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Seed Selection and Seed Breeding on the Farm.

THE topic announced for special discussion in *The Farmer* during April is one of the greatest importance to every farmer. Probably few readers fully appreciate its importance, and we venture the assertion that the few who do have a proper appreciation of that fact are mostly farmers who are interested in the breeding of pure-bred live stock. The live stock breeder has learned to appreciate to a greater degree than the average farmer who is engaged in other lines of production, the prepotent influence of heredity and the important influence of environment upon the quality of successive generations of live stock in particular, although many of these have failed to apply the same general principle to the plant world which they have found to be so unvaryingly applicable to the animal world. Yet practically the same principles apply in both cases, and their observance would benefit the farmer who grows general crops quite as much as they benefit the breeder who would produce the most perfect and prepotent animals.

In order that we may the better appreciate this fact, and that we may apply the same principles to plant breeding so far as the same may be profitably practiced on the average farm, let us for a moment consider the underlying principles of success which the live stock breeder knows he must observe if he would attain even a fair degree of success in his business. In selecting his foundation stock, the first requisite demanded by the intelligent live stock breeder is individual quality. Having found the quality for which he is searching in some individual animal he studies its pedigree to assure himself that such quality is the result of a consistent line of breeding, with the result in view which he admires in the animal, and that the animal comes from a strain or family of the breed in which the admired qualities have been constant in successive generations. Then, by mating this animal with another of similar type and known or presumable prepotency for its perpetuation the breeder knows he has started right for the per-

petuation of the desired qualities in the resulting product of such mating. But he does not stop here. When the young animal is born he carefully provides the proper environment and feed for its best development, and the same painstaking care is given it until it has reached maturity. Even then the result is not all that might be desired, and every breeder worthy of the name will be found to cull out the undesirable individuals from his herd or flock each year, no matter how desirable his foundation stock may be or how carefully the young animals produced may have been reared. Occasionally, too, he will find an animal among those produced that for some unknown reason shows a marked superiority over the others produced with practically the same breeding and care, and all such animals are retained in the herd, at least until they have demonstrated whether they have the ability to reproduce the superior qualities which they possess.

Thus, while the mysterious forces of nature are not well enough known by man so that he can control them with certainty in the improvement of animals, yet by intelligent selection and with the proper environment and care certain and steady advancement is made in the improvement of the quality of successive generations. That the well bred animal will yield a better profit to his breeder and feeder than the scrub requires the submission of no proof, yet a very large proportion of farmers neglect to profit by the knowledge. The same fact will hold true in the vegetable world, as every reader well knows, yet the average farmer fails to profit by this knowledge to anything like the degree which he might. That the simple process of selection will improve any desired quality in a plant has been repeatedly proven by actual results in many of the special crops grown on our farms. In sugar beets, for instance, the average percentage of sugar has been enormously increased by such judicious selection and perpetuation of strains that showed unusual percentages of sugar. In like manner superior varieties or strains of grains have been pro-

duced which give better than ordinary yields, and our experiment stations are working with all sorts of common plants for like results, through the simple process of selection and the perpetuation of the fittest for the purpose of which they are grown. This is a step in advance of nature's method of the survival of the fittest, in that the results are more profitable since the selection is carried on with a view to the usefulness of the plant for a given purpose, rather than for its mere ability to exist under unfavorable circumstances. In fact, in this work of selection for the betterment of plants, it is just as important to supply the proper environment and to feed the plants in a proper manner as it is to provide these essentials for the successful improvement of live stock by intelligent breeding.

But let us see how this principle may be applied in the selection and breeding of seeds for the improvement of our farm crops. Under ordinary methods we find it necessary to change seed often, and new varieties are secured because the ones which we have grown fail to give satisfactory yields. Often this may be because our soils have failed in fertility, in which case the new varieties tried will not remedy the difficulty for long, if at all. But is it not possible that there has been some connection between the deterioration of the varieties which we say have "run out" and the environments under which they have been grown? If the man who goes into the business of breeding pure-bred live stock is a poor feeder, the stock which he breeds will not be sought by others as foundation stock, no matter how well they may have been bred from the standpoint of the qualifications of their ancestors, and after a few generations have elapsed it is probable that the unfavorable environments under which the animals have been kept will have caused such a deterioration in the strain it would take generations of good feeding and the infusion of new blood to bring a herd or flock so treated back to its former quality. It is a reasonable theory that the seed from poorly nourished plants will

not be as virile as seed from plants that are given the best of environment, and this is a strong argument for the use of the seed breeding plot on the farm. There is also the added advantage in the special seed breeding plot for the production of seed for the next year's use that plants may be more carefully culled and seed more carefully selected on a small scale than would be thought practicable on a field scale.

To illustrate this latter point, let us take beans for an example. There is no doubt that the bean producers of Michigan have suffered severe losses from the fungous disease of beans known as anthracnose, which is perpetuated from year to year through the medium of affected seed. It would be entirely practicable to pick sufficient pods from healthy plants to provide seed for a seed breeding plot of an acre or so on one side of the field, from which to produce seed for use the following year. Also, it would not entail a great deal of labor to remove every plant from such a seed breeding plot that showed the effect of this disease, so that the seed produced would be practically free from it. Nor would it be impractical to harvest a small area from this plot by hand, selecting only healthy plants which bore a large number of well filled pods, this seed to be used in the seed breeding plot the following year. Not forgetting the influence of environment, the best available soil in the field should be selected as the place to carry on this seed breeding work, and this small area of soil could be fertilized more liberally than we can fertilize the balance of the field, so that its physical and mechanical condition may be such as to insure a normal development of the plants from which seed for next year's planting is to be secured.

This single example given will suffice to illustrate the wisdom of carrying the work of seed selection to the growing of the plant, and even to the providing of a suitable environment for the production of a perfectly normal and vigorous plant as the parent stock for the main farm crop. There is no crop commonly grown



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upon the farm with which this kind of seed selection or seed breeding cannot be practiced with profit, a profit which we believe will, in practically every case, prove to be out of all proportion to the labor involved.

FARM NOTES.

Plowing or Disking for Oats.

I have a field of seven acres which had been pastured for three years. Last spring I manured it well and put to potatoes. This year I intend to put this field into oats; would you advise disking or plowing for seed bed? Would also ask whether you would seed this down this spring or wait until fall and put in wheat and seed? In either case, how many bushels of oats would you sow to the acre? We had a very poor crop of oats through here last year and I have had some good seed sent to me from a farmer friend in Iowa, consequently I want to get the best results possible. This is my second year on a farm, and since I have had the Michigan Farmer I would not be without it, and if I was to give it another name I would call it "The Beginner's Friend."

Manistee Co.

K. M. J.

Where oats follow potatoes, as is proposed in this instance, the majority of growers agree that practically as good results are secured by the preparation of a seed bed without plowing, as by plowing the ground, and in some cases a better crop will be secured in a comparative test under the two methods. The potato crop is one which leaves the ground comparatively loose, not only because of the rather late and deep cultivation given it, but as well because in digging the ground is pretty well stirred, especially if it is dug with a machine.

Where the crop is to be seeded with clover some growers think that better results are secured by plowing the ground, since the decayed sod is turned to the surface, increasing the supply of humus in the top few inches of soil to the benefit of the clover seeding. However, if the soil is in a good state of fertility we do not believe this to be essential. Whether to seed with the oats or with a crop of wheat following the oats depends a good deal upon the crop rotation one desires to follow. Ordinarily the clover seeding is more certain in wheat than in oats, but a short crop rotation is found to be desirable upon many farms, and the practice of seeding to clover in oats is becoming increasingly popular with farmers in many sections of Michigan.

The amount of seed to sow is also a subject upon which there is considerable difference of opinion among our best farmers. Personally, the writer is of the opinion that one and one-half bushels is a sufficient amount of seed to use, although some farmers use twice that much. Last year the writer saw a field from which 60 bushels of oats per acre had been harvested from one bushel of seed. This was perhaps an extraordinary case, yet a good stand of alfalfa was secured in this field, and we believe without any decrease in the yield of oats from the small amount of oats sown. This was an improved variety of oats, and the field was well adapted to the crop and in a fertile condition, else such results could not have followed. Another favorable feature for this crop was that the season was favorable for getting oats sown early last year, while this year the opposite has been true, and it is probable that a little more seed would be advisable where the crop must be sown late than would suffice for good results where it can be gotten in early, since, other conditions being equal, the early sown oats are usually better from the standpoint of yield than the later sown crop.

