an hour with illustrations or arguments to prove this, but it is one of the things which men must think and work out for themselves. Take joy in your job.

We Believe

That perseverance often outruns genius.

That everything God does means something.

That a stingy man is always cheating himself.

That people with no faults have few friends.

That temptations resisted are stepping stones to heaven.

That it is impossible to travel far with the man who rides a hobby.

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That nobody ever has any intention of going to hell when they first hear of the place.—Better Farming.

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Solve This Puzzle



Here are seven ponies in a pen. By drawing three straight lines you can put each one in a pen by himself. If you can do this we will send you as a prize, a beautiful panel picture, "The Popular Girl," printed in many colors. This is a wonderful picture. All you have to do is enclose four cents stamps in your letter to pay postage and cost of mailing. We will also send a certificate for 1500 Free Votes in our grand contest for a beautiful Shetland pony.

Fine Pony Given Away

Remember the Pony will absolutely be given away in the grand contest which we will tell you all about. Send your answer at once so you can be entered in the great contest. In case of a tie a pony will be sent to each person so tied. Write me today.

THE PONY MAN Dept. 614 Des Moines, Iowa

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THE WRENCH OF ALL WRENCHES

You cannot afford to be without this tool if you use a wrench at all. Its unusual advantages are instantly appreciated. It will go into close corners and difficult angles with a good hold and a square pull, where an ordinary wrench cannot be used. Press the button and the handle will ratchet either way; release it and it locks rigidly in any of eight different angles. For utility and labor-saving value this wrench has no equal. Every Autoist, Mechanic, Electrician, Engineer, Plumber, Gas-fitter, Machinist and Farmer needs the Imperial Angle Wrench. These wrenches are made of the best material by expert workmen and are thoroughly guaranteed.

Our Special Offer We will send the Angle Wrench free to all who send \$2.00 for a three-year subscription to Mail and Breeze and 25 cents extra to pay for packing, mailing, etc. Or we will send the wrench free and postpaid for three yearly subscriptions at \$1.00 each.

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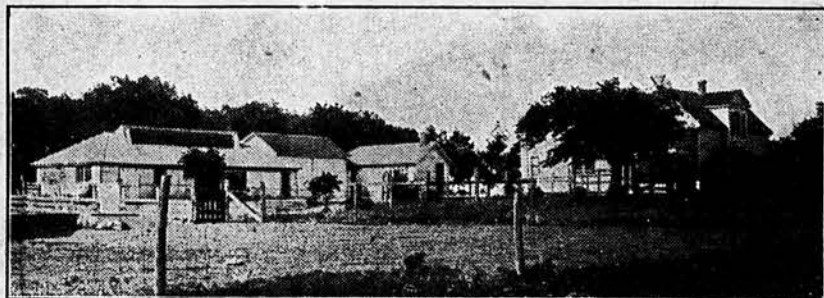
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The Oats is in the Ground

Some of the Wheat Fields will be Sown to Spring Crops this Year

BY OUR COUNTY CORRESPONDENTS



This is a Picture of "Wingina," the Farm Home of P. G. Price, Mankato, Jewell County, Kansas.

OAT SEEDING is pretty well finished in many of the counties in Kansas. In a few sections of the state the frost is not all out of the ground. Wheat that has been killed by the dry weather will leave the soil in excellent condition for spring crops.

Clay County—Very high winds this week have killed considerable wheat. Warm weather has started many farmers sowing oats. Potatoes sell at \$1.80 in some parts of the county and \$2.60 in other parts.—H. H. Wright, March 10.

Graham County—Dry weather still continues and there will be very little wheat crop. Stock is doing fine. Many wheat fields will be planted to spring crops. Wheat \$1.83; corn \$1; eggs 22c; butter 30c; hogs \$13.50.—C. L. Kobler, March 10.

Kiowa County—A new brick opera house nearly finished in Greensburg. Several other buildings being erected at our county seat. Wheat nearly all marketed and the prospect for the new crop is very unfavorable.—H. E. Stewart, March 10.

Sherman County—We have 8 inches of snow since March 1. The last one was an afternoon and night blizzard which drifted badly. Some weak cattle left on the range perished. Some have sown spring wheat over the winter crop. Spring wheat \$1.65; barley 92c; corn \$1; hens 15c; eggs 23c.—J. B. Moore, March 10.

Norton County—Weather very dry. Prospects for wheat poor. Farmers are laying up a good supply of hay and grain. At present outlook is that all farm products will bring high prices for some time. Cattle and horses sell high at sales. Wheat \$1.85; corn 95c; oats 85c.—Sam Teaford, March 10.

Thomas County—Still dry here. Three or 4 inches of snow March 6, but drifted badly. Lots of people coming in. A small amount of spring work done. Barley 95c; wheat \$1.82; corn \$1.05; eggs 23c; butterfat 38c.—C. C. Cole, March 10.

Harvey County—The snow March 2 did not melt in the fields and the dust blizzard March 6 was severe on the wheat fields. Livestock doing well. Hogs too high to quote. Wheat \$1.87; corn \$1.05; bran 38c; shorts 39c; tankage 35c; butter 28c; eggs 22c; seed potatoes \$3.25.—H. W. Prouty, March 9.

Pottawatomie County—Very dry in this county. Farmers trying to sow oats by disking, but a fine dry mulch of dust covers ground and prevents frost from coming out, so disking cannot be done at proper depths for good work. Wheat is suffering and at best is nearly gone. Seed potatoes \$3.—S. L. Knapp, March 9.

Smith County—We have had no moisture to speak of for three months. Livestock doing well. Plenty of feed. Not much wheat on hand. We have had a fine winter for feeding. Wheat \$1.88; corn 95c; hogs \$14; butterfat 37c; eggs 21c.—Ernest Crown, March 10.

Roots County—Dry and windy. Farmers are plowing for oats. A good many are buying kafir and cane seed. Prices are ranging from \$1.25 to \$2.25 for cane. Oats 80c; wheat \$1.80; corn \$1.10; hogs \$13.50.—C. O. Thomas, March 10.

Johnson County—Oats seeding in full blast and the soil works up fine. A few have finished their oats and all will be thru by the end of this week. The soil has moisture below the surface, but rain is needed to settle the dry surface soil to the wheat. Eggs 23c; butter 30c; butterfat 41c; seed potatoes \$3.50.—L. E. Douglas, March 10.

Morris County—Farmers busy sowing oats. A larger acreage than usual will be put out this spring. Altho the ground is dry on top, there is sufficient moisture in the subsoil. Wheat seems to be alive, but needs moisture badly. This has been a remarkable winter for saving seed. Stock is coming thru the winter in fair condition. Butterfat 36c; seed oats 75c. This county has just organized a farmers' bureau.—J. R. Henry, March 10.

Stevens County—We have had no rain. The ground works fine for spring crops. Some wheat looks good and some of it looks as if it was dead. Considerable wind.—Monroe Traver, March 10.

Trego County—Fine clear dry weather with about 2 inches of moisture since last June. Wheat prospect very poor. Stock is not wintering very well, but calf crop gives promise of average. Wheat \$1.82; corn \$1.10 to \$1.12; oats 70c; bran \$1.80; shorts 32c; cabbages 10c; apples \$1.25 to \$2; hogs \$13.50; prairie hay \$12.—W. F. Cross, March 10.

Ford County—Weather is warmer but still dry. High winds and dust storms have been hard on the wheat. Farmers are getting ready to sow oats, but we need moisture to bring them up. Feed is scarce and high. Wheat \$1.84; corn \$1.05; oats 75c to 85c; butter 30c; eggs 22c.—J. Zurbuchen, March 10.

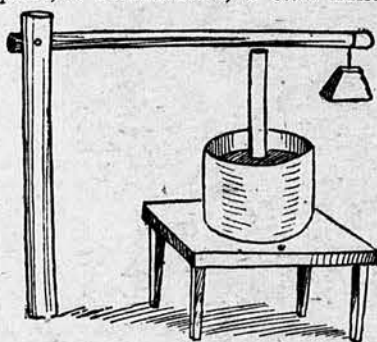
Lane County—We are having ideal March weather with plenty of wind but no moisture. Some farming has been done, but most of the farmers are waiting for moisture before starting. Wheat is in poor condition,

but if we get some moisture in a few weeks, there will be a chance for a small crop. Corn \$1.10; wheat \$1.87; hogs \$11.50; stock steers \$7.25; butterfat 36c; eggs 21c; hay \$14.—F. W. Perrigo, March 10.

Brown County—Ground is very dry and the dust storms continue. Wheat is not showing much life. Farmers sowing oats on ground plowed last fall. Frost about out. Wheat \$1.90; corn 95c; oats 60c; potatoes \$2.25; cream 35c; eggs 25c; set onions 25c; hogs \$14.50.—A. C. Dannenberg, March 10.

Making Cheese at Home

For cheese making at home you need a vat that can be kept clean, and large enough to hold whatever milk is to be used at one time, a press, and hoops. A good size for hoops is 10 inches in diameter and 8 inches deep. It is best to make them from heavy tin with strong edges and no top or bottom. A large basket lined with a strainer cloth will serve as a drainer. There will be needed also a dozen cloths a yard square, a thermometer, a curd knife—



A Homemade Cheese Press.

any long, slender knife will do—and a few smooth, wide shelves on which to cure the cheese.

Use about 1 tablespoonful of rennet extract for 3 gallons of fresh milk. If the curd is more than half an hour in "coming" increase the quantity of rennet; if less, decrease it. Or an eighth of a large rennet tablet to 3 gallons of milk may be used instead of the extract.

Warm the milk to 85 degrees, add the rennet and mix thoroly. Cover and let stand at this temperature for about half an hour, or until the curd will break, leaving the whey clear. Then cut each way, leaving it in columns about 1 inch square. Let stand until the whey rises an inch on top of curd, then warm the whole gradually, taking two or three hours to reach 98 degrees. Lift and stir and break gently with the hand while it is heating until the pieces are about the size of grains of corn. Be very careful not to crush the curd, as that will cause the cream, or fat, to escape with the whey.

Let stand at this temperature, stirring it occasionally to keep from packing, until the curd is so firm that when squeezed gently in the hand it will separate into particles again. The whey should have a slightly acid taste. Then dip the curd into a basket lined with cloth to drain.

Salt the curd after it has drained using 4 ounces of salt to 10 pounds of curd. Mix in carefully but thoroly. When the cheese is put in the press the pressure should be gentle at first, increasing gradually. In a few hours take the cheese out, rearrange the bandage, and press as before.

The cheese should be put to cure in a room where the temperature will be as even as possible, as in a cellar. From 50 to 60 degrees is regarded as the best temperature. Great care must be taken to keep out flies. The bandage should be greased and rubbed, and the cheese

turned over on the shelf every day or two for two months. After that once a week is often enough. If the cheese cracks paste strips of cheese cloth or paper over the openings.

This is the method used by the United States dairy division.

The drawing shows a good form of cheese press, which may be adapted to suit conditions. There should be two round boards cut just to fit inside the hoop. These are called the followers. One is put in bottom of hoop before putting in the curd, the other on top. Stones may be used for weights. The lever, to which the weight is attached, is 5 feet long.

Causes of Spoiled Silage

We are interested in the letters in regard to trouble with silage which were printed in the Farmers Mail and Breeze recently and hope that this may be as helpful as some of the others have been. We employ several experts who make it their business to keep in touch with methods employed and the results obtained in the actual use of silos. We have investigated a good many complaints in regard to spoiled silage and found that the trouble could not be charged to the silo in any way, except in a very few cases. Our investigation included all types of silos.

The cause of the spoiled silage in the greatest number of instances has been traced to the condition of the fodder when it was put in the silo. The corn used often would have been lost otherwise and was put in the silo as a last hope of getting something out of it. It usually consisted mostly of leaves and stalks and had been allowed to get too dry before it was cut. Running water in the blower is not sufficient in such cases as the blower will not carry up enough to wet the material thoroly. It is necessary to add enough water to equal the amount of fodder put in, in weight, after the silo is filled.

If such dry material is put in the silo and loosely packed the water added afterward is likely to trickle and wash down through the silage making holes in it. These holes allow the air to enter and moldy silage is the result. It is necessary, therefore, when putting up this kind of material, not only to supply moisture to the blower when filling the silo but to tramp the silage unusually well. The water put in after the silo is filled should be added gradually, say at the rate of one or two barrels a day for a week or 10 days, depending on the size of the silo.

Another point often neglected in filling a silo is to wet the inside thoroly before the material is put in. This rule applies to any silo which absorbs moisture. Wetting the wall is a precaution which will prevent spoiled silage around the edge.

Uneven distribution of the material in the silo is another cause of spoiled silage. Even if the corn or kafir is in the right condition and heavily eared or headed the heavier portion may not be distributed evenly over the surface. This means uneven settling and the forming of air pockets. We recommend that the silo be filled very slowly, that care be taken to distribute the heavy and light portions of the material equally over the top, and that it be well tramped.

A dull cutter which shreds instead of cutting the fodder is another cause of spoiled silage. It is as impossible to pack such material tight enough to exclude the air as it is to exclude the air from a hay stack.

It can be seen readily that even those who have had experience with silos and have made silage successfully for several years might at some time have one or another of these conditions which had not been present before, and be surprised and disappointed at their poor results when they opened their silos. Filling the silo is a task that should have the personal attention of the owner or someone he can trust. To trust the work to anyone else is as bad as to send a stranger to the bank to deposit your money. We know of nothing that is more like depositing money in a bank than putting up silage.

A Manufacturer and User of Silos.
Jackson County, Missouri.

Say you saw it in the Farmers Mail and Breeze.

Farm woodlots can be improved.

Sunday School Lesson Helps

BY SIDNEY W. HOLT.

Lesson for March 25: Jesus the way, the truth, and the life. John 14.

Golden Text: Jesus saith unto him, "I am the way, and the truth, and the life: no one cometh unto the Father but by me." John 14:6.

This 14th chapter of John to be used as a reading lesson in connection with a review of the quarter's lessons is one that is almost a universal favorite. Perhaps it is the most easily understood because its comforting messages never grow old. There is only one cure when the future is full of dread and that is a heart full of faith—faith that Jesus and God are one. When Jesus talked to His disciples about His Father's many mansions, and preparing a place for them, what visions were opened before their eyes of things unthought about till now. His Father's house was heaven and heaven meant home, yet no locality or building can make a home—only love. There lies in those two words a magic power able to touch all people. And the way to this home of homes is thru Jesus.

Since the earliest ages of human speech, life has been conceived as a pilgrimage. A journey, all must make over a common highway for kings and beggars alike. It is a pilgrimage of joy to be trodden with a song if Jesus is the guide, and like the common highway no one can deny Jesus to any one. He is ours for the taking and keeping.

When following a highway, thru an unknown country, its true value is realized. We are told to take a certain road and follow it and we shall reach our destination, but the way seems long and rough in places and winds too much and the little short cut looks so tempting that we take it only to find ourselves lost to the beaten track of the known highway. After long searching when we find it again, it seems to say, "Why did you leave me? I know that I seem long and difficult but it is the only way to reach the place you started for and I'll take you safely." And so it is with Jesus as the Way. We may become lost in the good that God has prepared for us to walk in, but if we follow in the footsteps of His only Son, unconsciously we find ourselves making progress in the destined way.

As obedience to the Way grows deeper in our lives we find the understanding of the truth of Jesus, for all the mysteries of wisdom and knowledge are hidden in Him and to know and possess Christ is to have the wisdom of God enshrined in our hearts.

The gate to knowledge is life, and to know things we must have life. God sent into a world of death, tainted at its source by Adam's trespasses and sins, his only Son who brought us life from the eternal throne. To find this abundant life we have to seek Jesus, trust Him and desire Him above all else and then we gain eternal life, the gift of God.

To me no other chapter in the Bible so clearly presents the Trinity as this one. With its motive of love and comfort it is all the way, God the Father, God the Son and God the Holy Spirit.

Did it ever occur to you that in the verse where Jesus says, "Peace I leave with you," and, "My Peace I give unto you," there is meant to be a distinction? His death on the cross was a legacy of peace with God and all men and "My Peace" is the indwelling of His Spirit in those who accept Him as the Way, the Truth, and the Life, and thus the peace with God sheds its benediction over the soul before it enters upon the peace of God.

Several thicknesses of new muslin wrapped around the lower roller of the clothes wringer will prevent buttons from cutting the rubber and cause it to wear several years longer than if unprotected.

A strip of muslin tacked over a screen and placed in an open window will ventilate the bedroom at night without drafts.

Kansas needs more breeding cows.

Purebred sires increase the profits.

Dairy farming is winning in Kansas.

Livestock farming is a sound system.

Cowpeas is a valuable annual legume.

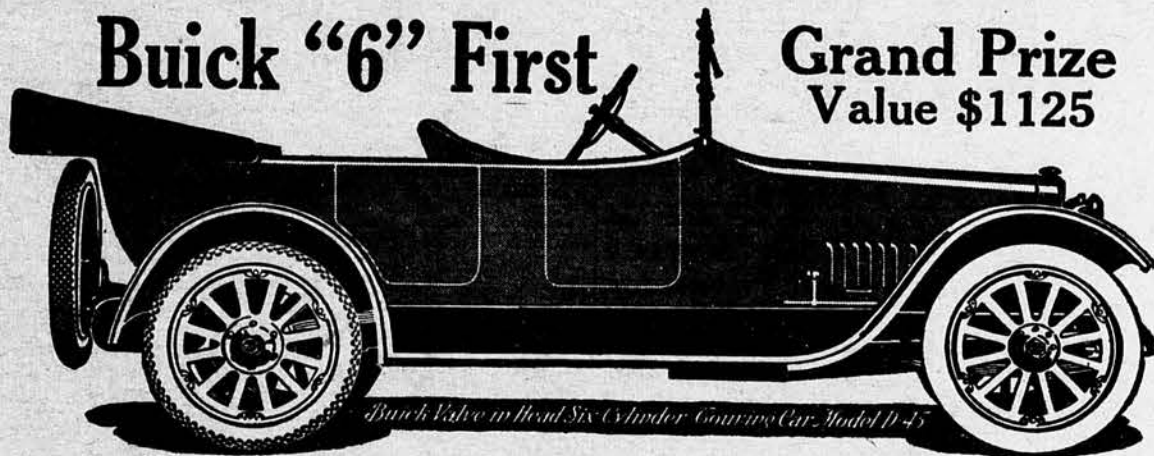
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Would you like to own this fine new 1917 Model Buick "6" automobile valued at \$1125; an Overland or one of the other Touring Cars without it costing you a dollar? We are going to award these four cars to four persons absolutely free of all cost. If you want a car just read this advertisement through, then send us the coupon printed below.