Commercial Fertilizer for Corn.

I would like to inquire about the use of commercial fertilizer on corn ground. We tried it on our clay soil last year, both broadcast and in the hill at the rate of about 200 lbs. to the acre, but our corn was almost a failure. It was not nearly as good on the fertilized as on the unfertilized fields; whether owing to the dry weather or not I do not know. The corn had good cultivation and was perfectly clean.

Berrien Co.

H. H. C.

Last season was a poor season for corn on clay land. It was too wet in the early spring for the corn to get a good start, and turned so dry later in the season that the clay land seemed to bake and dry out more quickly than the sand. The writer saw fields of mixed soil in corn last year that had received a good coat of manure in the spring, in which the corn on the loamy spots was as tall as a man and all tasseled out when that on the clay spots was not more than a foot high, yet all the ground had been manured. This simply illustrates that the weather is a great factor in the development of the corn crop, even where stable

manure is used as a fertilizer, and, of course, it has an even greater influence on its development where commercial fertilizer is used or where the land is not fertilized at all. Two hundred pounds of fertilizer per acre applied in the hill would be a liberal amount to give the corn a good start, but fertilizer applied in this way will not and can hardly be expected to push the corn along throughout the season. But in some seasons it will make a vast difference in the growth of the corn. Some years ago the writer got a horse corn planter, and later decided to get a fertilizer attachment for it. This was put on, but the spring that held the dropping device, until it was tripped by the buttons on the wire was not stiff enough to carry the added load of the device that dropped the fertilizer, and the result was that the corn was scattered between the hills, being practically drilled in while the fertilizer was dropped in hills. This was the cause of no little disgust on our part, but it served an excellent purpose in giving us an opportunity to see the result of the fertilizer. Less than 150 lbs. per acre was applied in this way, but it was possible to see the rows where it had been dropped crosswise of the drills of corn, so marked was the effect in pushing the corn along from the start.

In the later use of commercial fertilizer on corn we have adopted the practice of putting from 300 to 400 lbs. of fertilizer on broadcast, and then using about 125 lbs. in the hill. While the weather conditions undoubtedly have a great deal of influence in the result of this kind of fertilization, yet we believe that it has paid to use the fertilizer in this manner.

While a small application of 200 lbs. of fertilizer serves an excellent purpose with small grain crops and is probably as much as it is profitable to apply, it would appear from the best information available that for our cultivated crops, like corn and potatoes, we Michigan farmers have not faith enough in the fertilizer or the crop to get the most profitable results from it. In Maine, where the potato growers get about twice the average yields which we get in Michigan they use fertilizer very liberally, applying 1,500 to 2,000 lbs. per acre of high-grade fertilizer. Some recently reported contests in corn growing in New England where from 1,000 lbs. to nearly 2,000 lbs. of high grade fertilizer was used per acre on acre plots entered in the contest, also show surprisingly high yields. Of course, where one has used even a small amount of fertilizer without apparent results in a single season, his faith in its use is not likely to be increased, but we believe it is not a good reason why we should cease to experiment with it, since results are not always what they ought to be in the use of stable manure applied in the spring. In fact, it is all the more reason that we should continue to experiment with it, until we have demonstrated to our satisfaction what it will do for us in a normal season, when applied in varying amounts or where different formulas are used, since we can hardly know too much about the value of supplementary fertilization, and since this is really the only way to get valuable knowledge along this line.

Canada Thistles.

Please tell me through The Farmer if there is a way to get rid of Canada thistles.

Emmet Co.

W. H. C.

There is no certain way to eradicate Canada thistles except by thorough culture, which will not permit the development of leaves. If a plant is kept from making a growth above the ground for any considerable time during the growing season it must die. Where the thistles are present only in patches it will certainly pay to eradicate them, but where they are well seeded over the entire farm it is a difficult task to get rid of them, and it may be more profitable to learn to live with them with the least trouble and loss.

LILLIE FARMSTEAD NOTES.

The Water Supply.

As I have told you before in Lillie Farmstead Notes, our well went dry last summer. This is a very serious matter on a stock farm. I spent over \$100 trying to tinker up the old well last fall and then we didn't get any water. All of the young cattle had to go to the creek all winter long and get down on their knees and drink through the ice and several times the milk cows had to do the same. At one time I didn't know but the creek was going to freeze solid. As a matter of fact there was very little water in it.

In December I started a professional well-digger digging a well. He was to put down a 4-inch pipe or casing. He has been working on it on and off all winter long, and I have been hoping and praying for water. He claims he has gone down something over 180 feet. Over 50 feet of this is bed rock and he finally got down to where the rock was so hard that he couldn't do it with his hand drill and said that he would have to wait until it became warm enough weather so that he could use his steam outfit in order to go through this rock. But in the last several feet he found small seams in the rock. He said that he would fix it up and try it and perhaps we could get water enough so that it would furnish us water during the winter and then in the spring he could finish the well, and so he fixed the well up and began to pump and there seems to be a good supply of water. This is the first time in two years that we have had water so that we could say we had all we wanted. I do not know whether he will have to go down through the rest of the rock or not. Perhaps the seams that he found in the rock will furnish all the water that we need.

OATS AND PEAS FOR HAY.

My clover seeding failed last year. I note that in a similar case you advise sowing oats and peas mixed equal parts by weight. How much should I sow per acre and how harvest and cure them? What kind of peas should I sow and how? I see the seed books advise sowing the peas first, plowing them in and then sowing the oats. Is this best or could I sow both at once with drill? Is the hay good for horses as well as cows? St. Joseph Co. J. O. T.

There seems to have been quite a lot of failures to get a good catch of clover in southern Michigan last year and the raising of oat and pea hay as a substitute for clover hay is attracting more than usual interest. I had supposed that this subject had been discussed in The Farmer so much in the last few years that all of the readers understood the merits of oat and pea hay as a substitute for clover hay, but it seems farmers are not particularly interested in a given subject until the time comes when they need the help expressly for themselves.

Oat and pea hay is a most excellent forage crop for all kinds of stock. In many instances oats are grown alone for hay and are excellent for this purpose, but Canada field peas are leguminous plants and contain a much larger per cent of protein than oats, consequently if we mix Canada field peas with oats we have more nearly a substitute for clover hay. If we should sow the peas alone they are inclined to lodge and they are difficult to harvest, but when we mix them in the proportion of 1 lb. of peas to 1 lb. of oats and sow them at the rate of 2½ to 3 bu. per acre, the oats will help hold the pea vines up and keep them from lodging, and the crop can be cut with a common mowing machine the same as any grass crop and with as little expense. It should be cured in the same way.

Many people make the mistake of delaying the cutting of this crop until it is too ripe to get its greatest feeding value as hay. It ought to be cut when the oats are in the milk, before any berry has formed at all, and when the pea pods have just nicely formed, before they commence to fill very much. If you delay the cutting much longer the food nutriment of the plant will be concentrated in the grain, and the straw will not be as palatable nor as digestible as it would be if it was cut earlier.

The peas can be sown and plowed under, then the land fitted and sown to oats, but this is not necessary, especially on loamy or clay soil. Where peas are sown too shallow they are liable to be affected by dry hot weather and not fill as well, but we are not particularly interested in getting well filled pods for the hay crop; we want a good growth of vines. I should mix Canada field peas and oats, selecting a variety of oats with a good stiff straw, and sow the combination with a grain drill, setting the drill to sow 2½ to 3 bu. per acre. I would take pains to drill the peas and oats in as deeply as possible. If you have your ground well pulverized to a good depth there will be no trouble in getting the seed covered deep enough and you will not have to plow the peas under.

If this crop is cut at the proper time and properly cured, (it should be cured in the cock), you will find it a very good substitute for clover hay, and with a rich soil and a favorable year you may expect to get a good crop. COLON C. LILLIE.



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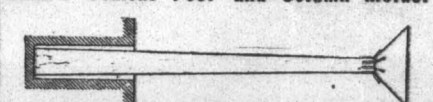
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WHERE TO BEGIN TO LAY TILE.

I wish Mr. Lillie would tell me where he commences to lay his tile, at the lower or upper end of the ditch, and why.

Kalamazoo Co.

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You can begin at either end of the ditch to lay tile but the better place is to begin at the lower end. If you begin at the upper end of the ditch you are working in waste water all the while and there is no chance for it to run off, but when you begin at the lower end of the ditch, as fast as you lay the tile the water from above passes through and out of the way and you have a clean ditch, so far as the water is concerned, in which to lay the tile.

Of course, if your ditch is dug out entirely, with the exception of simply bottoming it up in places, it don't matter so very much which end you begin at, but we usually begin to dig the ditch as soon as we get down deep enough at the opening or outlet end we bottom up and lay the tile and keep the tile laid as fast as we dig the ditch. In this way all of the drainage water passes off out of the way, while, if you attempted to do this by beginning at the upper end of the ditch you would soon have a ditch full of water and it would be impossible to accomplish anything.

The principal objection to digging the ditch out its entire length before you lay the tile is that it is very apt to cave in, especially if there comes a heavy rain, and, of course, this may cost a lot of money to clean it out again. I remember one year when we were tiling that we could not get the tile, and I wanted to keep the men at work and so we went on and dug ditch after ditch, leaving them open. The weather was dry at the time. We finished them all up but simply bottoming them. All we had to do was to set up the grade line above the ditch and level the bottom before the tile were laid. Before the tile arrived there came a heavy rain and it cost me in the neighborhood of \$100 to clean out the ditches that caved in. Now, if we had had the tile and laid them as fast as we dug the ditch all this expense would have been avoided.

COLON C. LILLIE.

MOISTURE IN THE SOIL.

Water exists in the soil in a number of forms. The two that we have to deal with mostly are: Free water and capillary water. The free water of the soil is that which we have in our springs, wells, etc. It flows under the influence of gravity. It is mostly directly beneficial to plants, but is detrimental to them if it rises too near the surface. It keeps the soil cold and excludes air. The latter is very essential to the roots of growing plants. The free water is valuable, however, as a source from which capillary water is drawn during the very dry time. Capillary water is the chief source from which plants derive their supply. It exists as a film surrounding the soil particles or grains, that is, when the texture is right and the soil grains come in close contact with one another. These films of water have the power of jumping from one grain to another and are being continually drawn to the surface by a force known as capillary attraction. This force, while we cannot see it, is always operating. The moisture from below is being drawn to the surface and is being carried away by the sun and wind. What we want to do is to prevent this moisture from escaping directly at the surface of the soil; but instead make it pass off through the tissue of the plants. Nature's way of preventing the escape of moisture in the forest that once covered our land, was by a mulch of leaves, which broke the connection between the moist earth underneath and the atmosphere. We all have noticed that if a board becomes partially embedded in the earth there is always moisture under it, no matter how dry it may be around it. Some people say the board did not draw the moisture, but simply prevented it from escaping. Now, we cannot have forest conditions in our cultivated fields, neither can we cover them with boards; but we can get fairly good results by using the dry earth as a soil mulch, that is, make the surface of the soil for a depth of two or three inches very fine. By keeping it stirred frequently with a cultivator or harrow, it is easy to prevent the capillary tubes or pores from running to the surface, thus evaporation is curtailed. We all know that if the soil is allowed to become baked or crusted it becomes porous and full of tubes or chimneys through which the moisture from below readily escapes; but

if we keep the surface stirred and fine these outlets cannot form and evaporation is materially lessened.

Canada.

W. R. GILBERT.

THE PROPER DEPTH TO PLOW.

Dr. Franklin, a man of wonderful ability, wrote:

"Plow deep, while sluggards sleep, And have some grain to sell, and keep."

The doctor was a printer, philosopher, and statesman, but never a farmer, and consequently formed his opinion on general principles, and not from practice. The prevailing opinion among farmers today seems to be that land should be plowed deep, or shallow, according to the nature and depth of the soil. A deep, rich soil may raise a better crop if plowed deep, so as to let the roots of plants go down to get moisture in a dry season, and affording a more extensive feeding ground for them to forage in, to obtain plant food, and promote greater growth at all times. A thin soil will produce a better crop, by plowing shallow, and not burying the fertile surface soil so deep that the roots of plants do not reach it until they are weary and weak, and the leaves are looking yellow and sickly.

Nothing has been more surely established by the writer's experience than the impropriety of turning the thin top soil to the bottom of a deep furrow, and unless there is given at the same time it is done, a top-dressing of manure there will be a positive damage to the land, and to several succeeding crops.

Some years ago the writer tried the experiment of deep plowing on what is called the "flats," or bottom lands along the Susquehanna river. The soil was a deep alluvial, sandy loam, every particle of which had been brought down and deposited by floods in the river. A heavy timothy sod was turned down as deeply as the strength of two good teams could do it, or about nine inches. A neighbor came into the field and said: "I would not have you plow my land so deep, if you would do it for nothing." About one-fourth of an acre was plowed only five inches deep. It was planted with corn, well tended, and the whole field produced a good average crop. No difference whatever could be seen between that part which was plowed deep, and the part plowed shallow, and no difference was found at husking. A dry season might have made a difference in favor of the deeply plowed portion. Several years afterwards the same experiment was repeated on the same field, (except that there was no sod to break), with the same result as before. The weed seeds not having been buried so deeply on the shallow plowing, were up sooner, and more troublesome to subdue. My conclusion from the results of these experiments was that a deep, rich soil will bear deep plowing and thereby bury the weed seed deeper, and enable the plants which are cultivated to send their roots down deeper in search of moisture in a dry season.

With our upland the case is different. The top soil is a thin vegetable mold, and the subsoil is a compact, sterile clay, with but little capacity to absorb warmth from the sun. I had a field of such land that had been cropped twice after clearing, and was full of small stumps which had become loose, so that by putting two teams to the plow the stumps could be turned out. This was done, and the field was deeply plowed, and sown with oats at the proper time. The season was favorable for oats, but on this field the plants looked yellow when they came up, and continued to look sickly and yellow, until they got ripe, and were so short the could not be cradled—had to be mown—and I never had a doubt that plowing so deeply injured the crop more than 50 per cent in yield.

Several years after, in plowing an adjoining field (of the same kind of soil), that had been in grass, the plow was set to plow a shallow furrow, but when about half plowed, the wheel that regulated the depth of the furrow, got broken and the plow at once pitched down two or three inches deeper. Corn was planted, and as soon as it came up the very place where the wheel broke could be seen by the color of the corn. It was green where the ground was plowed shallow, and a sickly yellow where it was plowed deeply. The stalks and ears were smaller, and the yield of grain much less on the deeply plowed portion.

Pa.

J. W. INGHAM.

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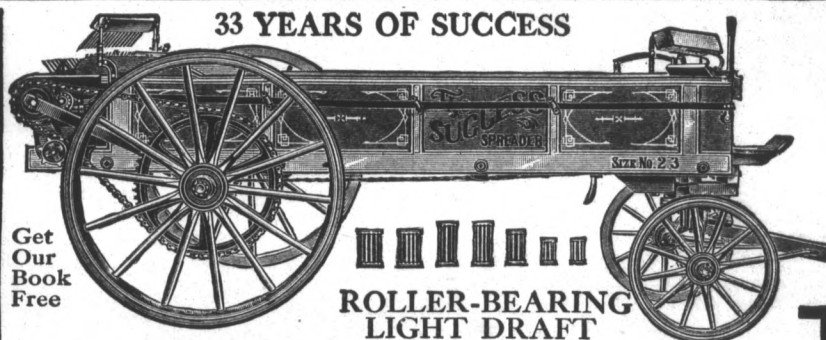
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LIVE STOCK

FEEDERS' PROBLEMS.

Buying Feed for Pigs.

Will you tell me through your paper whether there is anything to be made out of 20 pigs where I have to buy all of the feed? Have about four pails of milk a day to mix with ground feed. How much do I need to put them up to 175 lbs.? Which is best, half-and-half of corn meal and middlings, or more corn meal? Have about half an acre of orchard to plow and put into forage crop. Which is best, rape or peas and oats, or oats seeded with clover?

Oakland Co.

G. H.

It is impossible to predict with any degree of accuracy what future market conditions will be, and without knowing what a finished product will be worth, or exactly what the raw material which enters into the making of that product will cost, it is impossible to tell whether it will be produced at a profit or not. However, with skim-milk available for use in making up the ration, and ground upon which to raise a forage crop for summer pasture, there would certainly be no risk to run in keeping these pigs, and a fair prospect of making a good profit. The skim-milk should be mixed with corn meal and in the proportion of 1 to 3 lbs. of skim-milk to 1 lb. of corn meal. Then sufficient middlings should be used in the slop fed the pigs to make up the desired bulk in the ration. This will make a well balanced ration for young pigs, and with some green forage they will grow well upon it if fed liberally. The amount of grain required to produce a given amount of gain in pigs varies in proportion with the age and weight of the pig, but will range from 350 to 500 lbs. of grain for 100 lbs. of gain. The forage crop which would give the best results during the season would be a mixture of oats and rape, since this could be pastured earlier than the oats and peas, although if other grass is available for earlier feed the oats and peas would make a more valuable feed late in the season, since the grain produced help out materially in finishing the pigs for market.