This Offer Will Not Appear Again

There is not one person who reads this advertisement who cannot comply with the few easy conditions necessary to obtain one of the cars free. All we ask is a little of your spare time. Contest is just starting but decision is necessary for time is limited as the contest will close May 26th, 1917. This advertisement will not appear again. Be wise—send coupon today.

Our Guarantee

We wish to guarantee to the readers of the Farmers Mail and Breeze that this Grand Prize Distribution will be conducted with the utmost fairness in every way and that the prizes will be awarded as represented. The awards will be made without favors and in accordance with the rules and regulations, which will be mailed to you as soon as you mail us the coupon. Should two or more persons tie for a prize, each will receive the full award tied for.

We Have Awarded More Than 70 Automobiles

During the past few years we have awarded more than 70 high grade Touring Cars to our readers. During the next 12 months we will award from 25 to 30 more. However, you will never have a better opportunity to get a 45 horsepower automobile than you have in the contest just starting. A list of the winners in our past contest will be sent you as soon as you mail us the coupon for particulars.

FARMERS MAIL AND BREEZE
Contest Dept. 6, Topeka, Kansas

Overland Touring Car Second Grand Prize



Value \$715

Maxwell Touring Car Third Grand Prize



Value \$675

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Value \$388

Send No Money Just Your Name For Particulars

The Contest is just starting and will close May 26, 1917. We want to send you full particulars how the contest will be conducted and how the awards will be made. The cars we offer are brand new and are fully equipped. Shipped freight charges prepaid right to your home town. You will never have a better opportunity to get a car free.

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Our Easy Plan

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Act at once—
Today.**

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FINE BUFF COCHIN BANTAMS. THREE pens. \$1.00-\$1.50-\$2.00 15 eggs. Lester Fagan, Minneapolis, Kansas.

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LIGHT BRAHMA EGGS. \$1.00 FOR FIFTEEN. W. T. Lachenmaier, Miltonvale, Kan.
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ROWE'S QUALITY WHITE LANGSHANS. Bred to win, lay and pay. Eggs reasonable. Mattie Rowe, Lane, Kan.
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KLUMIRE'S IDEAL BLACK LANGSHANS. Winners wherever shown. Eggs for hatching. For prices write Geo. Klumire, Holton, Kan.
WHITE LANGSHANS, EXCLUSIVELY 17 years from best strains in U. S. Eggs \$1.00 per 15; \$5.00 per 100. Mrs. Walter Smith, Tonkawa, Okla., Route A.

LEGHORNS.

SINGLE COMB WHITE LEGHORN HENS. Alex Spong, Chanute, Kan.
ROSE C. B. LEGHORNS—EGGS. 15-\$1.00. 100-\$5.00. Otto Borth, Plains, Kan.
S. C. B. LEGHORN EGGS 45c A DOZEN. Herm. Hornbostel, Palmer, Kansas.
TIP TOP ROSE COMB BROWN LEGHORN eggs. J. E. Wright, Wilmore, Kan.
ROSE COMB BROWN LEGHORN EGGS. Kulp strain. M. E. Hoskins, Fowler, Kan.
WHITE LEGHORN EGGS (YOUNG'S \$20 stock). Elsie Thompson, Mankato, Kansas.
S. C. W. LEGHORN EGGS. STATE WINNER. Mrs. W. R. Hildreth, Oswego, Kansas.
PURE BRED S. C. WHITE LEGHORNS. Eggs \$4 per 100. Flora Watson, Altoona, Kansas.
PURE ROSE COMB BROWN LEGHORN eggs. 100-\$4.00. Bertha Fortney, Clyde, Kansas.
SINGLE COMB WHITE LEGHORN EGGS. \$4.50 per 100. Mrs. C. C. Cole, Levant, Kansas.
SINGLE COMB WHITE LEGHORN EGGS. \$4-100. Mrs. Arthur Lemert, Cedarvale, Kansas.
ROSE COMB WHITE LEGHORN EGGS. \$5.00 per hundred. L. H. Dicke, Lyndon, Kansas.
BROWN LEGHORN EGGS. BOTH COMBS. \$1-15; \$5-100. Albert Stahl, Louisburg, Kansas.
PURE SINGLE COMB BROWN LEGHORN eggs \$3.00 per 100. Mrs. Chas. Ginn, Haddam, Kan.
ROSE COMB BROWN LEGHORN EGGS. \$3.00-100. Large kind. M. M. Hayes, Fowler, Kan.
PURE S. C. W. LEGHORN EGGS \$4.00 per hundred. Wm. Norris, Sedgwick, Kan., Rt. 1.
SINGLE COMB WHITE LEGHORN EGGS. \$4-100. Heavy layers. Mrs. Lewis Olson, Barclay, Kan.
CHOICE S. C. BROWN LEGHORN EGGS. \$5 per hundred. Mrs. A. Anderson, Greenleaf, Kansas.
CHOICE S. C. BUFF LEGHORNS. EGGS 15-\$1.00; 100-\$5.00. Mrs. Willard Hills, Mho, Kansas.
SINGLE COMB BUFF LEGHORN EGGS. \$5.00 per 100. John A. Reed, Route 2, Lyons, Kansas.
ROSE COMB BROWN LEGHORN EGGS. Prize winners. Mrs. Ida Standiford, Reading, Kan.
BARRON'S 244 EGG LEGHORNS. EGGS \$5.00 hundred. Sunlight Poultry Farm, Mt. Moriah, Mo.
BARRON STRAIN FARM RANGE S. C. W. Leghorn eggs. \$4 per hundred. J. Sculp, Hartford, Kansas.
SINGLE COMB BROWN LEGHORN EGGS. 20 for \$1.50. \$4.00 per hundred. Mrs. F. E. Tonn, Haven, Kan.
ROSE COMB WHITE LEGHORNS; EGGS. 15, \$1.00-100, \$4.00. Mrs. Fred Miller, Wakefield, Kansas.
SINGLE COMB WHITE LEGHORN EGGS. \$4.00 100. Real layers. Mrs. Chas. Bullis, Spring Hill, Kansas.
SINGLE COMB BROWN LEGHORN EGGS. \$4.00 per 100. Good laying strain. H. H. Kahn, Arcadia, Kansas.
SINGLE COMB WHITE LEGHORN EGGS for hatching. \$4.00 per hundred. J. L. Young, Haddam, Kansas.

LEGHORNS.

PURE BRED ROSE COMB BROWN LEGHORN eggs. 15-\$1.00. 100-\$5.00. Mrs. Art Johnston, Concordia, Kan.
GOOD, PURE S. C. WHITE LEGHORNS. eggs 40c dozen, laying strain. Sarah Rollins, Greta, Kansas.
SINGLE COMB WHITE LEGHORNS. Eggs 15-\$1.00. 100-\$5.00. Chicks 10c each. A. Pitney, Bolivar, Kansas.
SINGLE COMB BUFF LEGHORN EGGS. \$1.00 per setting. \$5.00 per hundred. J. P. Rishel, Galatia, Kansas.
SINGLE COMB BROWN LEGHORNS. Choice stock. Eggs 100-\$4.00. Mrs. Henry Wohler, Hillsboro, Kansas.
SINGLE COMB WHITE LEGHORN EGGS. fifteen \$1.00. Hundred \$4.50. Layers. Mrs. Ennefer, Pleasanton, Kan.
BARRON STRAIN S. C. W. LEGHORNS; eggs; lusty chicks guaranteed. George Patterson, Melvern, Kansas.
CHOICE THOROUGHbred BUFF LEGHORN eggs \$1.00 per 15. \$5.00 per hundred. C. M. Trusler, Eskridge, Kan.
PURE S. C. W. LEGHORN EGGS. FRANTZ-Akerman strain. \$1.00 for 15. \$4.00 per 100. John Horn, Elmo, Kan.
SINGLE COMB BUFF LEGHORNS, FARM range. 15 eggs \$1.00. 100-\$5.00. Mrs. Chas. Morgan, La Cygne, Kan.
CHOICE SINGLE COMB BROWN LEGHORNS. Eggs prepaid. 100, \$4.00. 200, \$7.00. Mrs. Dan Ryan, Centralia, Kan.
THOROUGHbred FREE RANGE SINGLE Comb White Leghorns. Eggs. 100 \$4.00. Adolph Berg, McPherson, Kansas.
SHADY NOOK POULTRY FARM. PURE Single Comb White Leghorn eggs. Mrs. Hattie Jones, Jamestown, Kansas.
ROSE COMB BROWN LEGHORN EGGS from poultry show winners. \$4.00 per 100. W. Giroux, Concordia, Kansas.
EGGS—THOROUGHbred SINGLE COMB White Leghorns. \$1.00 per 15. \$5.00 per 100. Mrs. James Aitken, Severy, Kan.
PURE-BRED SINGLE COMB BROWN LEGHORNS. Choice farm flock. Eggs 100-\$4.00. Mrs. D. A. Wohler, Hillsboro, Kansas.
THOROUGHbred SINGLE COMB WHITE Leghorn eggs \$6.00-100. Fertility guaranteed. Cora Taylor, Baxter Springs, Kan.
PURE BRED S. C. BROWN LEGHORNS. heavy laying strain. Eggs 15 \$1.00; 100, \$5.00. Mrs. L. E. Bruner, Freedom, Okla.
SINGLE COMB WHITE LEGHORNS. State fair winners. Good layers. 105 eggs \$5.00. Lucy Kasenberg, Mt. Hope, Kansas.
WINTERLAY SINGLE COMB WHITE LEGHORNS. Eggs and chicks from 250 egg hens. Catalog. Barlow & Sons, Kinaley, Kansas.
SINGLE COMB WHITE LEGHORN EGGS from vigorous, high producing stock. \$4.00-100. Mrs. J. T. Bates, Spring Hill, Kan.
PRIZE WINNING SINGLE COMB BROWN Leghorn eggs. 100-\$3.75. 32, \$1.50. Charles Dorr and Sons, Osage City, Kansas.
SINGLE COMB BROWN LEGHORNS. Cockerel bred. Heavy layers. Eggs \$3.00 per 100. Mrs. Bert Cordry, Haddam, Kansas.
S. C. W. LEGHORN EGGS FROM GOOD laying strain. 15 eggs for \$1.00. 100 for \$5.00. Mrs. Alvina Feldhausen, Frankfort, Kan.
SINGLE COMB BROWN LEGHORNS. Thirty-one prizes Kansas state show 1917. Eggs \$5.00 per 100. William Roof, Maize, Kan.
S. C. W. LEGHORN EGGS FROM 185 AND 200 egg layers. Agricultural college stock. Chas. Adamson, 464 College, Manhattan, Kansas.
STANDARD REMEDY COMPANY, FORTANA, Kansas, offers Single Comb White Leghorn eggs from heavy layers at \$4.00 per 100.
EUREKA FARM, SINGLE COMB WHITE Leghorns, bred to lay, farm range eggs, \$4 per hundred. Henry Richter, Hillsboro, Kansas.
SINGLE COMB GOLDEN BUFF LEGHORN eggs. Settings \$1.25; 100, \$5.00. Embden goose eggs 25c each. V. P. Johnson, Saroville, Neb.
OUR SINGLE COMB BUFF LEGHORNS are winners, layers, payers. Get eggs now. 45-\$2.25. 60-\$3.00. 120-\$5.00. Pearl Haines, Rosalia, Kan.
PURE SINGLE COMB BROWN LEGHORN eggs from closely culled farm range flock. Eggs \$3.50 hundred. Mrs. Harry Augustus, Waterville, Kan.
SINGLE COMB WHITE LEGHORNS. HAVE won 38 premiums and silver cup. Eggs \$4 per 100. \$1 per 15. Miss Selma Fager, Admire, Kansas.
HAGANIZED HEAVY LAYING S. C. WHITE Leghorns. Eggs for hatching, priced right. The Burlingame Leghorn Farm, Burlingame, Kan., R. R. No. 2.
EGGS S. C. WHITE AND BROWN LEGHORN, 100-\$2.50 to \$4.00. 15-\$1.50 to \$2.00. Winners in egg laying contest. H. N. Holde-man, Meade, Kansas.
PURE SINGLE COMB BROWN LEGHORNS. Eggs \$6.00 hundred. Fifty \$2.50. Setting \$1.50. Satisfaction guaranteed. Chas. Bowlin, Olivet, Kansas.
LAYERS: S. C. W. LEGHORN MATED with male extra winter egg type. Setting \$2.00, chick order early guaranteed. Henry Mehl, Lorraine, Kansas.
YESTERLAIN'S STRAIN, SINGLE COMB White Leghorn eggs \$1.00 per 15; \$5.00 per 100; chicks \$12.50 per 100. Mrs. Earl Hennigh, Sabetha, Kansas.
S. C. W. LEGHORN. WYCKOFF per 15. English strain. Best pen \$2.00 per 15. Others \$6.00 per 100. Prepaid. B. F. Michaels, Osawatomie, Kansas.
SINGLE COMB WHITE LEGHORNS. EXhibition and egg type. Eggs \$1.50-15, \$5.00-100. Choice cockers for sale. Nickerson Poultry Yards, Nickerson, Kansas.
S. C. W. LEGHORNS, RANGE RAISED (Young's strain) mated for egg production. Sweetstake winners Manhattan show. Eggs from four best pens \$2.00-15; \$5.00-50. All other pens \$1.00-15; \$5.00-100. Jorgenson Bros., Manhattan, Kansas.

LEGHORNS.

SINGLE COMB WHITE LEGHORN EGGS from state prize winning stock, \$1 per 15, \$5 per 100. Special pens \$2.50 per 15. Vera Davis, Winfield, Kan., R. No. 2, Box 73.
S. C. BROWN LEGHORNS. OH, YES, WE have been raising them 21 years; the 222 to 228 trap nest egg record kind. Eggs 15-\$1.25. 100-\$5.00. Gorsuch, Stilwell, Kansas.
S. C. BROWN LEGHORNS. BABY CHICKS at \$12.50 per hundred; can deliver orders on first week of April, any quantity. Also eggs for hatching. Paradise Poultry Farm, Carona, Kansas.
PRIZE WINNING S. C. WHITE LEGHORNS at two state shows. Eggs \$2, \$3 and \$5 per 15. Eggs from flock \$5 per 100. Chicks. Send for free mating list. C. G. Cook, Lyons, Kansas, Box G.
S. C. W. LEGHORN EGGS FROM A GREAT strain of winter layers. Winners at every show. Pullets in laying contest. \$5.00 per 100 up to 1,000. Bellevue Poultry Farm, Scammon, Kansas.
SINGLE COMB WHITE LEGHORN EGGS for hatching \$4.50 per hundred. \$1.00 per setting from high carrying stock. Harry Olverson, R. F. D. 1, Manhattan, Kan. Formerly of Madison.
FOR SALE—SINGLE COMB WHITE LEGHORN babies 10 cents, eggs 6 cents, from world's best breeders and layers that pay \$7 each per hen per year. Clara Colwell, Smith Center, Kan.
ROSE COMB BUFF LEGHORNS EXCLUSIVELY. "Frost proof" combs means winter eggs. The largest Leghorn, select eggs, 15, \$1.50; 50-\$3.00; 100-\$5.00. Goldenrod Poultry Farm, Mesa, Colo.
PURE S. C. BUFF LEGHORN EGGS \$5 per 100; penned \$2 per 15. Heavy layers. Prize winning stock. Satisfaction guaranteed. Baby chicks 15 cents each. Mrs. John Witmer, Sabetha, Kan.
ENGLISH WHITE LEGHORNS BRED FOR laying. Free booklet of practical experience, tells how I cleared \$2400 last year. Write for it. Eggs and baby chicks. Sunny Slope Farm, Morrison, Okla.
SINGLE COMB WHITE LEGHORNS. Heavy laying strain. Direct descendants of the two champion laying hens of America. Eggs \$4.00 per hundred and up. Send for circular. F. E. Olmstead, Moran, Kansas.
SINGLE COMB WHITE LEGHORNS; EGGS. Fifteen, one fifty. Hundred, six dollars. Three pens first class pure white birds. Guarantee fertile eggs. Write for complete description. G. R. McClure, McPherson, Kan.
AMERICAN AND ENGLISH STRAIN OF Single Comb White Leghorns. World's greatest layers. Eggs at let live prices. Write for circulars and prices. Now booking orders. R. W. Bradshaw, Ellsworth, Kan.
SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Range raised, winter layers. Bred for egg production. \$1, \$2, \$3 per setting. Range matings \$5 per 100. Fertility guaranteed. Sunnyside Egg Farm, Box "B," Hallowell, Kansas.
PURE SINGLE COMB WHITE LEGHORN eggs for sale, range raised. Heavy layers. Famous Yesterday two hundred egg stock. Mated to Barron cockers from two hundred forty egg stock. Superb combination for egg production. One twenty-five per setting. Two or more one dollar each. Five dollars per hundred. Shady Pine Leghorn Farm, Rossville, Kansas.

MINORCAS.