The Ration for Growing Colts.

A Leelanau county subscriber asks how much and what kind of grain should be fed to a yearling colt. The question of the proper ration for growing colts is one which should be more carefully studied by the average farmer, since not a little of the future value and usefulness of the horse depends upon the feeding and care given to the growing colt. With colts, as with all other animals, the development must be continuous from birth to maturity if the possibilities of the colt are to be fully developed. If the horse produced is to attain a maximum value, the colt must be so fed as to be well nourished at all times and make a continuous growth. Any unfavorable conditions which check the colt's growth will affect the future size and symmetrical development of the horse and decrease his value accordingly. Thus, in order to produce the best results the ration should not only be plentiful, but should be so compounded as to produce a symmetrical development of the body. The ration should not be one which will tend to fatten rather than grow the colt, since it is essential that material be supplied for the making of bone and muscle during the growing period. Thus a balanced ration should be provided.

Oats with bright clover hay made for roughage, or good pasture during the summer season will prove very satisfactory as a grain ration, with perhaps a little bran added, and if desired some corn meal and oil meal can be used with the oats. But the amount of grain to feed cannot be fixed arbitrarily; it is an individual problem with each colt. Enough should be fed to keep the colt in a thrifty, growing condition, with plenty of flesh, yet without overloading him with fat. If the colt has been properly fed from weaning time, it will not be a difficult matter to so regulate the grain ration as to bring about this result. Any change either in the composition of the grain ration or the amount fed should be made gradually, but it will pay to feed some grain while the colts are on pasture, as it will crowd them along more rapidly. The common practice of feeding no grain while the colts are on pasture, even when the pasture gets poor, is one to be condemned. Every favorable condition should be supplied in summer as well as winter, and a colt on poor pasture in the middle of summer, when the flies are troublesome, will often receive a

check in growth which it takes weeks of good feeding to overcome, and means just that much loss of time in his proper development.

Turning the Cattle to Pasture.

There is a great tendency among farmers, especially in a season like the present when there is a shortage of hay as is the case upon many farms, to turn the cattle to pasture and stop feeding them entirely as soon as they are able to get a bite of grass. This is a poor policy, since, when the grass first starts it is very succulent, and not as nutritious as it is after it has attained some growth, and it is so great a change from dry feed that the animal's digestive organs are ill prepared for it. The consequence is that with this abrupt change of feed scouring will often ensue, and while this physicking may cleanse the system and leave the animal in good condition to gain when the grass gets more heart, yet this process entails considerable shrinkage of flesh which is unnecessary and which might just as easily be avoided if a little more judgment were used in making this change from dry feed to grass. Farmers often declare that their stock will not eat dry feed after they are turned to pasture. If the change is made as abruptly as is above described they will not, but if the change is made gradually and the animals are turned to grass for an hour or so at first during the day, they will eat their grain ration and some dry fodder, especially bright clover hay if it is available. The consequence will be that instead of shrinking badly the animals will continue to thrive, and the salutary effects of the green feed will be noticed much more quickly than would be the case if the change were made too abruptly.

What is true with regard to the cattle in this respect is equally true with the sheep. The dairyman usually avoids this trouble since he has learned that it pays to keep up the grain ration and to give some dry fodder until the cows are accustomed to the change. It pays just as well to give this matter some thought and to exercise some care in making the change from dry to green feed with the young cattle and other stock.

SOW RAPE IN THE BARN LOTS.

On nearly every farm there are unused steer-feeding lots or hog yards or other odd pieces of ground that frequently are not used for any purpose outside of the feeding season. All such patches ought to be put to some productive crop.

In our experience we have found rape to be one of the very best of crops for this purpose. The ground being very rich from the large amount of manure upon it, produces a very rank growth of foliage. This is all right in a crop used strictly for forage rape. Rape may be sown any time up to midsummer, providing there is plenty of moisture. Yards that we have utilized for this purpose have usually been very hard and required careful pulverizing, following the plow. Nearly always it has been necessary to use the disc harrow before the surface could be worked into a suitable seed bed.

These small patches of rape make splendid supplemental pastures during the season. When the regular pastures begin to dry up there is nothing nicer than an acre or two of rape onto which to turn the sheep. For young lambs at weaning time nothing could be better. We are always anxious to keep the youngsters growing during this trying time and rape is the best we have found yet for that reason when the blue grass is usually rather short.

Last year we had a piece of ground containing a little more than one acre that was seeded to rape during May. This was allowed to grow unpastured until about the middle of July. Then we turned in a bunch of 45 spring lambs. These lambs were pastured every night on that small patch of rape until well along in October. During part of the time the regular pasture was quite short and the youngsters had to subsist largely upon the rape. It is safe to say that they obtained half their keep for more than three months from that small patch of rape.

For hogs it is very good also. Last season a man nearby pastured a bunch of pigs on a lot containing about an acre of rape. The young porkers always looked well and made very satisfactory gains. The rape was never pastured more than half what it might have been, yet the owner figured at the end of the season that he had made over \$30 worth of pork from that acre.

Iowa.

H. E. McCARTNEY.

THE FARMER AS A BREEDER.

It is of great importance to every farmer, great or small, who in any way uses live stock in his system of farming, to have improved types of animals. Such animals better meet some of the wants of man than the common stock of the country. Whether a single animal or family or breed is improved so far as the farmer is concerned, depends on what the requirements are. The first question in selecting stock is: What are they wanted for?

In these days of close competition and high-priced animal foods, farmers must have animals that possess the highest possible development for one special purpose, that is, the highest possible development that can be attained without weakening their vital functions. In some cases animals are kept for more than one purpose. Such animals cannot be highly developed in both directions, but may be symmetrically developed in two or more natural functions. It is a serious mistake to multiply the difficulties of breeding by attempting to breed animals that excel in more than one line of production.

The special dairy farmer need not be troubled by the fact that other farmers, in selecting cattle for breeding, look almost exclusively to indications of special adaptability for beef production, while a much greater number wisely say they find their wants best met by the cattle which have had their natural capabilities for both beef and milk-giving, cultivated to equal degrees. The great mass of special dairy farmers will do well to select and breed for the highest possible development of the milk-giving functions without impairing health and vigor.

Type vs. Pedigree.

In selecting animals individual merit is of first importance. If this be inherited the probable value of the animal as a breeder is greatly increased. Pedigree is valuable because it is the safest guide in determining the qualities of the ancestors. Pedigree is not always proof of individual merit, but a first-class animal is a living witness of a good pedigree.

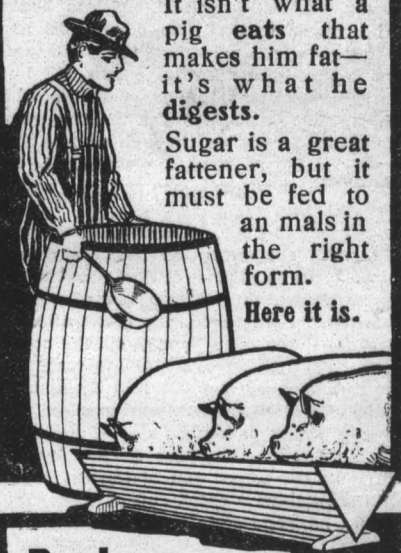
Environment, heredity and conditions of life causes a variation in the type of farm animals. The possibilities of development of an animal depend upon what it has inherited from its ancestors. The extent to which this development may go will be determined by the conditions that surround it. The breeding and developing of improved types of live stock need not necessarily be a matter of chance, as many seem to think, but a matter of accurate and well-defined knowledge. Years ago a few far-seeing men saw the need of animals that would convert their food into animal products in paying quantities. They began the selection of animals of the desired quality. In the course of time they developed meat producing animals with strong backs and well-sprung ribs, well developed in the quarters, well let down in the flank, with a soft, mellow hide, straight top and bottom lines, and a tendency to locate as much as possible of their flesh on parts that command the most money in the markets. This line of breeding has been pursued until the animals possessed the true meat-making form. They are able to reproduce this form with certainty, because they have acquired the fixed habit of economically converting their food into the higher-priced cuts of meat. In the same way the breeders of dairy cattle, horses and poultry have been able to develop improved types and breeds, each breed or variety developed for some special or particular purpose, and with the inherited tendency of doing their best work in their particular line.

Pure-Bred vs. Scrub Stock.

Why should the average farmer be interested in keeping improved stock? Because he grows crops on his farm which he desires to convert into money. He may sell his crops or feed them to live stock. If he sells his crops in the market he expects the highest price and in this kind of a deal he is characterized as a sharp business man. But, in case he desires to feed out his crops on his farm, he frequently exercises anything but sound judgment and selects animals for the purpose of converting his crops into money which are not capable of returning a fair market price for them. Instead of well-improved animals, that have been bred and perfected by years of experience for the purpose of making some particular product most economically and profitably, he selects animals regardless of age, type or capacity. It is astonishing that so many farmers still persist in feeding crops to unimproved

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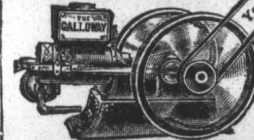
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WEST ELKTON, OHIO.
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Belgian, Percheron and Shire

Stallions and Brood Mares

40 head of prize-winners to arrive March 25. Plenty of mares in foal. A guarantee with each animal.

Prices reasonable.

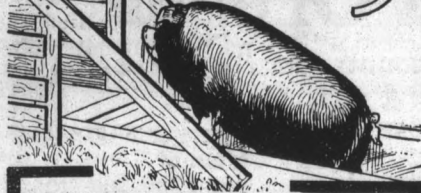
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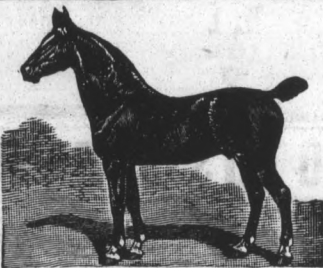
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THERE IS NO EXCUSE FOR LOUSY MANGY UNTHRIFTY PIGS. IF YOU HAVE SOME OF THIS KIND YOU WILL FIND IT WORTH WHILE TO GET OUR CIRCULAR ON TANKS AND WALLOWS. IT TELLS HOW TO MAKE THEM OF CEMENT

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THICK, SWOLLEN GLANDS
that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be removed with

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ABSORBINE, JR., liniment for mankind. Reduces Gout, Tumors, Wens, Painful, Knotted, Varicose Veins, Ulcers. \$1.00 and \$2.00 a bottle at dealers or delivered. Book with testimonials free.
W. F. YOUNG, P. D. F., 268 Temple St., Springfield, Mass.

Blood Poison.—I have a Holstein cow that has several suppurative sores on head, neck and brisket and would like to know what ails her, and also, have you prescribe a remedy. H. E. O., Osseo, Mich.—Give your cow 2 drs. iodine potassium and 1 oz. fluid extract sarsaparilla at a dose in feed two or three times a day. This will cleanse her blood. Open up abscesses freely, allowing as perfect drainage as possible and inject one part tincture iodine and eight parts water once a day for five days, then inject one part carbolic acid and 20 parts water into wounds twice a day. To superficial shallow wounds apply equal parts boric acid and oxide of zinc twice a day.

Bowel Infection.—My six month-old calf seemingly lost her appetite; I gave her epsom salts, which relieved costiveness; since then she has been losing flesh and is no better. Her bowel movements are mixed with blood and mucus. F. L. McD., Levering, Mich.—Give her 20 drops of fluid extract nux vomica, a teaspoonful fluid extract cinchona and a teaspoonful fluid extract buchu at a dose three times a day. A change of food in such cases has a good effect.

Dead Calf.—I have a heifer that is now due to calve soon and I am inclined to believe the calf is dead; if so, what had I better do? O. C. O., Baraga, Mich.—Give your cow enough epsom salts in solution as a drench or enough raw linseed oil to keep the bowels acting freely and if your cow does not clean properly within a few hours after calving, the afterbirth should be removed and the uterus washed out with one part carbolic acid and 100 parts tepid water daily.

Navel Infection.—I am at a loss to know what ails some of our calves, for they seem to be strong when born and remain all right until they are two or three days old, then gradually grow weaker and weaker from fever until they die. H. B. Lucas, Mich.—Your calves die the result of navel infection and it can easily be avoided by applying any good home healing remedy to the navel twice a day, commencing soon after birth. Apply one part carbolic acid and 10 or 12 parts of glycerine or dust on boric acid, or apply one part bichloride of mercury and 1,000 parts water twice a day. There are many other healing remedies equally as good as those I have mentioned.

Miscarriage—Clinging Afterbirth.—I have a cow that came fresh two months too soon and has not cleaned; I am feeding her boiled oats and flaxseed. Would feeding raw potatoes have a tendency to produce abortion in this cow? D. M. L., Tawas City, Mich.—If the potatoes did not produce a diarrhoea they would not hasten calving much. The afterbirth should always be removed within 12 or 24 hours after calving, if it does not come away before, then inject her with one part carbolic acid and 100 parts water.

Congestion of Lungs.—My ewes appear to be in splendid conditions, but their lambs do not live but a few hours and six of the ten have died. What caused their death? They show great weakness, but few, if any, other symptoms. H. W. B., West Branch, Mich.—Your lambs die of acute congestion of the lungs or else from virulent navel infection; however, I am inclined to believe it lung trouble. All you can do is to keep them warm and dry for a few days after they are born.

Sore Mouth—Fits.—I recently bought a carload of western ewes and nearly all of them are troubled with sore mouths and some of our native sheep have also sore mouth. We also have some sheep that are occasionally troubled with fits but these attacks do not last long. A. E. B., Mud Lake, Mich.—Dissolve 3 ozs. borax in a gallon of water and apply to mouths once or twice a day, and give the sheep that have fits 2 ozs. of castor oil after they show a fit condition; also give 5 grs. bromide of potash at a dose three or four times a day. Their bowels should be kept open.

Navel Infection.—Some of the young pigs from two different sows die when a week or ten days old without showing very many symptoms of disease and I would like to know what ails them. H. C. N., Vandalla, Mich.—If you will apply one part carbolic acid and 15 parts glycerine to their navels, commencing right away after birth and making these applications daily until the wound heals, they will not die; of course, they should be kept as clean and comfortable as possible.

Indigestion.—Reading the veterinary column of the Michigan Farmer has been a great help to me and I would like to know what to give to a boar that is troubled with indigestion. A. P. A., Suttons Bay, Mich.—Give him one part bicarbonate soda, one part ground gentian, two parts ginger, four parts charcoal, a teaspoonful or two at a dose in feed three times a day.

Dog Sucks Eggs.—I have a female collie dog that has contracted the habit of sucking eggs and as she is a good farm dog I dislike to destroy her. N. V. C., Mt. Pleasant, Mich.—Punish her when catching her in the act, or fill an egg shell with fluid extract of capsicum and close the hole and place the egg within her reach, and if she will break the shell, the result will be a good sore mouth and she will perhaps be shy of eggs ever after.

Bog Spavin.—I have a brood mare due to foal May 15, that starts lame, but soon warms out of it. The only blemish noticeable is in hock joint, there being a puffy swelling. C. H., Bronson, Mich.—Your mare suffers from incipient bog spavin lameness and she will be relieved somewhat by applications of equal parts spirits of camphor and tincture of iodine; these applications should be made three or four times a week. She should not be treated with harsh blisters, until after she foals.

Contagious Abortion.—My cows have suffered from contagious abortion and I have been partially successful in raising some of their calves, but most of the cows have now become barren; therefore I am going to dispose of them and stock

up with others. If the calves are kept in separate quarters, will they show the disease when older? Can healthy calves be infected by feeding them milk drawn from cows suffering from contagious abortion? Is there any danger of healthy cows becoming infected by running in a pasture that has been inhabited by diseased cows the year before? Will sheep contract this disease when in contact with diseased cows? T. B. P., Byron Centre, Mich.—Fatten all barren diseased cows, separate those that you believe cured and that have carried their calf full time. The milk does not contain abortive germs, but these germs may drop off the udder or hind quarters of cows into milk and possibly produce the disease in pregnant cows. I do not regard a pasture that has been used last year very dangerous to other cows, if kept on it this year. Sheep, sows and mares will contract the disease almost as readily as other cows if kept near diseased cows. I suggest that you keep up the use of disinfectants and germ-killing preparations about your stable.