BLACK MINORCA EGGS \$5.00 HUNDRED. Claude Hamilton, Garnett, Kansas.
S. C. WHITE MINORCAS. EGGS FOR hatching. A. Manley, Cottonwood Falls, Kan.
SINGLE COMB BLACK MINORCAS. 14 prizes on 16 birds. F. Kremer, Manchester, Okla.
SINGLE COMB BLACK MINORCA EGGS 30 \$2.50, postpaid. Sarah Peters, Nashville, Kan.
BLACK WHITE AND BUFF MINORCAS. Bred to stock cheap. C. H. Bartholomew, W. la, Kan.
LARGE SINGLE COMB BLACK MINORCA eggs for hatching. Victor E. Hawkinson, Randolph, Kan.
SINGLE COMB BLACK MINORCAS, EGGS, prize strain \$5.00 per hundred. W. A. Row, Alex, Okla.
SINGLE COMB BLACK MINORCA EGGS for sale. The large kind. Geiger and Whatgen stock. Satisfaction guaranteed. Ed Leach, Randolph, Kansas.
SINGLE COMB BLACK MINORCAS. PAPE'S heavy laying strain. Farm ranged. Eggs \$5.00, chicks \$10 hundred. Stock. Satisfaction guaranteed. Mrs. J. A. Jacobs, Manchester, Okla.

ORPINGTONS.

BUFF ORPINGTON EGGS. 75c SETTING. S. Peltier, Concordia, Kansas.
PURE BRED BUFF ORPINGTON EGGS \$1.50-15. John Stump, Bushton, Kan.
BUFF ORPINGTON EGGS. 15-75c. 100-\$2.50. Mrs. Melvin, Mahaska, Kansas.
BUFF ORPINGTON EGGS. \$1.50 FOR 15. Prepaid. H. H. Munger, Hollis, Kansas.
BUFF ORPINGTON EGGS \$1.00 FOR 15. \$5.00 per 100. Nellie Lawyer, Grenola, Kan.
WHITE ORPINGTON COCKERELS FOR sale \$2.00 and \$2.50. W. R. Gray, Green, Kansas.
BUFF ORPINGTON EGGS. MATING LIST free. C. A. Bassett, 355 Shawnee, Topeka, Kansas.
PRIZE WINNING SINGLE COMB WHITE Orpington eggs. Mrs. H. A. Snider, Abilene, Kan.
BUFF ORPINGTON EGGS. \$1.00 FIFTEEN. \$5.00 hundred. Mrs. E. L. Knapp, Maple Hill, Kansas.
WHITE ORPINGTON EGGS FROM HENS weight from 5 to 8½ lbs., \$4.00 100. D. H. Hoyt, Attica, Kan.
SINGLE COMB BUFF ORPINGTON EGGS \$1.25 per 15. Mrs. Walter J. Barnes, R. No. 5, Oswego, Kansas.
WHITE ORPINGTONS. PUREBRED. Winter layers. Fifteen eggs \$1.00. McKnight Bros., Cherryvale, Kan.
LARGE BRED, THOROUGHbred SINGLE Comb Buff Orpingtons. Best general purpose fowl. Selected free range flock. \$5.00 hundred. \$1.25 setting. Mrs. Anton Triaka, Hanover, Kansas.

ORPINGTONS.

PURE BRED WHITE ORPINGTON EGGS \$1.17; \$4-100. Cockerels \$1.50. Mrs. F. Platora, Tencott, Kansas.

GOOD PURE BRED BUFF ORPINGTONS. Eggs \$5.00 hundred. Pleasantview Poultry Farm, Little River, Kan.

BUFF ORPINGTON EGGS AND BABY chicks from winners; write for list. H. W. Smith, Junction City, Kansas.

BUFF ORPINGTON EGGS \$1.25 PER 15. Vigorous, high quality, farm raised stock. Mrs. H. M. Long, Reife, Mo.

COOK STRAIN BUFF ORPINGTON EGGS. 75c per 15; baby chicks 15c. Mrs. John Hough, Jr., Wetmore, Kansas.

S. C. BUFF ORPINGTON EGGS. \$4.00 per 100. \$1.00 per 15. Laying strain. V. M. Ravenscroft, Kingman, Kan.

BUFF ORPINGTONS, WON 1ST PEN AT two shows this winter, 15 eggs \$1.00, 100-\$4.50. A. Latham, Ingersoll, Okla.

SINGLE COMB BUFF ORPINGTON EGGS. \$1.25 for 15, \$6 per hundred delivered. Mrs. Olive Carter, Mankato, Kansas.

EGGS FROM PURE BRED S. C. BUFF Orpingtons. \$1.00 for 15, \$5.00 hundred. Mrs. E. D. Ludwig, Wichita, Kansas.

ALVEY'S SINGLE COMB BUFF ORPINGTONS. Eggs, \$5 per 100, \$8 for 50, \$1 per setting. N. J. Alvey, Meriden, Kansas.

GOLDEN BUFF ORPINGTON EGGS. 15-\$1.50, 30-\$2.50. Cook's strain. White House Poultry Farm, Salina, Kansas.

JUST A CARD WILL BRING THE "MATING LIST" of the "Golden Arrow Strain" Buff Orpingtons. Ball & Beebe, Viola, Kansas.

"PAYWELL" BUFF ORPINGTON EGGS from heavy winter layers and blue ribbon stock \$2.00 per 15. L. S. Weller, Salina, Kansas.

S. C. BUFF ORPINGTONS. EGGS \$1.00 setting; \$5 per hundred. Buff Orpington duck eggs. Mrs. Arthur Mosse, Leavenworth, Kan.

BUFF ORPINGTON-EGGS, FROM A FINE laying strain. 75c per 15, \$2.50 per 50, \$4.00 per 100. W. E. Bonneau, Rt. 1, Concordia, Kan.

WHITE ORPINGTON WINNERS. EGGS \$1.50 and \$2.50 per 15, \$6 per hundred. Prepaid. Hatch guaranteed. J. R. Berry, Solomon, Kan.

PURE BRED S. C. BUFF ORPINGTON eggs, from large, quick maturing strain \$1.00 for 15. Baby chicks 15c. Mrs. E. B. Johnson, Netawaka, Kansas.

CEDARLEAF POULTRY FARM, S. C. Buff Orpingtons, exclusively bred for size, color and eggs. \$1 per 15, \$5 per 100. Martha Brown, Parkerville, Kan.

S. C. BUFF ORPINGTONS. PRIZE WINNERS at Topeka 1915-16. Eggs \$5.00, 100, \$1.50 and \$2.50 for 15 from best matings. Alvin Miller, Overbrook, Kansas.

FOR SALE—SINGLE COMB BUFF ORPINGTON eggs 75c and \$1.00 per fifteen. \$5.00 per hundred. Trap nested \$3.00 per fifteen. H. G. Feltz, Hays, Kan.

WHITE ORPINGTON-EGGS FOR HATCHING from prize winners. \$1.00, \$2.00 and \$3.00 per 15. \$5.00, \$6.00 and \$7.00 for 100 eggs. Mrs. W. P. Latimer, Ottawa, Kan.

SINGLE COMB BUFF ORPINGTON EGGS from special pen \$3. 2nd pen \$1.50. S. C. White Leghorn eggs \$1 setting, \$5 per 100. Book orders now. F. E. Fisher, Wilson, Kan.

WHITE ORPINGTONS—PERSISTENT WINTER layers. Four pens. Mating list free. Eggs \$1.50 per setting and up. Urbandale Poultry Farm, 418 Butts Bldg., Wichita, Kan.

SINGLE COMB WHITE ORPINGTONS. Great winners and layers. Pens headed by sons and grandsons of American champions. Eggs \$1.50 to \$4.00. John Staley, Beloit, Kan.

WHITE ORPINGTONS. GOOD STRAIN, heavy winter layers. Will have a few settings to spare from best pen, \$1.50 per 15. Others \$1.00 per 15, \$5.00 per hundred. Mrs. Dora Ward, Ames, Kan.

OVERLOOK POULTRY FARMS, BUFF AND Black Orpingtons won 2nd first and 29 seconds this past show season. Cockerels for sale. Mating list sent free. Chas. Luengene, Topeka, Kansas, Box 1491.

SINGLE COMB BUFF ORPINGTONS, EGGS and baby chicks. Show and utility matings. Eggs \$1.00 for 15, \$5.00 for 100. Write for free mating list. Satisfaction guaranteed. Pleasant Hill Poultry Farm, Ellinwood, Kan., R. No. 3.

S. C. WHITE ORPINGTON EGGS FROM birds especially bred for heavy laying, healthy, vigorous and from highest class strains. \$1.50 fifteen, \$3.25 fifty, \$6 hundred. Prepaid express or post. J. H. Lansing, Chase, Kansas.

SINGLE COMB PRIZE WINNING GOLDEN Buff Orpingtons, fine layers, won 1st best pair. Sweepstake cockerel, all breeds competing at Mt. Grove, Mo., 1916. Eggs \$4.50 per 100. Buff Orpington duck eggs \$1.50 per 12. Mrs. Mary Knotwell, Norwood, Mo.

PLYMOUTH ROCKS.

BARRED ROCK EGGS. A. G. HAMMOND, Vinland, Kan.

BUFF ROCK EGGS. WILLIAM A. HESS, Humboldt, Kansas.

BARRED ROCKS. EGGS 15-\$1.00, 100-\$5.00. L. Thomas, Wetmore, Kan.

PURE BUFF ROCK EGGS. MRS. IKE Saunders, Elk City, Kansas.

BARRED ROCKS EGGS \$4.00 HUNDRED. D. E. McClure, Sublette, Kan.

PURE BRED WHITE ROCKS. EGGS \$1.50 per 15. J. C. Bostwick, Hoyt, Kan.

BARRED ROCK EGGS \$1.25 FOR 15. \$6.00 per 100. R. B. Donham, Talmo, Kan.

BIG BONED BARRED ROCK EGGS. \$1.50 per 15. Mrs. Aug. Hoyer, Canton, Kan.

100 BUFF ROCK EGGS \$4.00, 50 \$2.25. Mrs. Maggie E. Stevens, Humboldt, Kansas.

PURE WHITE ROCKS. EGGS \$1.50 PER 15. Mrs. T. C. Conklin, Mulvane, Kansas.

BARRED PLYMOUTH ROCKS. EGGS \$6.00 hundred. Mrs. J. B. Jones, Abilene, Kansas.

FINE RINGLET BARRED COCKERELS. Eggs. Chicks Edward Hall, Junction City, Kan.

BIG BARRED ROCK EGGS. \$5.00 PER hundred. Mrs. Henry Wenrick, Caldwell, Kansas.

PURE BARRED ROCKS. GOOD LAYERS. Eggs, both matings, \$1-15. Flock \$4-100, chicks 10c. Mrs. S. Van Scoyoc, Oak Hill, Kan.

PLYMOUTH ROCKS.

EXHIBITION BUFF ROCK EGGS. 2 AND three dollars. Broadmoor Yards, Haven, Kansas.

BARRED ROCK EGGS. SETTING 75c. Hundred \$4.50. G. C. Rhorer, Lewis, Kansas.

WHITE ROCK EGGS. SPECIAL MATING. \$1.50 for 15 eggs. R. L. Munson, Wetmore, Kan.

BARRED PLYMOUTH ROCK EGGS \$1.50 per 15, \$2.75 per 30. Wm. Pettyjohn, Talmo, Kan.

CHOICE WHITE ROCK COCKERELS FOR sale. Mrs. T. A. Cano, Sterling, Kan., Route No. 2.

WHITE ROCK EGGS \$4 PER 100. STATE prize winning strain. Mrs. W. J. Elliott, Raymond, Kan.

PURE BRED BIG TYPE BARRED ROCK eggs. 75c per 15. \$4.00 100. Mrs. Geo. L. Fink, Eddy, Okla.

PURE BUFF ROCKS EXCLUSIVELY. EGGS 15 for \$1.00, 100 for \$5.00 Elizabeth Means, Wetmore, Kansas.

BARRED ROCK EGGS. \$1.00 PER SETTING. \$4.00 per hundred. Mrs. Lillie Hirt, Parkerville, Kansas.

BARRED ROCKS. DARK MATING. EGGS \$1.50-15, \$8-100. Hal H. Darnall, Longdale, Okla., Route 1.

PURE BRED WHITE ROCK EGGS. \$1 per fifteen, \$4 per hundred. Mrs. Elwin Dalea, Eureka, Kansas.

BUFF ROCK EGGS, 100 \$5.00, 50 \$3.00, 15 \$1.25 from farm range flock. Mrs. Perry Myers, Fredonia, Kansas.

WEIGHER-LAYER BARRED ROCKS. Pens \$2 to \$5 setting. Flock \$5 hundred. C. F. Pickel, Earlton, Kan.

PARTRIDGE ROCKS. RANGE RAISED, vigorous. 15 eggs \$2.00, 50 eggs \$5.50. Joe McVey, Stafford, Kan.

EUREKA BARRED ROCKS. WINNERS. Pen eggs \$1.50 and \$2.00; range \$4.00-100. Lan Harter, Centralia, Kan.

WHITE ROCKS ONLY FOR 18 YEARS. Eggs \$1.00 per 15. \$5.00 per 100. Josias Lambert, Smith Center, Kan.

EGGS—BARRED ROCK, HEAVY LAYING strain, \$1 setting; \$5 hundred. Pinehurst Poultry Farm, Rt. 8, Topeka.

WHITE PLYMOUTH ROCKS ARE PRIZE winners. Send for catalog. W. K. Trumbo, Roseland, Kansas, Box 66 B.

BARRED PLYMOUTH ROCK EGGS FOR hatching. \$1.00 for 15, \$5.00 per 100. James Keal, Belleville, Kansas.

BARRED PLYMOUTH ROCK EGGS \$4.00 hundred; baby chicks 11c. Valley View Poultry Farm, Concordia, Kansas.

BARRED ROCK EGGS 215, 228 EGG strain. Prices reasonable. Maple Grove Farm, Billings, Mo. F. J. Greiner.

EGGS FOR HATCHING FROM FINE Barred Rock hens. Inquire of Wm. C. Mueller, Hanover, Kansas, Route 4.

BARRED ROCKS. COCKEREL LINE. Thompson strain. Eggs \$1.00 per 15. \$6.00 per 100. Jake Dusher, Lewis, Kan.

STAY WHITE ROCKS OF HIGH QUALITY. 15 eggs \$1.50. Satisfaction guaranteed. Garland Johnson, Mound City, Kan.

PARTRIDGE ROCKS. WINNERS AT Hutchinson, Kansas, 1917. Eggs \$5 per 15. C. W. Converse, Pawnee Rock, Kansas.

RINGLET BARRED ROCK EGGS. PEN fifteen \$3; thirty \$5. Range \$4 per hundred. Mrs. A. Anderson, Greenleaf, Kan.

BARRED ROCKS—FROM MITTENDORFF'S 200 to 268 egg strain (direct). Eggs \$2.00 per setting. O. Hassler, Enterprise, Kan.

EGGS FROM BARRED AND WHITE Rocks. 40 premiums 1916-7. Write for mating list. Henry Hicks, Cambridge, Kan.

WHITE ROCKS. SIZE AND QUALITY. Good egg strain. Eggs 15-\$1.00, 50-\$3.00, 100-\$5.00. G. M. Kretz, Clifton, Kansas.

WHITE ROCK EGGS FROM EXTRA LARGE pure white stock. \$1 per 15, \$5 per 100. Mrs. E. E. Williams, Sabetha, Kan., R. No. 6.

WHITE ROCKS—PURE BRED FARM range choice stock. Eggs 15-75 cents, 100-\$4.00. H. F. Richter, Hillsboro, Kansas.

BARRED ROCK EGGS. STOCK DIRECT from Holtermans-Thompsons. Pen 1 \$3-100, Utility \$5-100. Ed Lockwood, Kinsley, Kan.

BARRED PLYMOUTH ROCK EGGS FOR hatching. \$2.00 per 15. Baby chicks 20c. each. Mrs. G. W. Deverger, Tescott, Kan.

PURE BRED BARRED ROCKS. EGGS. 15 eggs, \$2. 30-\$3.50, 50-\$4.50, 100-\$8.00. Christina Bazil, Elmbrook Farm, Lebo, Kansas.

"RINGLET BARRED ROCKS." WINNERS wherever shown. Write for mating list and prices. Mrs. C. N. Bailey, Lyndon, Kansas.

BARRED ROCKS—73 PREMIUMS, TOPEKA, Manhattan, Clay Center, Denver. Italian bees. Mattie A. Gillespie, Clay Center, Kan.

PURE BARRED ROCKS. PULLET LINE only. High class stock. Eggs \$1.50, \$2.00 and \$3.00 per 15. Edna M. Sherman, Holly, Colo., R. 1.

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PLYMOUTH ROCKS.

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BARRED ROCKS—PEN AVERAGED 175 eggs, 1916. Trap-nested. Their pullets mated with fine cockerels. Eggs 10c, 50-\$4. J. F. Farnsworth, 224 Tyler, Topeka.

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BUFF ROCKS. FIFTEEN YEARS' SUC- cessful breeding eggs. \$4.50 per hundred. \$2.25 per fifty. Special penned \$3.00 per setting. Mrs. Homer Davis, Walton, Kansas.

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EGGS THAT WILL GIVE NICE LARGE yellow leg Rocks good shape deep barred, they are good eggs from pens. \$2.00 per 15, range \$5.00-100. Moore Bros., Cedarvale, Kansas.

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LINDAMOOD'S BARRED ROCKS. BOTH dark and light matings. Prices for eggs five dollars per 15. Utility eggs five dollars per hundred. Send for circular. C. C. Lindamood, Walton, Kansas.

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S. C. RED EGGS FROM PENS AND RANGE. Mrs. W. F. Burns, Hazelton, Kan.

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ROSE COMB REDS—GOOD LAYING strain. Eggs \$1 per 15, \$6 per 100. Mrs. Fred Watson, De Soto, Kan.

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SEEDS AND NURSERIES.

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SALESMEN WANTED FOR FRUIT AND ornamental trees. Experience unnecessary. Outfit free. Pay weekly. Carman Nursery Co., Lawrence, Kan., Dept. A.

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GENTLEMEN: MASON SOLD 16 SPRAY Pumps and Auto Washers one Saturday. Profits \$2.00 each. Write Rusler Co., Johnstown, O.

WE PAY \$80 MONTHLY SALARY AND furnish rig and expenses to introduce guaranteed poultry and stock powders. Bigler Company, X 608, Springfield, Ill.