Warbles—Worms.—I would like to know of a remedy for grubs in the back of cattle and would also like to know what I had better give for worms in horses. A. B. F., Eagle, Mich.—Use a sharp pen knife and make opening in back a little larger, then squeeze out grub and be sure to kill them. Also apply boric acid to sores once a day. For worms in horses give 1 dr. santaline and ½ dr. of calomel at a dose two or three times a week in a well salted bran mash.

Lump Jaw—Inflamed Udder.—The cow that I have been treating for lump jaw according to your directions is much better and the bunch is almost gone, but her udder is inflamed some and she is not due to come fresh until May 15. F. E. D., Climax, Mich.—You had better keep up the treatment for lump jaw a little longer. Apply equal parts alcohol and warm water to swollen udder twice a day and if you can ascertain the cause of it remove it. Give her ½ oz. powdered saltpeter at a dose in feed twice a day for several days and if her bowels are costive give some epsom salts to loosen them.

Navicular Disease.—I have a four-year-old mare that recently showed lameness in one fore leg and I had her examined by our local Vet.; he pronounced it coffin joint lameness. Now, I would like to have you prescribe a remedy. J. S., Lapeer, Mich.—Blister coronet with one part red iodide mercury and 10 parts cerate of cantharides once a week or ten days.

LIVE STOCK NOTES.

William Knecht, of Indiana, showed up in the Chicago market recently with 14 Shorthorn steers that averaged 1,617 lbs. and sold at \$6.60 per 100 lbs. Mr. Knecht bred and fed these cattle, which were three-year-olds. He is one of the largest farmers in Indiana, owning 920 acres that is valued at \$125,000 an acre.

In recent weeks Kansas City has been shipping about 40 per cent of its cattle receipts back to feeding districts, a movement entirely unique. The Ozark region of southern Missouri and northern Arkansas, that in past years supplied Kansas City with thousands of light stock cattle is now buying cattle of that class on the Kansas City market.

The almost constant weakness of the hog market has not been much of a surprise to most stock feeders in the corn belt states, for the time has arrived when a lower level of prices was to be expected. Several causes have contributed to bring this about, and now the only question generally asked is where the downward movement will stop. Of course, rallies in prices from time to time are to be expected, and the volume of the receipts will count a good deal, as well as the purchases made in the Chicago market by eastern shippers. Of late this demand has been most pronounced on Monday, the day of the week when the receipts are practically certain to be much lower than on any other day, resulting naturally in lower values.

Arizona sheepmen expect to market about 75,000 sheep and lambs this spring, and shipments will start up from the first to the middle of May. Grass is the best reported in ten years, and flocks are expected to go to market in fine condition. A few spring lambs are always marketed early, along in April, but heavy shipments are not looked for before the latter part of July or the first of August.

Reports from Texas state that while a good lamb "crop" is counted upon, the aggregate supply will not be large, as Texas has a great scarcity of ewes as compared with former years when that state led the entire country in mutton production. Texas sheep have been moving to market, but no large movement is expected before the latter part of April.

Michigan and Ohio farmers have fed a great many sheep and lambs during the past winter, and considerable disappointment has been felt because prices were not higher, but everyone understands that the feeding industry has been overdone, as is nearly always the case after a year of scarcity and extremely high prices. Looking ahead, and judging merely from past experience, a prophet would say that another year will see limited sheep feeding and a return of high prices. Mutton has become more popular with meat-eaters of late than ever before, one reason being the improved quality of a large part of the mutton offered for sale in the retail meat markets, but it must be admitted that its reduced price has a great deal to do with the growing sales. The export demand for live muttons is extremely irregular and not to be depended upon. When exporters are in the market there is a good outlet for fat heavy sheep, yearlings and lambs at relatively high prices, but at other times heavy lots can be sold only by offering them at a considerable discount in prices from those asked for light weights.



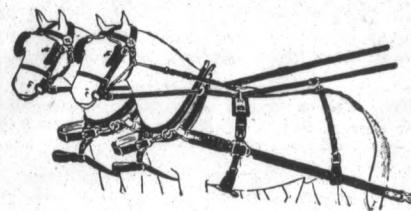
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Owing to the late spring we are offering a special inducement to harness buyers in the above Williams' Double Farm Harness. We will fill orders for this harness at the special prices quoted below until June 30th only. Send TODAY for a fuller description, if desired.

Williams' Double Farm Harness: Bridles, ¾-inch; Concord Blinds—Lines, 1-inch, 20 feet long—Brest Straps and Martingales, 1½-inch—Traces, 1½ and 1¾-inch; three rows of stitching.

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HEAVES

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Leucorrhea.—I bought a ten-year-old mare some time ago and with the exception of having a vaginal discharge she is all right. She is much worse when working, than if idle. J. O. S., Independence, Iowa.—Give her 2 drs. urtione at a dose in feed twice a day, also give two tablespoonfuls of bicarbonate soda at a dose in feed three times a day. Dissolve 1 dr. permanganate potash in a gallon of tepid water and wash out vagina once or twice a day.

Bunch in Teat.—Have a cow that has a lump forming in teat and I would like to know what can be done for her. G. H., Oxford, Mich.—Apply iodine ointment to bunch once a day and give her 1 dr. of iodide potassium at a dose in feed twice a day.

Indigestion.—I have a cow that had a calf six weeks ago which is now in a run-down condition, her appetite is poor for hay and grain, but she is fond of potatoes. Have given her Glauber's salts, thinking perhaps it might improve her condition and cause her to come in heat. H. H., Vassar, Mich.—Give her two tablespoonfuls of ground gentian, two of ginger and two of bicarbonate soda at a dose in feed three times a day.

Decreasing in Milk Supply.—I have a two-year-old heifer that came fresh five weeks ago, now she is drying up; she is fed ground corn, oats and mixed hay. J. H. F., Coral, Mich.—Feed her more bran, middlings and roots and give a tablespoonful fluid extract gentian, a teaspoonful powdered nux vomica, a tablespoonful of bicarbonate soda and two tablespoonfuls of ginger at a dose in feed three times a day.

Stomach and Bowel Trouble.—I have a mare 22 years old that is fleshy and eats well, but when driven seems to suffer considerable pain. She suffered from a similar ailment 12 months ago, but seemingly got over it. F. L. C., Schoolcraft, Mich.—Give 1 oz. ground gentian, 1/2 oz. ground ginger and 1 dr. powdered nux vomica at a dose in feed three times a day.

Distemper—Scratches.—I have a colt coming one year old that took distemper four weeks ago and since then his legs have stocked. I have been told that he has farcy, but I doubt it; the sores on legs are better. J. A. W., Maple Grove, Mich.—Dissolve 4 ozs. acetate of lead, 3 ozs. sulphate zinc, 2 ozs. of carbolic acid in a gallon of water and apply to sore heels twice a day. Give 1/2 of a teaspoonful of powdered nitrate of potash at a dose in feed once or twice a day. Feed some well-salted bran mash and roots to open the bowels.

Bunch in Udder.—I would like to know how to reduce a bunch that is situated in back part of my cow's udder. A. D., Gilbert, Mich.—Give your cow 1 dr. iodide potassium and 1 oz. of salt at a dose in feed three times a day; also apply one part red iodide mercury and eight parts lard to back parts of udder directly over bunch twice a week.

Breeding Question.—I would like to know how to manage a young mare that I recently bought in Illinois and desire to leave her to be bred, then ship her 100 miles by railroad and 300 miles by boat. At what stage in pregnancy would it be least liable to cause miscarriage. F. J. B., Chicago, Ill.—The sooner after she is pregnant, the less liable she will be to miscarry; however, it can be done with safety any time up to the sixth or eighth month.

Septic Poison.—I recently lost a mare that was sick only two days; the first symptom she showed was swelling of hind leg, which increased rapidly and in 12 hours she got down and was never able to get up again. She seemed to have paralysis of hind quarters. Nothing passed her bowels after she took sick and I am anxious to know what caused her death. A. McD., Leer, Mich.—Your mare died the result of septic poison following a suppurative condition of the lymphatic glands, or it may have been uraemic poison. Little can be done by medication to check an acute ailment of this kind.

Chronic Grease Heel—Yearling Colt Scours.—I have a three-year-old filly that was worked in mud last fall which caused her heels to crack; since then her heels have been inclined to crack and her legs stock whenever she is worked. Have applied different preparations, but none of them seem to heal the sores. I also have a yearling colt that scours but appears to be well other ways. Have been feeding mixed hay, oats, cottonseed meal and roots. R. M., Charlevoix, Mich.—Apply one part oxide of zinc and three parts vaseline to sores once a day; also give her a dessertspoonful of Donovan's solution at a dose in feed three times a day. For your yearling colt give a teaspoonful of sub-nitrate of bismuth, a teaspoonful of powdered cinnamon bark and two tablespoonfuls ground ginger at a dose in feed three times a day. Feed oats and timothy hay.

Sore Ear.—I have been a reader of the Michigan Farmer for many years and am very much interested in your veterinary department, but fail to find a remedy for shaking of the head. My four-year-old mare acts as if the bridle hurt her head or flies were bothering her and I would like to know what you think ails her. E. A. H., Clinton, Michigan.—If you will examine her ear you will perhaps ascertain the cause, or she may have a sore tooth, or her bridle may not fit properly. A close personal inspection should be made in order to ascertain the cause of her shaking head.

Abscess.—I have a sow that has a soft puffy swelling on lower part of ham, which is very soft and painless. A. L. C., Stanton, Mich.—Open abscess and allow fluid to escape, you will find it contains serum or pus. Then inject one part coal-tar disinfectant and 50 of water twice daily.



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The breed, the family and the sire form the trinity of successful breeding everywhere, but careful management alone will bring results, even with these principles understood. Certain families unite with certain others for the greatest excellence. It is the business of the breeder to work out his own success along his own lines. It is the same in breeding commercial types as it is with breeding pure-bred farm animals. Breed, family and sire are the prime factors. Steady, every-day work; selecting the best within

and each disappointment is a signal for a new cross. In the end he comes out with a nondescript herd not so good as the one he started with. He has such a confusion of blood in each animal that he can only guess what the progeny will be from year to year. He has jumbled together the characteristics that careful breeders have been eliminating and establishing through long years of systematic selection and mating.

Breed characteristics and uniformity of type is the great benefit accruing from years of purposeful and intelligent selection. The tyro who attempts to unite two types in one animal is working against the fundamental principle of breed prepotency and producing a typeless animal from which nothing definite can ever be secured.

The Importance of Proper Feeding.

A few generations of poor feeding will ruin the best herd or flock of farm animals. Lack of feed brands its imprint on the animal, even before birth, and alters both form and function. Such alteration in form and function cannot be wholly overcome by later liberal feeding. The general experience of breeders and feeders goes to show that animals once stunted never reach a normal development. There are many animals possessing latent possibilities as record-makers that are never heard of because they are never fully tested. Plenty of suitable food and favorable environment means much to animals. The proper development of breeding stock brings out such desirable characteristics as early matu-



A Rambouillet Ewe with the "Husky" Triplets She Has Raised, Owned by E. O. Bellows, of Montcalm County.

the breed and piling cross upon cross of pure blood on a foundation of common stock. Success is sure to come in this way, yet how many have failed, just as success was within reach, by changing sires and securing only a shadow of reward. Many a breeder has found out to his sorrow that a violent outcross will not, under most circumstances, prove profitable. The promiscuous mixing of breeds and types does not imbue the resulting animals with the power to reproduce themselves uniformly. The crossing exerts an influence which causes the transmissive powers of the animal to be broken up into many integers, and his progeny must therefore present many different characters, some like those of the parents, some like those of remote ancestors, and oftentimes some unlike the parents or ancestors.

The Fallacy of Cross Breeding.

Some farmers have a mania for cross-breeding. Grading and crossing are very different practices. The first is grading-up, the other is mixing-up. The most successful breeders realize that the present types of live stock have resulted from steady, purposeful effort within the breeds, and know that future success will be made in the same way.

The farmer who is grading up his common stock by the use of pure-bred sires always of the same breed is progressing toward the standard of that breed; he is raising the standard of his herd from a common mixture to a uniformity of excellence in some particular line. His purpose is to secure excellence of the pure-bred from which he selects his sires. He is on the right road to success.

The farmer who crosses one breed upon another is trying to combine the good qualities and eliminate the undesirable points in the making of a perfect animal. He is working on the old dual purpose fallacy. Each cross is a disappointment

and each disappointment is a signal for a new cross. In the end he comes out with a nondescript herd not so good as the one he started with. He has such a confusion of blood in each animal that he can only guess what the progeny will be from year to year. He has jumbled together the characteristics that careful breeders have been eliminating and establishing through long years of systematic selection and mating.

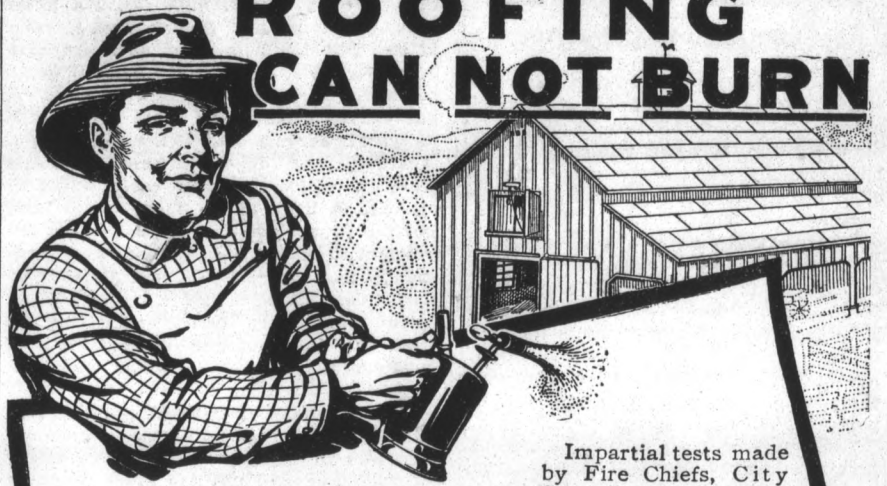
Nothing contributes more to the thrift and health of live stock than persistent attention to its needs. It is the steady, every-day care that counts. The animals that are comfortable, without hunger or thirst, from day to day, and not subjected to disease, maintain a healthy, steady advance in growth, flesh or milk production. Every period of hardship is followed by stagnation of nutritive processes and the possible loss of progress already made. Pure air, sunshine and outdoor exercise go to build up that superb vigor which immunizes animals against disease. Outdoor life subjects them to sunshine and compels them to exercise. It is well enough to assist nature in caring for stock, but it is wrong to set nature's ways aside and confine the animals in over-heated and poorly ventilated buildings, from which almost all of nature's curative and preventative influences are excluded. Extremes are to be avoided. It is not the extremely warm barn or the cold outdoors that is the most desirable place for healthy live stock. He should make the best use of the sun, air, grass and outdoor life in securing and maintaining the health of his farm stock.

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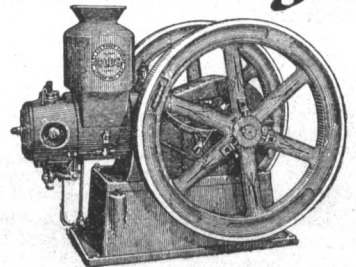
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CONDUCTED BY COLON C. LILLIE.

FEEDING DAIRY CALVES.

The following compilation of information given on the above important topic by Prof. Otis, of the Wisconsin Experiment Station, recently published in bulletin form, will find anxious and interested readers among the patrons of this department of The Farmer. We are indebted to the report of the experiment station work by the department of agriculture for the review. Mistakes in calf feeding are usually life-long influences. It is the desire of most feeders to intelligently eliminate all the mistakes he can. He purposes to reduce, so far as possible, the practice of feeding to a science. The review reads as follows:

Young calves need whole milk for the first few days. The calf should always have the first or colostrum milk of the cow and be allowed to nurse the cow until the eighth or ninth milking, when the milk is suitable for human food. Feed often with small amounts to avoid over-feeding. Teach the calf to drink and feed whole milk for at least three weeks, changing to a skim-milk diet gradually.

By good feed and care, or the lack of it, it is easy to make a variation of \$1 to \$5 or even \$10 per head in the value of the calf the first year.

Skim-milk is a cheap feed for calves but should be fed carefully in limited quantities and only while it is warm and sweet. Skim-milk may form the principal diet of the calf for eight months or a year. Factory skim-milk should always be pasteurized to avoid the spread of tuberculosis. The best skim-milk is that which is fresh from the separator and still warm. Experiments show that it is only one-fourth as expensive to raise a calf on skim-milk as whole milk. Two pounds grain with the proper amount of skim-milk equals one pound of butter-fat. Buttermilk or whey may profitably be fed to calves.