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TYPHOID FEVER—THE OLD STYLE Cistern filter is a filthy disease breeder. The Cox Filter Co. will send you a durable, Sanitary Self Cleaning Filter, freight prepaid for less money than the old style costs. For particulars write The Cox Filter Co., Parsons, Kan.

The Grain Reserves are Small

(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.)

Official statistics of wheat supplies in the United States indicate that before another crop is harvested, available reserves will come nearer to complete exhaustion than ever before in the history of the country.

The Department of Agriculture last week reported 140 million bushels less wheat in farmers' hands, and 65 1/2 million bushels less in country elevators and mills than a year ago. The compilation of stocks at market centers shows 18 million bushels less than a year ago, so that aggregate supplies in the country appear to be 223 1/2 million bushels less than a year ago. The total amounts to 236 million bushels, 101 million on farms, 90 million in country mills and elevators, 45 million at market centers.

Normal domestic requirements for four months would be about 205 million bushels including 25 million for spring seeding, so that the excess above home needs is only 30 million. The reserves in all positions never were reduced to that figure on July 1. The nearest approach to it was in 1909 when July 1 reserves were 43 million bushels.

Exporters probably have more than 30 million bushels under contract to go abroad, so that the theoretical statistical situation seems to indicate that wheat will be very scarce before the new crop becomes available.

The government estimate caused only a temporary bulge in the market, which was followed by a setback, and closing prices were about 2 cents lower than the preceding week.

The setback in the market was due to profit taking sales by speculators who had bought in anticipation of the report. Another depressing influence was reports of the cancellation of foreign purchases amounting to 2 million bushels or more and the lack of any important new foreign buying in this country.

Primary receipts of wheat continue large in proportion to the supplies in the country. Five markets received 3,465 cars last week, nearly 25 per cent more than the preceding week and substantially more than two and three years ago. The movement, in fact, is unusually large for this time of year and seems to discredit the small estimates of reserves in the country. The government report indicates that farm reserves and country elevators and mill stocks are 44 million bushels less than two years ago, yet the five primary markets received 40 per cent more wheat last week than in the corresponding week of 1915.

Corn went to new high record prices last week, up 3 cents for May delivery, and the close showed 1 1/2 to 2 cents net gain for the week.

The government report showed smaller farm reserves than expected, 789 million bushels, 349 million less than a year ago and the smallest in more than 10 years. The figures indicated that the consumption of corn was only 60 million bushels less from harvest to March 1 this year than last, out of a crop of 411 million bushels less in 1916 than in 1915. Apparently the extreme high prices have not caused much economy in the use of corn. Farmers have been willing to feed high priced corn to get the benefit of marketing livestock at higher prices than ever prevailed in any previous year. If the same rate of feeding continues, corn is likely to be very scarce before next fall.

Saturday's grain quotations were: Wheat: No. 2 hard, \$1.93 to \$1.97; No. 2 soft, \$1.93 to \$1.97; No. 2 mixed, \$1.94 to \$1.95. Corn: No. 2 mixed, \$1.07 to \$1.08 1/2; No. 2 white, \$1.08 to \$1.08 1/2; No. 2 yellow, \$1.09 1/2 to \$1.10. Oats: No. 2 white, 62 1/2 c to 62 3/4 c; No. 2 mixed, 60 c to 61 c; No. 2 red, 62 c to 68 c.

The biggest advance that has occurred in the remarkable upward movement of the hog market was made last week, and it is probably the largest upturn that ever occurred in one week.

The Kansas City top price, \$15, was \$1.45 higher than a week ago, and \$2.85 above the top price of any previous year. The market has risen \$4.40 since the beginning of the year. Urgent packing demand was evident from the active competition to get every load at the price named by the salesman. The belief that supplies of fat hogs in the next five months will be short of requirements is the big factor in the advance.

The cattle market showed renewed strength last week. Eastern demand for beef improved, receipts of cattle were moderate, and there is increasing call for beef because of the seasonally high prices for mutton and pork. The fat cattle are selling at the highest prices ever known at this season of the year, they are relatively low compared with the prices of hogs and sheep. Native steers sold at \$9.50 to \$11.50, and Southwest meal and cake, fed steers at \$8.75 to \$10. Prices were quoted 15 to 35 cents higher, and the largest advance was in the plainer grades. Prime native steers would bring \$12 or better.

There was a ready demand for cows and heifers. Prices were up 10 to 20 cents. Bulls were quoted up 25 to 50 cents, and veal calves declined 50 cents.

The supply of feeding cattle was moderate, and prices were up 25 cents. Stockers were up 15 to 25 cents and stock calves 50 cents.

The new high record prices paid in the sheep pens were \$14.85 for lambs, \$13.65 for yearlings and \$12.50 for wethers. Receipts were moderate. A sale of wool was reported at 48 cents a pound. Receipts of clipped lambs are increasing, but prices for that class, \$12 to \$12.50, were lower.

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Watch the colts. They're money growing.

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Modern Priscilla.....	1.00	\$1.80
Woman's World.....	.35	You save \$1.05
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McCall's Magazine.....	.50	\$1.40
Today's Housewife.....	.50	You save 60c

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Farmers Mail and Breeze.....	\$1.00	All One Year for only
Today's Housewife.....	.50	\$1.50
Boys' Magazine.....	1.00	You save \$1.25
Household.....	.25	

Bargain Offer No. 4

People's Popular Monthly.....	.25	All One Year for only
McCall's Magazine.....	.50	\$1.55
Farmers Mail and Breeze.....	1.00	You save 70c
Reliable Poultry Journal.....	.50	

Special Club No. 50

Farmers Mail and Breeze.....	\$1.00	All One Year for only
Capper's Weekly.....	.50	\$1.25
Household Magazine.....	.25	You save 50c

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Household.....	.25	All One Year for only
Farmers Mail and Breeze.....	1.00	\$1.50
Modern Priscilla.....	1.00	You save 75c

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Farmers Mail and Breeze.....	\$1.00	All One Year for only
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Farmers Mail and Breeze.....	1.00	\$1.30
Reliable Poultry Journal.....	.50	You save \$1.20
Green's Fruit Grower.....	.50	
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Bargain Offer No. 9

Farmers Mail and Breeze.....	\$1.00	All One Year for only
Woman's Home Companion.....	1.50	\$2.65
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Free McCall Pattern

To introduce McCall Patterns, The McCall Company allows each subscriber for McCall's MAGAZINE to choose from her first copy of McCall's any one 15 cent McCall Dress Pattern FREE. Send free pattern request to McCall's Magazine, New York City, giving Number and Size, with 2-cent stamp for mailing. McCall's Pattern given only with clubs containing McCall's Magazine.

NOTE—If you do not find your favorite club in this list, make up your own combination of magazines and write us for our special price. We can save you money on any of the magazines above providing they are clubbed with our publication. New, Renewal or Extension Subscriptions Accepted.

— — — Use This Coupon — — —

Farmers Mail and Breeze, Club Dpt., Topeka, Kas. Gentlemen: Enclosed find \$..... for which please send the magazines listed in Offer No..... to the following name for one year.

Name.....

Town..... State.....

BIG BARGAINS IN REAL ESTATE

Dealers whose advertisements appear in this paper are thoroughly reliable and the many bargains are worthy of your consideration

Special Notice

All advertising copy discontinuance orders and change of copy intended for the Real Estate Department must reach this office 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.

80 A. IMP., 65 cult. 2 ml. Chetopa, \$55 a. Geo. Brechelsen, Jr., Chetopa, Kan.

WESTERN KAN. LAND. Farm and ranch lands. \$5 to \$25 a. J. E. Bennett, Dodge City, Kan.

320 ACRES smooth wheat land, unimproved. Ford Co. Good buffalo sod. Bargain. \$22.50. Terms. C. W. West, Spearville, Kan.

FOR SALE: 160 acres near Yates Center, Kan. Improved. Worth \$60. Price \$40 per acre. L. C. Arnold & Co., St. Joseph, Mo.

FOR SALE: Well improved farm near town; splendid stock farm; small payment; easy terms. Lewis Pendleton, Dodge City, Kan.

NORTHEAST KANSAS bargains in bluegrass, timothy, clover and alfalfa farms. Exchanges. Compton & Keen, Valley Falls, Kan.

100 A., 1 1/2 ml. Lebo, Kan., 80 cult., 20 blue-grass pasture. \$75 a. Mtg. \$2500, 6 1/2% Trade for mdse. Hedrick & Beschko, Hartford, Kan.

FOR SALE: The N. W. 1/4 of sec. 2, Twp. 33, Range 29, Meade county, Kansas. Make cash offer. W. G. McCartney, No. 205 New York Life, Kansas City, Mo.

3600 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.

FOR SALE: 160 acres very desirable, unimproved dry land, in Kearny County, Kansas, \$12 per acre, cash. For particulars and location write R. L. Henry, 410 Matthews St., Fort Collins, Colo.

40 SECTIONS of ranch land in S. E. Okla. Good grass and worlds of water, sell all or part. Price \$3.50 per acre. Guss Schimpff, Burns, Kansas.

WE OWN 100 FARMS in fertile Pawnee Valley; all smooth alfalfa and wheat land; some good improvements; shallow water. Will sell 80 acres or more. E. E. Frazier & Sons, Larned, Kansas.

160 ACRES located 2 miles of good railroad town, Franklin County, Kansas. All nice smooth tillable land; 120 acres in blue grass pasture, and timothy and clover meadows; good 7 room house; good barn; close to school and church. Price \$75 per acre. Extra good terms. Casida & Clark, Ottawa, Kan.

SPECIAL BARGAIN in highly improved 120 acre farm, adjoining Ottawa, abundance of water, good soil, a very choice home. Write for descriptive list of same.

Special price on 360 acres, well improved, 100 acres in tame grass. Also 170 acres, well improved, choice farm. Ideal location, very attractive. Write for full descriptions. Possession at once. Mansfield Land Company, Ottawa, Kansas.

SNAPS IN WESTERN KANSAS LAND. Write Ernest R. Trimmer, Gove, Kansas.

FERTILE KANSAS LAND CHEAP

Those who located in Central Kansas 20 years ago are the big farmers today. Their land has made them independent.

Your chance now is in the five Southwestern Kansas counties adjacent to the Santa Fe's new line, where good land is still cheap.

With railroad facilities this country is developing fast. Farmers are making good profits on small investments. It is the place today for the man of moderate means.

Wheat, oats, barley, speltz, kafir and broom corn, milo and feterita grow abundantly in the Southwest counties referred to. Chickens, hogs, dairy cows and beef cattle increase your profits.

You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6 per cent—price \$10 to \$15 an acre.

Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy-purchase contract. Address

E. T. Cartledge,
Santa Fe Land Improvement Co.,
1891 Santa Fe Bldg., Topeka, Kan.

SANTA FE LANDS ON LONG TIME. L. J. Pettit, John, Gen'l Agent, Dodge City, Kan.

FOR REAL ESTATE BARGAINS in Reno, Scott and Lane Counties, write Bachus & Winder, Abbeville, Kansas.

RIVER BOTTOM FARM 471 ACRES. Improved, 1 mile out. \$17 per acre. Easy terms. Cliff Tomson, Syracuse, Kansas.

280 ACRES, HOUSE, BARN, SILO. 3 miles of town. 135 a. cult.; 60 hay, bal. pasture; \$35 acre. 160 improved; 1/2 cultivation. Four miles out. \$30 an acre. J. K. Beatty, Coffeyville, Kan.

CHASE COUNTY FARM. 315 acres, 2 miles town on Santa Fe. 160 acres first bottom, no overflow. Fine timber feed lot. 140 acres bluestem pasture. Fair improvements. Close to school; daily mail, telephone. \$24,000; liberal terms. J. E. Beacock & Son, Cottonwood Falls, Kan.

FINE FARM HOME. POSSESSION AT ONCE. 200 a. 7 ml. Yates Center; 60 a. creek valley; no rock; smooth land; good improvements. Price \$60 per a. Loan \$6000. If interested write for pictures and description. Iola Land Co., Iola, Kansas.

CHEAP QUARTER. GERMAN SETTLEMENT. BEAVER COUNTY, OKLA. At a Bargain Price.

A dandy quarter of wheat land, 18 miles southeast of Liberal, Kan. Close to route of proposed new railroad from Liberal to Fort-gan. Rolling land but fine soil and close to school. Must sell at once and will price accordingly. If you want a snap write for full description and price. E. J. Thayer, Liberal, Kansas.

480 ACRES, six miles from town, every acre perfect wheat land. This is an exceptionally good bargain at \$12.50 an acre. Description guaranteed. Write us for our map and folder of Scott County.

THE KING REALTY CO. Scott City, Kansas.

EASTERN KANSAS FARMS

50, 80, 160 and 240 a. improved farms near Lawrence. We offer for 20 days at \$40 per acre. Good terms. Have several farms for rent. Hemphill Land Co., Lawrence, 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.

Lane County

Write me for prices on farms and ranches, wheat, alfalfa and grazing lands. W. V. Young, Dighton, Kan.

80 Acres Only \$500

Only 7 ml. Wichita. Virgin black loam soil. New 5-room cottage, new barn, etc., only \$500 cash, \$500 Aug. 1st, \$500 yearly. R. M. Mills, Schwelter Bldg., Wichita, Kan.

FARM HOMES FOR YOU

160 a. farm, rich loam soil, improved, 160 a. alfalfa land, well located, \$7500, \$3000 handles. 80 a. farm, rich soil, improved, fine location, \$4500, \$2500 handles. H. E. Osburn, 227 E. Douglas, Wichita, Kan.

Cash for Farm Lands

Where you find one purchaser for a large tract of land we can furnish twenty wanting small tracts. 40s and 80s. Let us subdivide and sell your place. Write for particulars and references. Closing up estates a specialty.

MIDDLE WEST LAND AUCTION COMPANY C. F. Sutter, Pres. I. H. Johnson, Gen'l Mgr. P.O. Box 374, Office, Hub Bldg., Salina, Kan.

Stock Farm for Rent

640 a., 450 a. blue grass and blue stem pasture, 30-40 a. clover, balance cultivation. Abundant water, good improvements, two miles to railroad. Write E. M. Smith, Colony, Kansas.

3100 ACRE RANCH

—\$13 PER ACRE

Living water, 700 acres sub-irrigated alfalfa land; balance pasture and wheat land. About all tillable. Fair improvements. Located near Wakeeney, Kan. Big bargain, good terms. We have other bargains.

Parish Investment Co., Missouri.

Western Kansas Lands

Are advancing rapidly. We have the best at lowest prices and most attractive terms. Write us today. Griffith & Baughman, Liberal, Kan.

Farm Mortgages For Sale

Any one wanting to invest in good farm mortgages on land in Hodgeman County, Kansas, will find it to their advantage to write to M. W. Peterson, Jetmore, Kansas.

800 Acre Beaver Creek Ranch
Wichita County, Kansas

Improvements only fair. Nice grove trees. About 150 acres excellent Beaver Creek bottom, from 8 to 15 feet to sheet water. Mile to church and daily motor mail route. Exceptional bargain. \$15 per acre. D. F. Carter, Leoti, Kansas.

Immediate Possession

Fine 240 a. improved farm, 7 ml. Ness City. 100 a. wheat, plenty pasture, good buildings, R. F. D. and telephone. Close to school. Price \$7,500. Half cash.

160 a., 8 ml. Ness City, half cultivation, bal. fine pasture, small buildings, plenty water. Price \$ 00.

Above are cash prices for quick sale, no trades considered. Come quick.

Miner Brothers, Ness City, Kan.

ARKANSAS

40 ACRES, improved, 38 cult. \$2000. 1/2 cash. Terms. Fair, Centerton, Ark.

FOR ARKANSAS farms and ranches, write for lists. R. D. McMullen, Ola, Ark.

500 ACRES, 1 1/2 MI. TOWN; level. 100 open. \$20 a. Chas. Thompson, Jonesboro, Ark.

70 ACRES, IMP., 45 A. Cult. \$2200.00. Moss & Hurlock, Siloam Springs, Arkansas.

80 A., 25 CUL.; \$15 a. 160 a., 80 cult.; bal. timber; water, house, barn, orchard; public road; no rocks. \$20 an acre. Robt. Sessions, Winthrop, Ark. (On Ry.)

COME TO CLEBURNE county, Arkansas. Land \$5 up; easy terms. Send for list. Claude Jones, Heber Springs, Ark.

IF YOU WANT good farm, stock and fruit lands, write us for list. Robertson & Son, Magazine, Arkansas.

200 A. 6 ml. R. R. station; 60 acres in cult. Small tracts. \$1500, 1/2 cash, bal. long time. Wallace Realty Co., Leslie, Ark.

80 ACRES, 30 in cult.; small house. Bal. timber. 5 ml. Marshall on turnpike road. Terms. \$10 a. Lock Box 21, Marshall, Ark.

132 ACRES, improved. 100 cult., bal. timber and pasture. \$3,000. Good terms. Yell Co. Land Co., Danville, Ark.

160 ACRES, 80 a. rich bottom, 80 a. good upland; well improved; close to school and small town. Price \$20 per acre. J. C. Hart, Waldron, Ark.

40 A., 4 room house, good outbuildings—1000 fine bearing fruit trees; good water. 2 ml. R. R. Price \$1000. Easy terms. J. M. Doyel, Mountainburg, Ark.

IF YOU WANT A GOOD FARM at reasonable prices, write for our list. Dowell Land Co., Walnut Ridge, Ark.

100,000 ACRES FOR SALE.

Farms and ranches, any size, cash or terms, low prices, profit doubling values, no rock or swamp, fastest selling land in south; sure crops; pastures 3 head to acre; bears inspection. Free map and price list. Tom Blodgett, Little Rock, Ark.

Must Be Sold in Twenty Days

to settle partnership business, 40 acres, 2 1/2 ml. from Berryville, Ark. (county seat). 1/2 mile to church and school; good roads, all fenced with hog wire; 30 acres in cult., but all can be cultivated when cleared; 10 acres fine timber, oak, hickory and walnut, no pine; 7 a. bottom land, never-falling well, good spring, good new barn and house. Immediate possession. Made a splendid crop corn last season and will raise anything; no swamps or overflows in this section. Price \$32.50 per a. \$5 per a. cash and bal. in monthly payments 7% int. until paid. Adjoining land sold for \$40 and \$50 an acre. An ideal home for someone. Don't write but wire when you will arrive. B. H. Atkinson, Berryville, Ark., principal owner.

WISCONSIN

30,000 ACRES our own cut-over lands; good soil, plenty rain, prices right and easy terms to settlers. Write us. Brown Bros. Lbr. Co., Rhinelander, Wis.

UPPER WISCONSIN. Best dairy and general crop state in the Union. Settlers wanted; lands for sale at low prices on easy terms. Ask about our cutover lands for cattle and sheep grazing. Write for booklet No. 21 on Wisconsin. Address Land Department, Soo Lines.

1207 1st Nat'l Bank Bldg., Minneapolis, Minn.

WYOMING

640 Acre Homesteads in Wyoming

We will locate you and stock you with sheep or cattle. For particulars write to Western Ranch Exchange, Eastern Office, P. O. Box 1106, Lincoln, Neb.

OKLAHOMA

LAND BARGAINS, all leases. Write for list. Roberts Realty Co., Nowata, Okla.

EASTERN OKLAHOMA farms, ranches, oil lands. \$5 up. Black Bros., Stillwell, Okla.

70 ACRES, improved, bottom land; spring. 4 room house; barn. 2 miles of Westville, Oklahoma. W. J. Foreman, Westville, Okla.

FOR SALE. Good farm and grazing lands in Northeastern Oklahoma. Write for price list and literature. W. C. Wood, Nowata, Oklahoma.

HUNDREDS of Kansas people have bought homes of me. My illustrated list and map of Oklahoma is free. Ask for it. Perry DeFord, Oakwood, Okla.

2000 ACRES—Plenty of timber and water. A fine proposition for stock ranch. Can make terms. Price \$2.25 an acre. McClendon & Jones, McAlester, Okla.

200 A. ALL BOTTOM, all tillable. 70 a. cult., bal. meadow and pasture. Adjoins city, this county, of 1500. \$35 a. Terms. Southern Realty Co., McAlester, Okla.

Attention Farmers
200
Choice Eastern Oklahoma Farms
For Sale

At Low Prices and on Easy Terms. It will pay parties wishing to acquire homes to answer this advertisement. Write Jas. P. Allen & Son, Box 1322, Tulsa, Okla.

COLORADO

TWIN LAKES IRRIGATED LAND at unheard of prices. Relinquishments and cheap dry lands. Write today for prices. Grene & Dean, Ordway, Colorado.

CHEAPEST choice half section RELINQUISHMENTS in Colorado, farm and ranch properties. Write for bargain list. Terral Land Company, Springfield, Colo.

FOR SALE: One of the best stock ranches in southern Colorado. 1120 acres with irrigation, alfalfa, and 1st class improvements. Price \$20 per acre. Easy terms can be secured. Edwin B. Haver, Room 119, Central Block, Pueblo, Colo.

For-Sale or Trade

80 acres of raw land in Mayes Co., Okla., two miles west from Mazie. Address Joseph Pizinger, Box 96, Great Bend, Kan.

COLORADO LAND

I have a few of the best, cheapest farms and ranches in the best of East Colorado. Climate, soil, water, crops, schools and opportunities. Write for FACTS, prices, terms. R. T. Cline, Brandon, Colo.

MISSOURI

FOR SOUTHEAST MISSOURI farms, write M. Leers, Neelyville, Mo.

120 ACRES, 60 cult. Improved. Good water. \$2400. W. W. Tracy, Anderson, Mo.

160 A. DOUGLAS CO., 1 ml. Ava. Well imp. \$3200. Corn Land Co., Springfield, Mo.

POOR MAN'S CHANCE. \$5 down, \$5 monthly, buys 40 acres good land, near town, some timber. Price only \$200. Write for list. Box 808, Excelsior Springs, Mo.

NEW YORK

355 ACRE high class Holstein, hay, stock farm in New York state, located on State road, only 1 1/2 ml. from bank, railroad and high school. 250 acres tillable, level and free from stone, balance in pasture. Price includes three sand-stone quarries and gravel pit, railroad switch in one quarry; two fine stone houses, also two tenant houses, large modern barns, two silos, electric lights, including 25 registered Holstein cows, four horses, milking machine, gas engine, grain binder, corn harvester, and large quantity of other tools. Price \$40,000; \$25,000 down or will exchange for large tract of range land. Write for new illustrated catalog. The Russell Real Estate Co., Ogdensburg, N. Y.

OKLAHOMA

80 ACRES FINE VALLEY; 65 acres cultivated. \$2000. Mortgage \$1,200, 7 years. Givens & Ryan Land Co., Holdenville, Okla.

MONTANA

640 ACRE Montana homesteads. New law Circular free. Bureau 112, Boulder, Mont.

MONTANA The Judith Basin offers exceptional opportunities in the farmer, stockman and investor. Surveys by ordinary farming methods. Harvest every year—not once in awhile. No irrigation, splendid climate, excellent water, good markets. You can do better in the Judith Basin. Buy direct from the owners. Prices lowest; terms easiest. Free information and price sent on request. Address THE COOK-BEYNOLDS CO., Box R1405, Lewistown, Montana

ALABAMA

LOCATE on the Gulf, Mobile & Northern R.R. Large or small tracts, suitable for alfalfa, general farming, truck, pecans, oranges and stock raising. New road, new country. Healthy, rapidly developing. Address H. H. Bolton, Immigration Agent, Mobile, Ala.

TEXAS

HAVE subdivided my 16,000 acre cow ranch and offering same in tracts of 5 acres and up at \$30 to \$100 per acre. Land joins one of the best towns in west Texas. Good schools and churches. Send for map. Henry M. Half, Midland, Texas.

SALE OR EXCHANGE

240 A. KAW VALLEY LAND, IMPROVED. J. M. Conlan, St. Marys, Kansas.

WHATEVER you may have for exchange write me. Eugene Oaks, West Plains, Mo.

EXCHANGE BOOK, 1000 farms, etc. Trades everywhere. Graham Bros., El Dorado, Kan.

OZARKS OF MO., farms and timber land, sale or ex. Avery & Stephens, Mansfield, Mo.

240 A. ANDERSON CO., Kan. Price \$14,400. Mtg. \$6,000. Want western land. Other trades. Thane Holcomb, Garnett, Kan.

1000 ACRES exchange for anything. 10 a. up. Timber, water and grass. S. A. Robinson, Southwest City, Mo.

FOR illustrated booklet of good land in southeastern Kansas for sale or trade write Allen County Investment Co., Iola, Kan.

THREE RANCHES in Elk Co. to exchange for wheat land, city property or small farm. F. J. Brown, Howard, Kansas.

160 A. 5 MI. WAVERLY, 100 a. cult., 30 pasture, 30 hay; some alfalfa. Exchange for good dairy stock, Holsteins or Jerseys. W. H. Lathrop, Waverly, Kansas.

HAVE STORE BUILDING 30x80 feet, with residence, in back; situated in Yocemento, Kan. Priced at \$2000. Will trade for Western Kansas or Eastern Colorado land. Western Real Estate Co., Ellis, Kan.

TRADES Farms, property, stocks. Write Fred Ochiltree, St. Joseph, Mo.

FOR SALE AND EXCHANGE. Northwest Missouri, Iowa and Nebraska choice farms; the greatest grain belt in the United States. Get my bargains. M. E. Noble & Co., St. Joseph, Mo.

CASH OR LAND. Harness shop in good little town of 350, no competition. Stock \$1,100, tools and fixtures \$350. No encumbrance. Fred Kent, Uniontown, Kansas.

"Macon Moore" By Judson R. Taylor

This is a story of detective work among the MOONSHINERS in the mountain wilds of GEORGIA. There is not a slow line in the entire book of 251 pages; it is written in a style that commands attention right from the start. The best part of it all is that MACON MOORE is a gentleman detective and in no sense a swash-buckled ruffian. He has the courage to meet even criminals and desperadoes on the level; in short, he is what the schoolboy would call "a corker." Like all fiction there are places where the story strains the probable, but it is within the possible. We think it certainly a mighty clever, well-written, interesting book.

SPECIAL OFFER: This dramatic story book sent free and postage paid for one new or renewal subscription to the Missouri Valley Farmer at 30c. MISSOURI VALLEY FARMER, Book Dept. M.M. 2, Topeka, Kan.

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THE SOUTHERN DETECTIVE By Judson R. Taylor

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Silage for Horses and Mules

BY E. A. TROWBRIDGE.

The satisfactory results which have been obtained from the use of silage as a part ration for dairy cows, beef breeding cattle, and fattening steers have suggested possibilities as to its value for horses and mules. It has been fed to these classes of livestock to some extent on many farms but there is little published data on the subject.

The Missouri Experiment station fed corn silage to yearling mules during the winter of 1910-11. The object of this test was to obtain information in regard to the amount of silage yearling mules will eat and the value of silage in the ration. Ten yearling mules which averaged 652.2 pounds at the beginning of the experiment were fed 90 days on an average daily ration of 6.5 pounds of ear corn, 8.6 pounds of mixed hay, and 4 pounds of corn silage. The corn was of good quality and the silage and hay were of medium grades. The mules made a gain of only 45-6 pounds a head in the 90 days. No ill effects were observed from the use of the silage but the mules did not consume large quantities of it. This may have been due to the fact that the silage was made from rather immature corn.

Cochel fed draft weanlings at the Pennsylvania Experiment station for 168 days. The daily ration consisted of 5 pounds of a grain mixture, 8.2 pounds of silage, and 7.4 pounds of hay for the first 75 days. The grain was increased to 7.5 pounds a day, and the hay to 13.1 pounds a day after that and the silage was discontinued. The colts made satisfactory gains and came through the winter in good condition.

Burkett reported feeding silage at the North Carolina Experiment station in bulletin 189. Horses weighing 1,250 to 1,300 pounds were fed 30 pounds of silage in the place of 15 pounds of oat hay in a balanced ration for five weeks. Both rations produced slight gains. The oat hay was replaced later by an equal amount of clover hay for four weeks. The silage still served as a satisfactory substitute for the hay. Corn silage was compared with various other roughages for horses and mules at farm work. The data shows that 2 pounds of silage was substituted for 1 pound of hay. As much as 30 pounds of corn silage a head was fed daily. The results were very satisfactory when the silage was fed as part of the balanced ration.

Fattening horses averaging 1,500 pounds were fed a ration of 17 pounds corn silage, 14 pounds of grain, and 10.5 pounds of hay 84 days at the Pennsylvania Experiment station. They made slightly less gains, but at less grain and made their gains at a lower cost than did horses which received no silage.

There is little doubt that corn silage can be used more extensively as a part of the ration for horses and mules. Horses have much smaller stomachs, proportionately, than cattle consequently they are not so well adapted to the consumption of large quantities of roughage but must have their food in a more concentrated form. A pound of silage contains one-half the protein and fat, one-third the carbohydrates, and less than one-third the dry matter contained in 1 pound of timothy hay. This shows clearly why it is advisable to substitute 2 pounds of silage for 1 pound of hay. Silage is a succulent feed which serves a valuable purpose in the ration for animals which are on a dry feed, especially in winter.

Horses on a full feed of grain, either fattening or performing hard labor, cannot be expected to eat large quantities of silage. As much as 17 pounds of silage, however, has been fed to fattening horses with good results. Successful horsemen report that a good leguminous hay and corn silage is a satisfactory ration for mature mares and that they produce strong, lusty foals when fed these feeds.

A part of the roughage fed to growing horses and mules may consist of corn silage. If satisfactory gains are to be obtained, however, they should be fed grain and hay once a day. Growth and development is the best index to the quantity of feed necessary. Corn silage which is in any way spoiled, moldy or rotten is an unsafe feed for horses. It may cause indigestion which usually is followed by serious results. Be careful to feed none but good silage.

Horses and mules should be fed small quantities of silage at first and the silage should be fed in connection with

other feeds. It should be increased and the other feeds should be decreased until the proportions desired are reached. The desired balance of food stuffs should be determined by the condition of the animals.

It Keeps on Rambling

We have only owned our car 18 months but we have driven it 8,530 miles, and I think its purchase was the best investment we ever made. We live 10 miles from town and in the summer we can work until 2 o'clock, then go to town that afternoon, do our trading and get home before sundown. Our car is very useful. We take all kinds of produce to market and bring back a load of groceries.

Our car has been driven 8,530 miles with only one puncture and the tires are good for many more miles. Our only expense for repairs has been 15 cents. We like our Ford for it is a good all purpose farm car and it can climb hills better than some of the larger cars.

Mrs. G. T. Shifflet.

R. 5, Brookfield, Mo.

DUROC JERSEY HOGS.

Jones Sells on Approval High Quality Duroc-Jerseys. White Wyandottes, eggs for sale now. W. W. & L. C. JONES, CLAY CENTER, KANSAS.

Bancroft's Durocs Guaranteed Immune. Ten choice September boars. D. O. BANCROFT, OSBORNE, KANSAS.

50 Duroc-Jersey Pigs Sired by Critic B and G's Crimson Echo 2nd. Special prices for 30 days. R. T. & W. J. Garrett, Steele City, Nebr.

QUALITY AND SIZE Big type Poland Chinas, either sex, \$12 to \$35. Satisfaction guaranteed and a pedigree with each pig. E. CASS, COLLYER, Trego Co., KANSAS

Quality Durocs Richly bred fall boars and gilts for sale. Attractive prices to move them as I need the room. F. J. MOSER, GOFF, KANSAS

Two Outstanding Spring Gilts due April 28, and May 5. Price \$100, \$75. June farrowing gilts \$40 and \$45. Several good boars summer and fall farrow, also illustrators. J. R. No. 188893. G. M. SHEPHERD, LYONS, KAN.

Private Sale, Boars and Gilts A choice lot of fall pigs, either sex. Also one of my herd boars. Priced to sell. Address A. E. SISCO, R.R. 2, Topeka, Kansas

Duroc-Jerseys Johnson Workman, Russell, Kansas

TRUMBO'S DUROCS Bred gilts all sold; a few fall boar pigs all immuned. Price \$15. Satisfaction guaranteed. Write today. WESLEY W. TRUMBO, PEABODY, KAN.

DUROCS of SIZE and QUALITY Herd headed by Reed's Gano, first prize boar at three State fairs. Fall boars and gilts, from champions Defender, Illustrators, Crimson Wonder and Golden Mod-el breeding. JOHN A. REED & SONS, Lyons, Kansas

BONNIE VIEW STOCK FARM Duroc-Jerseys! Booking orders for spring pigs, sired by a Critic, out of Tat-A-Walla sows.

SEARLE & COTTE, BERRYTON, KANSAS

Percherons — Belgians — Shires Imported and home-grown 4 and 5-year-old stallions, ton and heavier, 3-year-olds, 2-year-olds, yearlings. Proce of 62 imported mares and noted prize winning imported sires weighing 2,235 lbs. and 2,430 lbs. Ton stallions at farmer's prices. Near Kansas City. FRED CHANDLER, Route 7, CHARITON, IA.

CLOSING OUT AT PRIVATE TREATY Imported and Home Bred **BELGIAN and PERCHERON MARES** Having changed my occupation and location, I must sell the following: 8 Belgian and Percheron mares, 3 to 10 years old; all in foal. 1 Belgian filly, two years old. 2 Percheron fillies, two years old. 1 Belgian filly, one year old. 1 Belgian stallion, one year old. 1 Percheron stallion, one year old. All are registered, extra fine, large and sound. Don't buy until you see these. Priced right. ROSCOE FRAZIER, Cainesville, Missouri

Extraordinary Poland China Sale Lookabaugh Disperses Entire Big Boned Herd Watonga, Okla., Tuesday, Mar. 20 To Give Entire Time to Shorthorns.

40 HEAD. All Immune. 35 large type sows. Every one a tried sow of proven worth. 3 spring gilts, extra size and quality.

Wonder Monarch and Lookabaugh's Revenue, two great breeding and prize winning herd boars also sell. These sows have great size with quality and farrow and raise large litters. None of these sows would sell at any price were I not dispersing the herd. Write today for catalog, it gives full description of offering.

H. C. LOOKABAUGH, WATONGA, OKLAHOMA

LIVESTOCK AUCTIONEERS.

Jas. T. McCulloch, Clay Center, Kan. References: I am selling for every year. Write for open dates.

Rule Bros., H. T. & R. D., Ottawa, Kan. Livestock sales a specialty. Write for dates.

W. H. Fisher, White City, Kan. Pure bred and big stock sales. Write, Wire or Phone. Address as above.

Lafe Burger, Wellington, Kan. LIVESTOCK Auctioneer. Ask any Breeder. Write or wire as above.

Be An Auctioneer

Make from \$10 to \$50 a day. We teach you by correspondence or here in school. Write for big free catalog. We are also starting a new breed of horses known as "Wagon Horses." We register 25 of the best mares in each county. Foundation stock mares to weigh about 1,200 pounds. Stallions must be registered Percherons.

W.B. Carpenter, Pres., Missouri Auction School, 818 Walnut St., Kansas City, Mo.

MULE FOOT HOGS.

200 Immune Mulefoot Hogs, all ages, sired by champion males. Hereford Collie. Catalog free. C. M. Thompson, Letts, Ind.

POLAND CHINA HOGS.

Fashionable Stock Place Big Type Poland Chinas Breeding stock for sale. Immune. Satisfaction guaranteed. V. O. JOHNSON, AULNE, KANSAS.

BIG POLAND CHINAS We have selected only a few of our fall boars for sale. All herd headers. J. RAHE & SONS, Winkler, Kan.

FAIRVIEW POLAND CHINAS Full values offered in 50 fall pigs, sired by Miami Chief and Ware's Blue Valley. For prices and description, address F. L. WARE & SON, PAOLA, KANSAS

POLAND CHINAS BIG TYPE Gilts all sold; six fine boars left; sired by Jupiter, champion of three states.

Engleman Stock Farm, Fredonia, Kan.

Private Sale A few bred gilts, some fine June and July boars and one extra good February boar by Hercules 2d out of Helene Again. Price right. Pedigree with each pig. ANDREW KOSAR, DELPHOS, KAN.

Missouri's Best Polands BRED GILTS, by X. L. Columbus, by Smooth Columbus, Big Bone Leader, Big Logan X and Crow's Extra. Bred to Smooth Bob, by Big Bob —dam by Smooth Big Bone, and The Mint, by Goldengate King. Also a few open fall gilts and fall boars. None better in Missouri. Prices reasonable and satisfaction guaranteed.

Joe Young, RICHARDS, MISSOURI Joe Sheehy

Poland Chinas Breeding stock as good as the best and at prices consistent with the quality offered. Write your wants. I will try to please.

L. C. WALBRIDGE, RUSSELL, KANSAS

FARMERS MAIL & BREEZE ENGRAVING DEPARTMENT TOPEKA, KANSAS CUTS OF YOUR LIVESTOCK FOR LETTERHEADS & SALE CATALOGS

Vegetable Garden Free It is none too early to commence to plan your vegetable garden for the coming season. If you have a piece of land that makes it possible for you to have a garden of any sort it is your duty to get busy and make that land yield something. We will help you with your garden and will furnish you the seed on an unusually liberal plan.

Only One Collection To a Person This is the best assortment of garden seeds ever offered. Choice, tested seeds, true and tried varieties, and warranted fresh, and reliable. This assortment contains all the standard garden vegetables, such as Melons, Onions, Cabbage, Radishes, Lettuce, Turnips, Beets, etc.

Special Offer to Our Readers We have purchased a large quantity of these vegetable seed assortments to give to our readers as a premium with a subscription. The seeds are packed in envelopes and will be sent free to all who send 50 cents to pay for a one year subscription to Capper's Weekly. New or renewal subscriptions accepted on this offer. Address

CAPPER'S WEEKLY, Seed Dept. 4, TOPEKA, KAN.

Capper's Weekly, Seed Dept. 4, Topeka, Kan. Enclosed find 50 cents for which enter my subscription to Capper's Weekly for the term of one year and send me the vegetable seed assortment free as per your offer.

Name.....

Address.....

CHESTER WHITE AND O. I. C. HOGS.

CHESTER WHITE HOGS Fashionable breeding. Excellent quality. Prices reasonable. E. E. SMILEY, PERTH, KAN.

Big Stretchy Chester White Boars ready for service and open gilts. Write your wants. A. C. Ballew, Lewistown, Mo.

For Sale, O. I. Cs. A few service boars, July gilts and fall pigs, priced for quick sale. A. G. COOK, LURAY, KANSAS.

O. I. C. Service Boars Spring pigs. Both sex. Harry W. Haynes, Grantville, Kan.

Summer Boars and fall pigs, at very reasonable prices, to make room for my spring pigs. **F. C. GOOKIN, Russell, Kansas**

Edgewood Farm Herd Chester Whites Spring boars with length, size, bone and quality sired by Don Ben 2nd and Sweepstakes. **HENRY MURE, Tonganoxie, Kan.**

CLINTON COUNTY CHESTERS Booking orders for spring pigs of National Swine Show blood lines. A few good fall pigs at bargain prices. **J. H. McANAW, CAMERON, MISSOURI**

FEHNER'S O. I. C. Herd headed by the \$500 Eagle Archie first prize aged boar at Sedalia, 1916. We offer 100 selected spring pigs, a number by a son of Eagle Archie, every one immune and shipped on 10 days' approval. **Henry Fehner, Higginsville, Mo.**

Kansas Herd of CHESTER WHITES All bred stuff sold to Copper Pig Club Boys. Fall pigs for sale. K. I. C. Hogs. **ARTHUR MOSSE, LEAVENWORTH, KAN.**

CHESTER WHITE PIGS SHIPPED C. O. D. I am booking orders for spring pigs sired by prize winners. Free 24 page catalog with photos. Also the difference between Chester Whites and O. I. Cs. My herd boar, a prize winner, for sale. **Henry Wiemers, Diller, (Jefferson Co.) Neb.**

"PREPAREDNESS"

Get ready for your 1917 pig crop. Large, heavy-boned, early-maturing type of O. I. C. Rich in champion and grand champion blood lines. All ages (either sex) for sale at all times. Satisfaction guaranteed. **F. J. Greiner, Box B, Billings, Mo.** Breed O. I. C.

HAMPSHIRE HOGS.

REGISTERED HAMPSHIRE 150 gilts and boars, all ages. Cholera immuned. Satisfaction guaranteed. **C. E. LOWRY, Oxford, Kan.**

Hampshires of Quality A few choice fall pigs, either sex, nicely belted and best of breeding. Satisfaction guaranteed. Priced to sell. **F. B. WEMPE, FRANKFORT, KANSAS**

Shaw's Hampshires 150 registered Hampshires, nicely belted, all immuned, double treatment. Service boars and bred gilts. Satisfaction guaranteed. **Walter Shaw, R. 6, Wichita, Kan.**

SHEEP. REGISTERED SHROPSHIRE RAMS Yearlings and two, square built, hardy bucks with weight, bone and heavy fleece. Quick shipping facilities and priced cheap. 412 head. Near Kansas City. **Howard Chandler, Chariton, Iowa.**

Two to Five Thousand Bred Ewes for sale, good ages, all western ewes. Ten to twelve dollars. Write or wire quick. **MERRITT BROTHERS, Box 818, WALSBURG, COLO.**

BERKSHIRE HOGS.

BERKSHIRE PIGS Best of Breeding. Big type English. Either sex, \$15 each. Crated and papers furnished. **R. J. LINSKOTT, HOLTON, KANSAS**

JACKS AND JENNETS.

A Jack and Stallion for sale or trade. **H. W. Morris, Altamont, Kan.**

For Sale Extra good Mammoth Jack, 15 hands, good points; also good grade Percheron horse. **H. B. Humble, Sawyer, Kan.**

One Black Jack coming 5-year-old, and one blue jack, coming 2-yr.-old. **LOUIE TIMM, Woodbine, Kan.**

FOR SALE—4 BIG JACKS, 3 JENNETS The jacks are 4 and 5 years old. 15½ to 16½ hands, standard measure. They are all grandsons of Limestone Mammoth. **F. W. POOS, POTTER, KANSAS**

15 JACKS 20 JENNETS 3 to 6 years old. 15 to 15½ hands high. Excellent in bone, size and conformation. Write today. **Philip Walker Moline, Elk County, Kansas**

Kentucky Jacks and Saddlers Registered BIG BONE Kentucky MAMMOTH JACKS and JENNETS. 15 SADDLE and CUBAN GAITED STALLIONS, geldings and mares. YOU CANNOT AFFORD TO BUY UNTIL YOU get our description and prices. WRITE US describing your wants. Mention Mail and Breeze. **THE COOK FARMS, Box 436K, Lexington, Ky.**

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, 1937 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.

Jacks and Jennets.

March 26—G. C. Roan, LaPlata, Mo.
Mar. 28—W. J. Finley, Higginsville, Mo.

Holstein Cattle.

April 7—Consignment Sale, Newton, Kan.
W. H. Mott, Salesmanager, Herington, Kan.

Apr. 10—F. J. Searle, Oskaloosa, Kan.
Apr. 18—Lee Bros. & Cook, Harveyville, Kan.

Shorthorn Cattle.

Mar. 21—J. R. Whistler, Watonga, Okla.
March 28—F. A. Egger, Roca, Neb.

Mar. 29—Southwest Missouri Shorthorn Breeders' Ass'n, E. H. Thomas, Mgr., Aurora, Mo.

Mar. 30—H. C. McKelvie, Lincoln, Neb., Mgr. Combination sale at South Omaha.

May 2—Geo. Allen & Sons, Lexington, Neb. Sale at So. Omaha.

Polled Durham Cattle.

Mar. 29—H. C. McKelvie, Lincoln, Neb., Mgr. Combination sale at South Omaha.

June 8—Ed Stegell, Straight Creek, Kan.

Jersey Cattle.

May 31—R. J. Linscott, Holton, Kan.

Poland China Hogs.

Mar. 20—H. C. Lookabaugh, Watonga, Okla.
April 25—Fred G. Laptad, Lawrence, Kan.

Duroc-Jersey Hogs.

Mar. 20—Geo. Briggs & Sons, Clay Center, Neb.

Mar. 29—W. W. Otey & Sons, Winfield, Kan.
April 25—Fred G. Laptad, Lawrence, Kan.

S. W. Kansas and Oklahoma

BY A. B. HUNTER.

G. M. Shepherd of Lyons, Kan., is offering two outstanding Duroc Jersey spring yearling gilts. They are due to farrow April 28 and May 5. He is also offering gilts bred to farrow in June. Also several good boars. For prices look up his ad in this issue and if interested, write him, mentioning Farmers Mail and Breeze.—Advertisement.

F. P. Wilson of Pegbody, Kan., has an ad in the Shorthorn section of Farmers Mail and Breeze which will be of interest to any of our readers who are in the market for bulls. His offering includes 10 bulls from 8 to 11 months old. They are sired by Star Goods and Orange Marshall. If interested in these bulls write Mr. Wilson for further particulars and prices.—Advertisement.

Lookabaugh's Poland China Sale.

H. C. Lookabaugh sells at Watonga, Okla., Tuesday, March 20, 40 Poland Chinas, perhaps the largest 40 head ever offered in one sale in the state of Oklahoma. They will include numerous prize winners. A number of the sows will have large litters at foot. Many of those not prize winners are half brothers or half sisters to first prize winners. If you want the really large type, sow or gilt, or a boar to head your herd and increase the size of your hogs, write today for a catalog and be at Watonga sale day.—Advertisement.

Otey's Duroc Sale.

W. W. Otey & Sons, Winfield, Kan., will sell at auction Thursday, March 29, 70 head of richly bred Durocs consisting of 40 bred sows and gilts and 30 summer and fall boars and gilts. Eight tried sows and 12 fall yearling gilts are included in this offering along with eight young summer boars that are the right kind to head good herds. They are sired by such sires as grand champion Good E Nuff Again King and the prize winners Crimson Wonder 4th, Otey's Dream and All Col. 2nd. Most all the sows and gilts are safe in pig to All Col. 2nd and Day Dream, by a great son of Otey's Dream. Write today for catalog, mentioning Farmers Mail and Breeze.—Advertisement.

N. Kansas, S. Nebr. and Ia.

BY JOHN W. JOHNSON.

On account of a shortage of pasture Abe Fisher of Glen Elder, Kan., will make a reduction sale of Shorthorns at his Cole Creek Stock Farm, 9 miles south of Glen Elder, on April 4. The offering will consist of a choice lot of cows and heifers in farm condition, also three bulls, one coming 2-year-old and the other two yearlings. The sale will commence at 10 a. m. and a lot of work horses and grade cattle will be sold. Mr. Fisher also breeds Shetland ponies and will offer on the above date at private sale some of these little fellows at very attractive prices. Look up the advertisement in this issue and arrange to attend this sale. Go to Glen Elder and you will be taken to the sale and returned free of charge. Write for the breeding list today.—Advertisement.

Spring Lake Holsteins to Kansas.

C. L. Bratzler, owner of the Spring Lake Dairy Farm, Algonquin, Ill., makes the following statement concerning his consignment to F. J. Searle's sale to be held at Oskaloosa, Kan., April 10 and 11: "We are consigning 35 head of very choice Holsteins, such as would be a credit to most any herd, including one herd sire, King Frontier Pontiac, a beautiful son of King of the Pontiacs and 10 of his daughters, running in ages from 6 months to 2 years old and a dozen cows and heifers bred to this bull. Three daughters of Johanna McKinley Segis, the \$25,000 son of King Segis, out of a 40

**German Coach Stallions and Mares**

The Farmers General Purpose Horse

23 stallions from weanlings to 5-year-olds. Handsome, stylish, gentle, but powerful young stallions, 1300 to 1600 pound fellows, the right kind to produce durable, active farm horses and command attention in any stud. Priced where you will buy. Satisfaction guaranteed. Come or write at once.

BERGNER BROS., Route 4, PRATT, KANSAS
WALDOCK LAKE RANCH

Bishop Bros. Percherons

Our stallions are all young, a life of usefulness before them. They are the big, strong boned, massive kind, with quality and finish to suit the most critical buyer. If you want a stallion it will pay you to come see ours. You can find what you want and at the right price. We invite your inspection and solicit your inquiry.

Bishop Bros., Towanda, Kan.

Solomon Valley Stock Farm

Asherville, Kansas

We are now offering some high grade American bred Saddle stallions, 2, 3, and 4 year olds. Correspondence solicited.

Jno. O. Evans, Asherville, Kan.

**Clover Leaf Valley Jack Farm**

Ninth Annual Sale of Jacks and Jennets

This celebrated farm will sell forty head of registered jacks and jennets.

LaPlata, Mo., Monday, March 26

This offering consists of twenty head of big Missouri jacks with lots of bone and twenty head of good jennets, some with colts at foot. Sale will be held in my large sale pavilion located at La Plata, Macon County, Mo., two blocks from railroad station. Write for catalog now, it is free for the asking.

P. M. Gross, Auctioneer.

C. H. Hay, Fieldman. **G. C. ROAN, LaPlata, Missouri**

Registered Kentucky JACKS

I have shipped from my home, Poplar Plains, Ky., 18 head of jacks to Newton, Kansas, and they are for sale privately. This is a good load of jacks with lots of bone and size, with all the quality and finish you would ever see in a load of jacks. Ages from two to eight years old, height from 14½ hands to 16 hands standard and good performers. I have shipped jacks to Kansas since 1879, and I do not believe I ever shipped a better load. Anyone wanting a good jack call and see me at Welsh's Transfer Barn, two blocks from Santa Fe depot, 1 block from Interurban depot. Come and see me.



E. P. Maggard, Newton, Kansas

Successor to Sanders and Maggard

C. W. LAMER & SON, SALINA, KANSAS**Last Call for their Annual Percheron Sale**

At the Pioneer Stud farm 16 miles south of Salina. Autos from Salina, where buyers from a distance should come the day before. The sale will be held in the big sale barn at the farm.

Tuesday, March 20, 1917

Seven Percheron stallions will be sold, six registered mares, 20, three and four-year-old, farm mules, 30 brood mares and geldings. The stallions are from three to five years old and weigh from 1,700 to 2,000 pounds. Many of them are by imported sires and out of imported dams. Come to Salina. Autos leave the Lamer Hotel the morning of the sale and return in the evening.

C. W. Lamer & Son, Salina, Kan.

HORSES.

Stallions and Jacks

A few black and gray, three and four year Percheron stallions that will develop into 2,300-pound horses and two big registered Jacks for sale at live and let live prices. GEO. W. SCHWAB, CLAY CENTER, NEB.

FOR SALE OR TRADE

Black French Draft Stallion coming six years old. Heavy bone, good style and action. Gets number one colts. Will sell or trade for cattle. WILLIAM DUNCAN, ELMO, (Dickinson County), KANSAS.

80 Head

Percheron, Belgian, shire and Clydesdale stallions. Illinois and Iowa colts, from \$250 to \$350. Big and rugged. I sell more horses than any firm in the west. BARN in M. T. Bernard, Grand Island, Nebraska.

For Sale or Exchange at actual value, a 3-year-old Percheron stallion, registered in P. S. of A., sound and weighs 2010 pounds. Want a good big young Jack. Adam Becker & Son, Meriden, Kansas

STALLIONS, MARES AND JACKS

Registered Percheron stallions, yearling, two, three and four year olds. Blacks, and a few grays. Brilliant bred. The big, wide-out, heavy boned, ton kind. Two year olds weighing 1900 lbs. Also a bunch of big, registered mares showing colts.

30 big, Mammoth black Jacks, the kind that breed the big mules. Jacks, 15 to 17 hands standard measure. Jennets in foal. All stock guaranteed. References, the Banks of Lawrence. 40 ml. west of Kansas City. AL E. SMITH, LAWRENCE, KANSAS.

Jeun In Service

Pure Bred License No. 2231

The great Percheron stallion at the head of my herd. A few mares will be received either Riley or Leonardville at \$100 per service.

ED. NICKELSON, Leonardville, Kan.

40 PERCHERON STALLIONS, JACKS AND JENNETS

2 to 6 years old; heavy bone, right every way. Imported Spanish Jack, weight 1200 pounds and head of Jennet herd. Come and see us. We mean business. Prices reasonable.

J. P. & M. H. MALONE, Kansas

PERCHERON AND BELGIAN

Over 60 Head of Registered Stallions, Mares and Colts

To close up a partnership the mares and colts must be sold by March 1st. I mean business. Come and see them.

J. M. NOLAN, PAOLA, KANSAS

**Woods Bros. Co., Lincoln, Neb.**

Imported and Home-Bred Stallions

Percherons, Belgians and Shires

We offer for sale all of our champions and prize winners in the recent Denver show and the Nebraska and Kansas State Fairs. Winners of 25 championships, 40 firsts, 22 seconds and 14 third prizes. They are of the highest class, extra weights, bone, quality and action.

We have 70 stallions coming 2 and 3 years old and older—outstanding good ones—imported and home-bred of the three breeds, sound, clean draft horses. The kind that will give the best of service in the breeding studs.

Come and make your selection. We invite inspection and we offer terms, prices and guarantees that will suit you.

A. F. COON, Manager

HEREFORD CATTLE.

Registered Hereford Bulls

One 2-year-old, weight 1800 pounds; one extra good May calf, weight 600 pounds, and several other bull calves; also some good Percheron stallions.

Mora E. Gideon, Emmett, Kan.

RED POLLED CATTLE.

FOSTER'S RED POLLED CATTLE Write for prices on breeding cattle. C. E. FOSTER, R. R. 4, Eldorado, Kansas.

MORRISON'S RED POLLS

Cows and heifers for sale. Write us your wants. Chas. Morrison & Son, Phillipsburg, Kansas

Pleasant View Stock Farm

20 Red Polled heifers and young bulls for sale; can furnish herds not related. Also Percheron horses and Poland China hogs. Hafforen & Gambrill, Ottawa, Kan.

GALLOWAY CATTLE.

Smoky Hill Galloways

The world's largest herd. Yearling and two-year-old bulls for sale in numbers to suit, from one to a car load, at reasonable prices. If in the market for Galloway bulls come and look them over.

Smoky Hill Ranch

E. J. Gullbert, Owner, Wallace, Kansas.

pound dam. One of these is bred to King Frontier Pontiac and one to King Segis Pontiac, the noted sire at the head of Haeger's famous Herd. These are all out of A. R. O. dams. Three daughters of King Segis Pontiac, out of daughters of King Frontier Pontiac, Johanna McKinley Segis and one out of a 26 pound dam.—Advertisement.

Big Holstein Spring Sale.

Lee Brothers & Cook, Harveyville, Kan., have decided on April 13 as the date of their big annual Holstein sale. This sale will be held at the farm joining Harveyville and 200 head will go in the sale. It is without question a sale of great importance. This firm has enjoyed a splendid trade this season in registered and high grade Holsteins and will continue to supply customers visiting the farm with about anything in the Holstein line. The sale of 200 head will consist of cows and heifers that are fresh and those that are heavy springers.—Advertisement.

Lamer's Percheron Sale.

C. W. Lamer & Son, Salina, Kan., will hold their annual Percheron sale at the Pioneer Stud Farm, next Tuesday and this is the last call for this sale. Parties coming in on trains to attend this sale should come to the Lamer hotel in Salina where autos will leave, the morning of the sale, returning in the evening. A nice line of Percheron stallions, from 3 to 5 years old, will be sold. They will weigh from 1700 to 2000 pounds and many of them are by imported sires and out of imported mares. About 30 brood mares and geldings and about 20 farm mules will be sold. Pioneer Stud Farm is 16 miles south of Salina, near Lindeborg.—Advertisement.

Haeger's Holstein Heifers.

R. E. Haeger, the well known Holstein breeder of Algonquin, Ill., consigns 25 head of high class cattle to F. J. Searle's sale at Oskaloosa, Kan., April 10 and 11. Concerning the consigning five 2-year-old daughters of King Segis Pontiac, every one a show heifer in quality. Included in the lot is the first prize 2-year-old heifer at the Iowa Dairy Show, 1916. These are bred to our junior herd sire and show bull, Joe Calamo Hengerveld. I will also consign five heifer calves by King Segis Pontiac worth looking at. I will also consign three choice sons of King Segis Pontiac that are ready for service and you will like them. The balance of my consignments are all young and nice individuals and the kind that grow into money for the purchaser.—Advertisement.

Nebraska and Iowa

BY JESSE R. JOHNSON.

George Allen & Sons of Lexington, Neb., authorize us to claim May 2 as the date for their annual sale of Scotch Shorthorns. The sale will be held at South Omaha and the offering will consist of herd bulls of great merit and females worthy of a place in any herd in America. Watch this paper for further announcement or write at once for catalog, mentioning Farmers Mail and Breeze.—Advertisement.

The Egger Shorthorn Sale.

Fred Egger, one of Nebraska's leading Shorthorn breeders, announces a big reduction sale to be held on the farm about 12 miles south of Lincoln on Wednesday, March 28. Mr. Egger will sell a splendid lot of good, useful cattle. Nothing but pure Scotch bulls have been used on the Egger farms for years and in buying Mr. Egger has always been careful to select the best kind of individuals. Much of the offering of young bulls and heifers was sired by the splendid breeding, roan bull, Avondale's Gloster. This bull is being cataloged for the sale, owing to the fact that a big lot of his heifers are being retained in the herd. Every female of breeding age will have a calf by her side sale day or be in calf to the bull mentioned or the other herd bull, Snowflake's Lad, a son of the noted show bull, Snowflake. A few of the heifers will be bred to Omega Jr., a son of Omega, by Whitehall Sultan. Fifteen very choice young bulls are listed. The offering includes some nice roans and a few white bulls. These cattle have been raised on the farm and under natural conditions, with plenty of good alfalfa but little grain. They will lack fitting sale day but are the kind that will do good in the hands of new owners. Trains will be met at Hanlon on Blue Valley branch of Union Pacific, Martell on Rock Island, and Roca on Burlington. Write at once for catalog of this sale and mention this paper.—Advertisement.

S. E. Kan. and Missouri

BY C. H. HAY.

If you are interested in Jacks you have no doubt noticed the announcements of the G. C. Roan sale which will be held in La Plata, Mo., March 26. Every one familiar with the Jack breeding business knows the kind of Jacks and Jennets Mr. Roan breeds. Don't overlook this sale if you can use a good Jack.—Advertisement.

Finley's Annual Jack Sale.

W. J. Finley, the well known Jack breeder of Higginsville, Mo., announces his annual sale of Jacks and Jennets for March 28. The offering will include 30 Jacks and 10 Jennets. The following well known prize winning Jacks are included: Dr. McCord 3d, first prize at Missouri State Fair, 1911; Limestone Big Boy, sweepstakes Jack at Missouri State Fair, 1914; Dr. Nelson, first prize Jack at Kentucky State Fair, 1914, and Dr. Wilson, a grandson of Dr. McCord. These are samples of the good ones Mr. Finley will sell. The others are well bred, good individuals, including many herd header prospects. Most of the Jennets are by Great Eastern and are in foal to Dr. McCord 3d. Write today for illustrated catalog and mention this paper.—Advertisement.

Southwest Missouri Shorthorn Sale.

The Southwest Missouri Shorthorn Breeders' association will hold their annual sale at Aurora, Mo., Thursday, March 29. On account of delay in getting some of the pedigrees from the Record association we are unable to give a detailed list of the breeding of the offering. The certificates turned in at this writing show the blood of Choice Goods, Lavender Viscount, Collynie,

SHORTHORN CATTLE.

ELMENDALE SHORTHORNS

100 big, rugged bulls, suitable for herd headers, or farm and range use. 50 females of different ages. These cattle are especially good and the prices attractive. Address Elmendale Farms, Fairbury, Neb.

Salter's Shorthorns

12 young bulls 6 to 12 months old; Scotch and Scotch topped. These young bulls are by such sires as Rosewood Dale, by Avondale, Silver Hampton and Master of the Dales; also cows and heifers. Scotch, Scotch topped and plain bred in calf to our great herd bulls, but priced so both farmer and breeder can afford to buy. Visitors always welcome. Phone Market 3705. Address,

Park E. Salter, Wichita, Kansas

SHORTHORNS**Private Sale**

Seven bulls from eight to fourteen months old. Also cows and heifers. Shipping point Wamego. Oldest herd in Potawatomi county. Address

W. T. Ferguson, Westmoreland, Kan.

ACRES

Crescent Acre Farms

Registered Shorthorn Cattle.

For Sale: Six yearling bulls, sired by The Cardinal and out big richly bred dams. Correspondence promptly answered. Address, Warren Watts, Clay Center, Kansas

IF INTERESTED IN

Polled Durhams

COME TO

South Omaha, Neb., March 29

IF YOU WANT

Shorthorns

COME TO

South Omaha, Neb., March 30

Write for illustrated catalog of the breed you are interested in.

Sixty head of Polled Durhams the first day. Seventy head of Shorthorns the second day.

For illustrated catalog address:

H. C. McKelvie, Manager, Lincoln, Neb.

SHORTHORN CATTLE.

PURE BRED DAIRY SHORTHORNS

Double Marys (pure Bates), and Rose of Sharon families. A nice lot of young bulls coming on for fall and winter trade. R. M. ANDERSON, BELOIT, KANSAS

DOYLE SPRING SCOTCH TOPPED SHORTHORNS

10 bulls, ages 8 to 11 months, sired by the famous Star Goods and Orange Marshall. Write your wants. F. P. Wilson, Peabody, Kansas

Fifteen Bulls

I offer 15 Shorthorn Bulls eight months old to yearlings. They are reds and roans and have size and quality. You will buy a bull if you visit my herd. Address,

K. G. Gigstad, Lancaster, Kan.

(12 miles from Atchison.) Good R.R. Facilities.

Salt Creek Valley**Private Sale**

25 Shorthorn bulls from six to 12 months old. Also a good three year old bull. All sired by Barmpton Model 338998, by Barmpton Knight. Also a few cows and heifers. Good breeding and plenty of quality. Inspection invited. Write for further information. Address

E. A. Cory & Sons, Talmo, Kan. (Pioneer Republic County Herd)

Symphony's Last 395198

is now for sale, 4 yrs. old. Keeping all of his heifers. Write for price at once. H. C. Graner, Lancaster, Kansas

Scotch and Scotch Tops

A choice lot of young bulls from 8 to 10 months old for sale. Sired by Valiant 346162 and Maringo Pearl 391902.

A number of pure Scotch bulls in this offering. For further information address,

C. W. Taylor, Abilene, Kan.

Norton County Breeders Association

SAMUEL TEAFORD, President

CARL BEHRENT, Secretary

Norton County Fair, August 29, 30, 31, Sept. 1, 1917

For Quick Sale 12 extra choice spring Poland China Boars. Big type and good all over. C. F. Behrent, Oronoque, Kan.

25 BRED SOWS and gilts bred for spring farrow. 5 spring boars and fall boar pigs. Everything on approval. J. F. Foley, Oronoque, Kan.

Poland China Pigs. Three of September farrow weigh about 130 or 140 pounds each. GEO. W. GOODMAN, LENORA, KANSAS.

POLAND CHINA Last fall Gilts for sale. Write for prices. PETER LUFT, ALMENA, KANSAS.

Shorthorns The home of the great bull, PIONEER, a grandson of Avondale and Whitehall Sultan. Nothing for sale at present. N. S. LEUSZLER & SON, Almena, Kansas.

Percherons--Shorthorns--Polands October gilts, bred or open, for sale. Barmpton Bruce, by Lord Bruce heads my Shorthorn herd. C. E. Foland, Almena, Kan.

We Have 3 Shorthorn Bull Calves for sale. Got by a Imp. White Hall Sultan and out of cows of the Lord Strathallen and Golden Fame Strains. J. W. Liggitt & Sons, Almena, Kan.

Percherons--Shorthorns--Polands A few nice spring gilts, by Jumbo Prospect, by Luft's Orange for sale open or bred to order. C. E. Whitney, Almena, Kansas.

COL. W. M. PATTON, Livestock Auctioneer Almena, Kansas. Devoting my time to the business. Address as above.

COL. C. H. PAYTON Purebred stock sales and big farm sales solicited. Write or phone. Address as above.

NORTON, KANSAS L. J. Goodman, D.V.M. Lenora, Kan. Hog vaccination a specialty.

Mitchell County**SHORTHORN SALE**

A draft sale, consisting of seven cows, three heifers, three bulls of serviceable ages, one coming two-year-old and two yearlings. The cows are 100 per cent breeders.

At Cole Creek Stock Farm, nine miles south of

Glen Elder, Kan., Wed., April 4

Come to Glen Elder. The Shorthorns listed in this sale are all registered or eligible and while they are not in show shape they are cattle of real merit and of good breeding. Shortage of pasture compels me to make this reduction sale. Catalogs ready to mail.

Big Farm Sale: The sale will commence at 10 a. m., and a lot of work horses, cattle and hogs will be sold.

Private Sale of Shetland Ponies

We have a nice string of ponies that will be offered at private sale at very reasonable prices. Nice little fellows that are gentle and kind.

Abe Fisher, Glen Elder, Kansas

Will Myers, auctioneer. J. W. Johnson, fieldman.

POLLED DURHAM CATTLE.

Polled Durham & Shorthorn sale
100 Registered
Roan Orange, Weight 2100, and
Sultan's Pride 1st at Kansas, Nebr., Iowa
and Oklahoma state fairs.
Heads herd. Will meet trains. Phone 1602.
J. C. Banbury & Sons, Pratt, Kan.

Willson's Polled Durhams

For Sale: One 2-year-old herd bull,
and three bulls, 8 and 11 months old.
Also a few cows and heifers. Strong in
Polled Durham breeding.
Also a few choice Poland sows and gilts,
bred to farrow in March and April.
T. M. Willson, Lebanon, Kansas

ABERDEEN ANGUS CATTLE.

ANGUS CATTLE 150 young bulls
and heifers
ready to ship.
Berkshire Hogs
SUTTON & PORTEOUS, Lawrence, Kan.

Aberdeen Angus Cattle
Herd headed by Louis of View-
point 4th. 150624, half brother
to the Champion cow of America.
Johnson Workman, Russell, Kan.

17 Angus Bulls

In ages from six to 12 months old.
Can ship over Santa Fe, Union Pa-
cific and Rock Island. Will sell some
cows and heifers. Address,
H. L. Knisley & Son
Talmage, Kan. (Dickinson Co.)

Angus Bulls
We have for sale a few
extra good young bulls
of the very best breeding.
Prices reasonable.
E. CLELAND
Hiattville, Kan.

GUERNSEY CATTLE.

FOR SALE 1 year old high grade Guernsey
heifer. **Geo. Haas, Gridley, Kan.**

FOR SALE A registered Guernsey bull, two
years old. 2 high grade cows, 3
yearling heifers, one high grade bull, 7 months old,
and four heifer calves. Priced to sell.
DR. E. G. L. HARBOUR, BALDWIN, KAN.

JERSEY CATTLE.

Registered Jersey Bulls Excellent Breeding. Percy
Lill, Mount Hope, Kansas

LINSCOTT JERSEYS
R. J. LINSCOTT, HOLTON, KANSAS

Choice Registered Jersey Bull Call
Sire Pops of Brondale 190606; dam, Marion's Boneta,
302650. Priced right. **ANDREW KOSAR, Delphos, Kan.**

JERSEY CATTLE

2 Registered Jersey Bulls, solid color, good ones.
Several cows and heifers. Also pure Texas oats; re-
cleaned, extra good. Seed bought in Texas last year.
S. S. SMITH, CLAY CENTER, KANSAS

HOLSTEIN CATTLE.

High Grade Holstein Calves 12 heifers
15-16 pure
bred, 4 to 6 weeks old, beautifully marked, \$18
each. Safe delivery and satisfaction guaranteed.
FERNWOOD FARMS, Wauwatosa, Wis.

FIFTY HIGH GRADE HOLSTEIN Cows and
Heifers,
and some registered yearling bulls for sale. Cows
are heavy springers and good ones.
EAGER & FLORY, Route 8, Lawrence, Kansas

LILAC DAIRY FARM
TOPEKA, KANSAS, R. NO. 2
Breeders of Pure Bred Holsteins
Bulls, from A. R. O. cows, all ages for sale.

Braeburn Holsteins

I have changed bulls a dozen times, trying each
time to get a better one. If you want to share in the
results, let me sell you a bull calf.
H. B. Cowles, 608 Kan. Ave., Topeka, Kan.

Purebred Registered
HOLSTEIN CATTLE
Send for FREE Illustrated Booklets
The Holstein-Friesian Association of
America, Box 292, Brattleboro, Vt

Holstein Foundation Stock

One bull calf, and two heifer calves, all
registered. Bull almost white, heifers well
marked. Good individuals. Thirty pound
breeding. Best families.
A. S. NEALE, Manhattan, Kan.

When writing to advertisers be sure to
mention the Farmers Mail and Breeze

Master of The Grove, Royal Gloster, and
other prominent bulls. The offering will
consist of cows with calves by side, bred
cows, bred heifers, open heifers, and bulls
ranging in age from yearlings to 4-year-
olds. For catalogs address E. H. Thomas,
Aurora, Mo., Route No. 2. Please mention
this paper when you write.—Advertisement.

Publisher's News Notes**New Seed Corn Book.**

Farmers who do not have sufficient supply
of seed corn on hand, or who are not satis-
fied with the quality of what they have,
will be interested in the recent announce-
ment of the Zeller Seed Company in regard
to the company's Seed Corn Book for 1917.
This book is ready for distribution. It is
the most complete and informative corn
book ever issued by this company—cramped
full of valuable information about seed corn.
It gives the facts about the popular Zeller
Prize Seed Corn, how this seed is produced
and why it is of exceptional value to the
corn grower. Explains scientific methods
of producing seed corn. The information
contained in the new Zeller Book is of value
to any farmer who wants to increase his
yield of corn and will be sent free if you
want it. Address your card to the Zeller
Seed Co., 407 McKinley St., Jefferson, Ia.—
Advertisement.

Build Better Barns.

More and more, the progressive type of
farmer is giving greater thought to sci-
entific barn construction as he realizes what
it means to the better condition and better
health of his livestock, and hence to his
bank-balance. Among the most practical
and interesting volumes on barn-building
that have come to our attention recently
is the Barn Plan Book published by the
Gordon-Van Tine Co., of 636B Gordon St.,
Davenport, Ia. This book, which will be
sent free on request to readers of this paper,
shows 200 barn and outbuilding plans, bank,
dairy, gable, gambrel roof, cattle, feed and
hay barns; corn cribs, hog houses, imple-
ment sheds, poultry houses, silos, stalls for
horses or cows, ventilating systems, and is
full of valuable ideas and suggestions for
everyone interested in the subject of barns
and the best methods of housing horses,
livestock and poultry. The plans in this
book are more than ordinarily valuable to
farmers because they are intensely prac-
tical, and have been proved out in actual
construction on thousands of farms the
country over. They have been laid out by
skilled barn architects who have discarded
theories and worked with the farmer's real
needs always in mind. The result is the
plans are so arranged as to make chores and
work easiest, allow full use of storage space,
correct ventilation, warmth and the type
of construction that lasts.—Advertisement.

Canada Needs Laborers.

Canada today, with the great demand that
is made upon it for foodstuffs, finds itself
almost in the throes of a labor famine. A
novel means of solving the problem has been
evolved by the Canadian government at Ot-
tawa on February 28, when it was decided
to practically bonus every farm hand going
to Canada, by giving him an 160 acres free
as a homestead and to allow the time he
would be working out for, the good wages
offered, to count as residence duties on the
homestead. Western Canada has been
big producer of grain and it is estimated
that there is a shortage of over 30,000 men,
necessary to produce an average crop in
1917. This shortage has been caused by so
many young men having left the farms to
go to war and it is essential to make an un-
precedented offer of this kind to fill their
places on the land at once. It has been
required in the past to do three years' duties
on homesteads to get title, but an addi-
tional inducement has been offered by prac-
tically reducing this term to two years. As
explained by an official of the Canadian
government, Canada's need for farm labor-
ers is intense and exceptional inducements
are being offered to get the needed farm
workers at once. A farm hand will make
his entry for one of the 160-acre farms and
satisfy the government that he is working
for a farmer, and the time thus employed
will apply as residence on the land filed for,
just the same as if he was actually living
on it.—Advertisement.

In Movable Schools 20,000.

More than 20,000 persons attended the
25 one-week schools in agriculture and
home economics held in as many com-
munities by the division of extension
of the Kansas State Agricultural college.
Five instructors—two men and three
women—were sent to every school. In
12 of the communities the schools were
held for the second time drawing a total
attendance of 10,641. The communities
petitioned for the schools, organized the
classes, and paid the local expenses. The
agricultural college paid the salaries of
the teachers and their railroad fare from
funds appropriated by the state and the
Federal government for this purpose.
"The extension school idea is growing
rapidly in Kansas," commented Edward
C. Johnson, dean of the division of ex-
tension. "Already many petitions have
been received for schools to be held next
year. They will be available for any
community provided the time of the in-
structors will permit. The only require-
ment is that a class of not less than 50
men and 25 women be organized by the
community and a fund sufficient to pay
expenses guaranteed—this will be be-
tween \$50 and \$125."

One direct value coming to the farmer
from good roads is that it brings the
farmer nearer to market in point of
time.

The best in any department of produc-
tion is that which pays the largest
profit.

HOLSTEIN CATTLE.

Registered Holstein bull calves for sale, from
good cows. **Wm. C. Mueller, Hanover, Kansas**

HOLSTEIN CALVES high grade Holstein calves
either sex, 3 to 4 weeks old,
\$30, crated for shipment. **BURR OAK FARM, Whitewater, Wis.**

Registered Bull Calves
for sale from cows with official butter and milk records,
also can spare a few cows. **HIGGINBOTHAM BROS., ROSSVILLE, KAN.**

HOLSTEIN BULLS Nine for sale,
mostly from A.
R. O. cows. Inspection solicited. Prices right.
BEN SCHNEIDER, NORTONVILLE, KANSAS

Segrist & Stephenson, Holton, Kansas
Prize winning registered Holsteins. Bulls from three
months to yearlings for sale. Address as above.



THE HOLSTEIN-FRIESIAN ASSOCIATION OF KANSAS
as an organization offers nothing for sale but desires to supply
valuable information free to prospective buyers. The object of
this association is to protect the interests of the breed in Kan-
sas. Are you a member?
Write **W. H. MOTT, SECY., HERINGTON KANSAS**

NORTHVIEW HERD OF HOLSTEINS

Start the new year right. Get the best—the cheapest in the
long run. Three year old heifers due to freshen soon. Large,
well marked and well bred. Registered bulls.
LACKLAND BROS., AXTELL, KANSAS, (MARSHALL COUNTY)

**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, Kan.

Clyde Girod, At the Farm.

F. W. Robison, Cashier Towanda State Bank.

Holstein Friesian Farm, Towanda, Kan.**Breeders of Purebred Holsteins**

We offer special attractions in choice young bulls, ready and nearly ready for
service, both from tested and untested dams at prices within reason. Have some
attractive baby bulls also, choicely bred. Let us furnish you a bull and improve
your herd. Several young females from 6 months to 5 years of age, sired by high
record bulls and from A. R. O. dams, up to 28.1 pounds butter in 7 days. A num-
ber of these females have A.R.O. records themselves, from 15 to 26 pounds, 7 day
butter records.

IT WILL PAY YOU TO SEE OUR OFFERING

of choice extra high grade, young cows and heifers, all springers, in calf to purebred sires, large de-
veloped females, good udders, nicely marked and the right dairy type at prices that challenge comparison
for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind
before purchasing. Wire, write or phone us.

GIROD & ROBISON, Towanda, Kansas

Oak Wood Stock Farm

A choice herd of Holstein and Jer-
sey cows, from four to six years old,
to freshen during the next thirty
days.
Thirty head of high grade Jersey
heifers to freshen in March and
April. These cows and heifers were
selected by an expert, from high
producing strains.
Eight head of registered Holstein and
Jersey bulls of the very best quality.
Come and inspect them and we can sat-
isfy you as to quality. Write, phone or
wire for prices and description.

M. E. PECK & SON, SALINA, KAN.

In 1887 Lee Bros. father brought the first imported Holstein cows to Wabaunsee county.
In 1917 Lee Bros. & Cook have the largest pure bred and high grade herd in Kansas.

300 Holstein Cows, Heifers and Bulls

Registered and High Grade. 3 Bred Heifers and a Registered Bull \$325

We are selling dealers in Kansas and Oklahoma. Why not sell direct to you?

40 fresh cows, 75 heavy springing cows, 90 springing heifers; 40 open heifers and
20 registered bulls. Bring your dairy expert along, we like to have them do the
picking. Every animal sold under a positive guarantee to be as represented.

Well marked, high grade Heifer and bull calves from 2 to 8 weeks old. Price
\$25 delivered any express office in Kansas. We invite you to visit our farm and
can show you over 300 head of cows and heifers, sold to our neighbor farmers. Wire,
phone or write when you are coming.

40—Registered Cows and Heifers—40

40 springing two-year-old heifers and cows, excepting a few cows which are fresh.
The cows are from two to six years old. Special prices for 30 days.

LEE BROS. & COOK, Harveyville, Wabaunsee Co., Kan.

**175 Holstein Cows, Heifers & Bulls**

These choice heavy springers were selected for
milk production. There may be others as good,
but none better. These cattle will stand the closest
inspection and we invite prospective buyers to call
and be convinced. These cattle are priced to sell.

HALEY & ANDERSON, Hope, Kan.

Finley's Annual Jack Sale

Higginsville, Mo., Wednesday, March 28

30 Jacks

The following well known jacks are included in this offering: Dr. McCord 3d, first prize at Missouri State Fair, 1911; Limestone Big Boy, sweepstakes jack at Missouri State Fair, 1914; Dr. Nelson, by Dr. McCord, first prize jack at Kentucky State Fair, 1914, and Dr. Wilson, a grandson of Dr. McCord.

10 Jennets

Most of the jennets are by Great Eastern and in foal to Dr. McCord 3rd. Write for catalog today and mention Farmers Mail and Breeze.

W. J. FINLEY, HIGGINSVILLE, MISSOURI



Auctioneers: F. Holsinger and Vandiver Bros. Fieldman: C. H. Hay

Southwest Missouri Shorthorn Breeders Association Sale



Aurora, Mo., Thurs., Mar. 29

An offering of cows with calves by side, bred cows, bred heifers, open heifers.

Bulls—(yearlings to 4-year-olds) carrying the blood of Choice Goods, Lavender Viscount, Collynie, Master of The Grove, Royal Gloster and others.

C. H. Hay, Fieldman. Col. R. L. Harriman, Auctioneer.

For catalogs
address

E. H. Thomas, Sale Mgr., R. 2, Aurora, Mo.

Oteys' Great Duroc Hog Sale

The last and greatest sale of Duroc Jersey bred sows and gilts, herd boars and summer open gilts of the spring of 1917, will be held at

Winfield, Kan., Thursday, Mar. 29

We will put in the sale ring that day what I verily believe to be the biggest opportunity of breeders in the Southwest for choice Durocs this spring. We will drive into the ring eight head of great young tried sows, 12 fall yearlings, 25 head spring gilts bred, and 25 head of summer and fall gilts and boars. These summer gilts sold open. One great fall yearling herd boar, and 8 summer boars that are good enough for any breeder. They are sired by such great prize winners as Good E Nuff Again King, grand champion 1913, Crimson Wonder 4th, second prize, Otey's Dream, champion 1914, and All Col. 2nd, one of the very great young boars in the field. They are bred to All Col. 2nd and Day Dream, a great son of Otey's Dream.

No such an opportunity has been offered the breeders of the Southwest this year in Durocs.

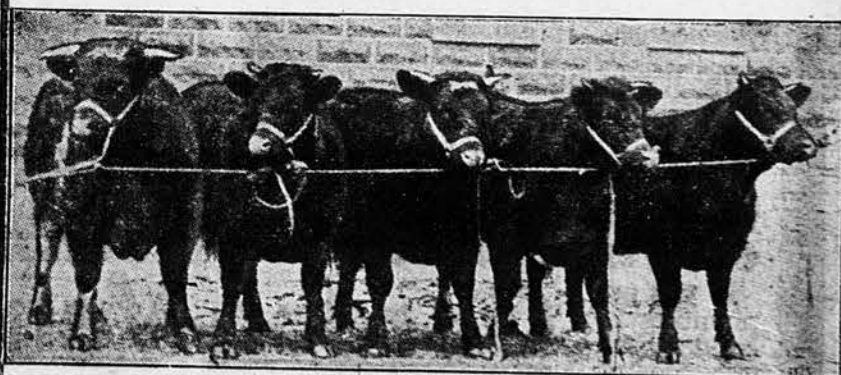
Stick a pin in the date, Thursday, March 29, and COME. Your last chance of the year. For catalog address,

W. W. Otey & Sons, Winfield, Kan.

Auctioneer—Col. Lafe Burger. Fieldman—A. B. Hunter.

Scotch and Scotch Topped Shorthorns at Auction

At farm under cover near
Roca, Nebr., March 28, 1917



50 Head of Strictly High Class Cattle 50

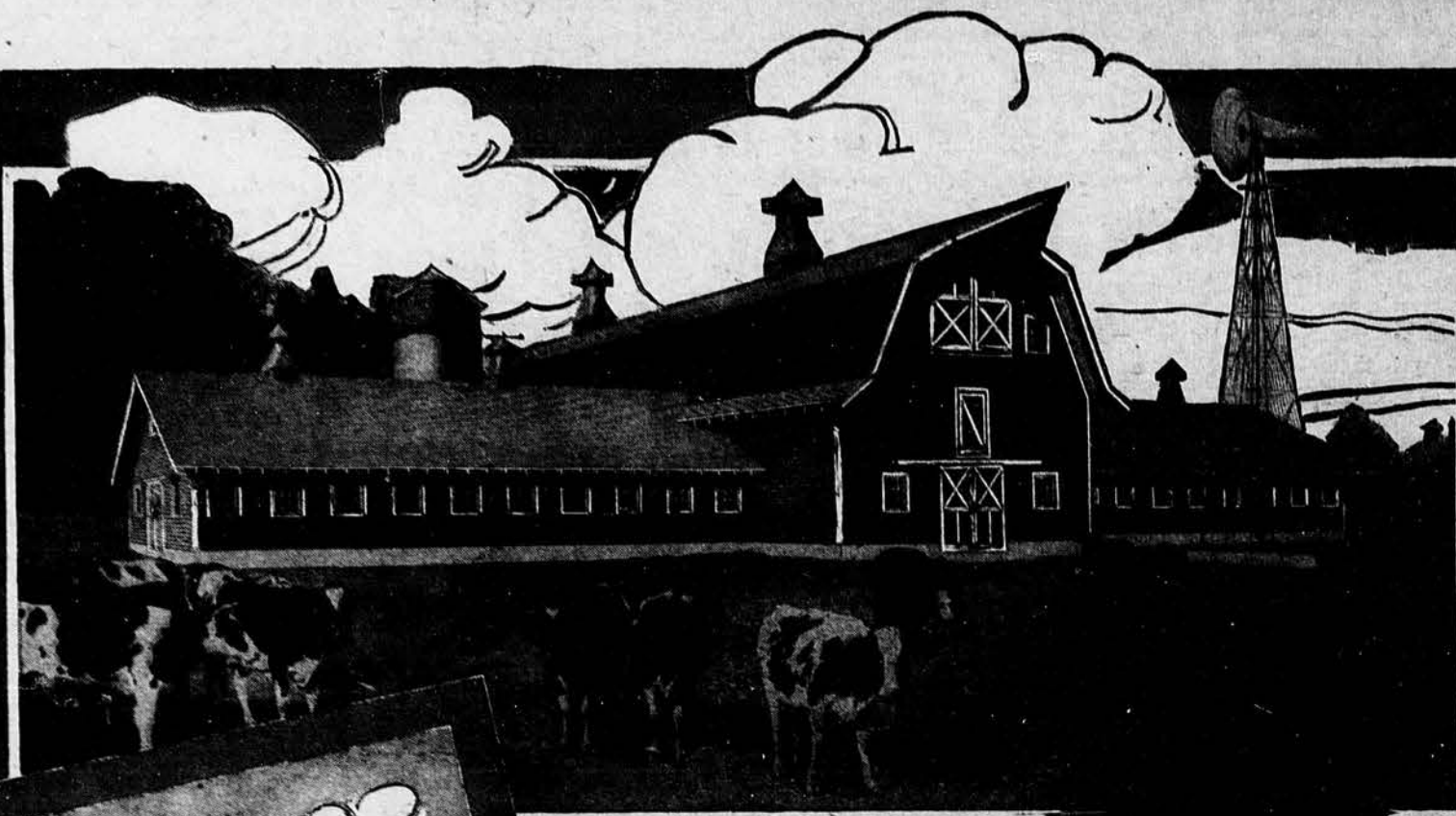
18 bulls, in age from ten to twenty months. Also my herd bull, Avondale's Gloster, sire of many of the young things in the sale.

32 females, 17 head of which are choice young cows, ten of them with calves at foot and most of them rebred. Ten two-year-old heifers, all bred, and five open heifers. Every female in sale old enough will have a calf at foot or be in calf to Avondale's Gloster, Snowflake's Lad, or Omega Jr., a grandson of Whitehall Sultan. This is our regular annual reduction sale and comprises one of the most useful lots of cattle to be sold this season.

We also sell four registered Percherons, two young stallions and two fillies. Write at once for catalog and mention Farmers Mail and Breeze.

Fred Egger, Roca, (Lancaster Co.,) Nebraska

Auctioneer—Col. H. S. Duncan. Fieldman—Jesse Johnson.



Showing head-house type of modern Dairy Plant. Main building provides storage for hay and grain and offers a loading place for cattle. The wings are a modern dairy annex and are furnished in several widths and any desired length. Price of main barn, \$354.00 to \$2,900.00. Annex, \$392.00 to \$964.00.

Buy the Type of Barn You Need—at WHOLESALE!

Costs Guaranteed—Less Than Material Bought in the Ordinary Way

A GORDON-VAN TINE BARN increases your land value far more than the barn costs. Practical barns for practical farmers—properly built and ventilated. They are the best designed, best value and sold by the best method. Shipped complete promptly. Safe arrival guaranteed no matter where you live. **Costs guaranteed**—the Gordon-Van Tine wholesale, "mill-direct-to-farmer" prices cover everything, and there are no extras. They are the kind of barns that help make the farm pay!

Barns That Are Bigger PROFIT PRODUCERS

Gordon-Van Tine Barns mean healthy live stock—greater milk production—chores done in less time—warmth, dryness, ventilation—full use of all storage space—stability, permanence, fine appearance. Highest standard grade materials; lowest prices. All material delivered at one time—no delays. No middlemen's profits to pay. Remember, our barn architects specialize on barns all the time; you get highest type of skilled advice.

You also get Gordon-Van Tine Barns "Ready-Framed," all framework cut to fit. Measurements adjusted ready to nail. Heights, roof-pitches, etc., all figured for you. Material marked to correspond with numbered plans. You can do the erecting work alone without expert help—another big saving! Remember, you run no risk dealing with us. Over 100,000 regular customers and 3 strong banks vouch for us.

Send for Book FREE of Barn Plans

This is the greatest and most intensely practical Barn Book ever printed. More than just a catalog. A valuable treatise on barn building. It shows 200 Barn and Outbuilding Plans—Bank, Dairy, Gable, Gambrel Roof, Cattle Feed and Hay Barns; Barn Door Hangers, Corn Crib, Cupolas, Hay Tools, Hay Carriers, Hog Houses, Implement Sheds, Incubators, Poultry Houses and Supplies, Silos, Stalls for Horses or Cows, Stanchions, Stock Sheds, Ventilating Systems, etc. Shows wholesale prices on all. As America's largest lumber dealers, our volume gets you lowest prices. Selling through catalog only, costs are cut to the bone. Minimum selling expense saves for you. Every plan tested and proven by actual building hundreds of times in all climates.

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If you are planning to build a barn either now or soon, use the coupon and get our Free Barn Book at once.

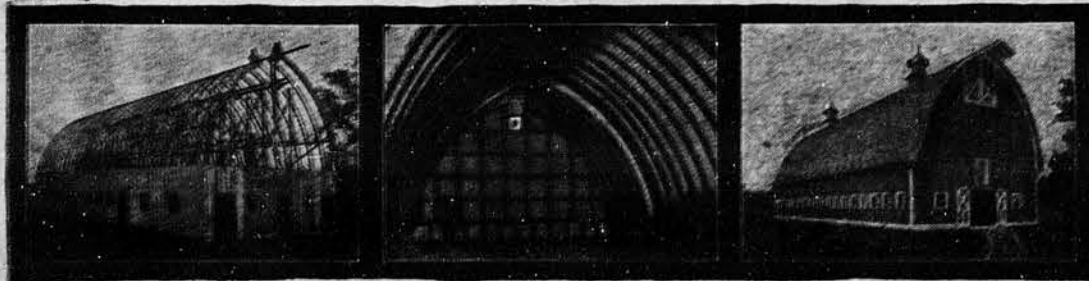
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6368 Gordon Street

Davenport, Iowa

Established Over Half a Century



GORDON-VAN TINE CO.
6368 Gordon Street, Davenport, Iowa

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☐ Summer Cottages	☐ Building Material Catalog (Lumber, Millwork, Hardware, Paints, etc.)		

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R. F. D.

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