Milk that is too rich may cause serious trouble from scours, and in feeding such milk care should be exercised to give limited amounts at the proper temperature. The feeding of whole milk should be continued for about three or four weeks, when the number of meals may be reduced to two per day. From one-half to a pint of skim-milk may now be substituted for an equal amount of whole milk. The amount of skim-milk may be gradually increased and the amount of whole milk correspondingly decreased until, at the end of a week or ten days, the calf is getting all skim-milk. Feed the milk sweet and at blood temperature.

Not over 10 to 12 pounds of milk daily should be fed until the calf is five to seven weeks old. Later the amount may be increased to 14 or 16 pounds and at three months may, though not always, go to about 20 pounds. The amount fed, however, must be carefully regulated by the ability of the calf to handle it without scouring.

The grain for calves should be fed first while the calf is quite small with a little bran to aid the calf in learning to eat. High-priced concentrates are unnecessary and give no better results than corn meal, oats and bran, ground barley, etc., when fed in proper combinations. At four to six weeks a calf has good teeth and can grind his own feed. A variety of feeds is advantageous and best results will usually be secured from mixtures.

The roughage for calves should first be fed at two or three weeks of age when the calf begins to eat grain. Good clean hay, either timothy, blue grass, clover, or alfalfa may be used. Corn silage is an excellent calf feed when fed in moderate amounts. Good pasture is an essential after four to six months of age, and if the calf is turned out for only a few hours each day at first scours will be avoided.

Whey has the casein as well as the butter-fat removed and hence is a much less valuable feed than skim-milk; a good grain ration must be carefully selected as a supplementary feed. The calf to be fed on whey should receive whole milk for the first week or two; it can then be changed to skim-milk. If this is not available it should be continued on whole milk. A calf will do better not to receive whey for five to six weeks. It will take ten days to two weeks more to complete the change to whey. Calves will handle about the same amount of whey as skim-milk, viz., 14 to 16 pounds daily per calf. An excessive amount may cause undue

largeness of the paunch. The feeder will need to give more care and attention to calves fed on whey than to those fed on milk.

Calves, like other farm animals, get thirsty, even though milk forms a large part of their ration. Calves three months of age will drink as much as five quarts of water daily per head. They like to drink often, sipping a little at a time. A half barrel, cleaned and replenished twice daily, will serve nicely as a water trough. Another good device is an automatic waterer, which may be easily cleaned, situated a little above the floor to keep out the litter. Salt is essential to the development of the calf, as of other animals, and should be kept continually available.

The management of the calf during the first year has much to do with its later usefulness. Plenty of water and salt should be given in clean vessels. Avoid sudden changes of diet and practice regularity in feeding. Provide warm, dry quarters in damp weather. Give plenty of roughage and not too much grain so as to develop a large capacity for handling food as is desirable in dairy animals. When the calf is six months to a year old milk may be omitted from its ration and a full roughage and grain diet substituted.

When the skim-milk diet is stopped at any time from six to 12 months of age, it should be remembered that the calf is deprived of a nitrogenous feed and its place should be taken by some nitrogenous grain or roughage. The tendency of the dairy calf to get too fat depends not only upon its temperament but also upon its feed. Avoid too much corn. For grain, oats and barley are good; for roughage, bright clover or alfalfa hay with corn silage to give succulence and variety.

Size depends much upon heredity but even more upon liberal and judicious feeding. It is impossible to starve good dairy qualities into a growing heifer but many a promising heifer has been starved into a poor cow.

The intelligence that the herdsman puts into his calf feeding will have a great influence upon the future cow. There are great possibilities in the production of good cows but these are seldom if ever seen, appreciated, or attained except by an intelligent, thoughtful feeder. The earmarks of an intelligent feeder are seen in his herd. The calves are thrifty, active, with bright eyes, smooth, glossy coats, always hungry, and playful and lusty.

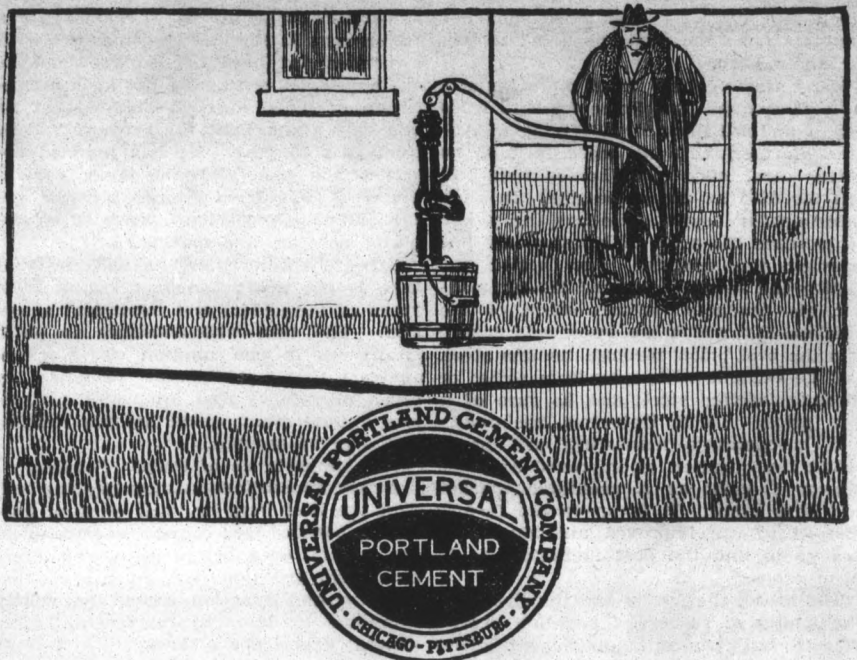
PASTURE ON THE DAIRY FARM.

The pasture problem is growing more serious with the American dairy farmer. Its abundance formerly made it a matter that required no attention. Now considerable thought is being given it, and on many farms more notice is required since the pasture lots are not giving proper returns. To grow a luxuriant, palatable fodder demands certain requirements, among which fertility, drainage and proper seeding are highly important.

And first, fertilizers. We are not in the habit of fertilizing our pastures. The other crops appear to respond better than the pasture lots as we can see the gain at the basket. The fact that we fail to note the effect of manure and commercial fertilizers upon pasture growth, does not prove its ineffectiveness because the animals often take care of the additional growth, which secretly comes back to the farmer in the milk pail in the form of an indirect award for his thoughtfulness. Manures and commercial fertilizers improve the grasses. The plant food usually needed most is nitrogen, since the vegetative parts of the grass are what is desired. But the other elements, potash and phosphoric acid are required to a certain degree.

Drainage would save large unproductive areas in many pasture lots and make them the most valuable parts. The largest yield of pasture is almost invariably grown upon the lowest well-drained places since they are richest in fertility. Drainage often changes the character of grass, displacing a poor variety with one that produces better feed. It also prolongs the season of pasturage, and enables one to get animals on for a longer period without damaging the soil by trampling.

Seeding thin spots is another matter that should take the attention of the dairy farmer who desires to get from his land a greater amount of pasturage, since every foot of the lot should be doing its part to furnish the maximum of growth. Do not allow large areas to go long without seeding.



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A SILO INSIDE OF BARN.

We are planning on building a silo in our barn. The building is 28x104 feet. As we have a track running through the center of the barn from end to end, we could not have the silo located within eight feet of the track. We had planned also, on building this silo square. It would be easier to construct. It seems that the feeding proposition would be made more convenient by locating the silo as suggested than by having it out doors. What criticism would you make of such an arrangement?

Calhoun Co.

W. B. T.

Under no consideration would I build this silo in the barn as proposed by W. H. T. With a blower elevator one must set the ensilage cutter up close to the silo because the blower conductor, or pipe, wants to be as nearly straight up and down as possible to get it. If it leans very much, it will not elevate the ensilage because the friction of the pipe is so great. If this silo is built in a 28-foot barn, you would have to set the cutter out doors and that would mean the use of an old-fashioned carrier elevator, which would not be practicable. Or else, if you set the ensilage cutter in the barn, it would take up an immense amount of room. While you would have room to set the ensilage cutter in the barn, you would lack room to drive through the green corn when filling it. My experience and observation is, that a silo should be out of doors, outside of the barn, not connected with it only by an ensilage chute. It makes no difference what the shape of the barn is, I would put it outside of the barn, as handy as possible to the feeding alley.

There is only one kind of a barn where an inside silo is permissible and that is a very large circular barn, where the silo is in the center of it. But if I was to build a circular barn, I wouldn't have a silo inside of it, but I would have it outside. I have seen these large circular barns with a silo in the center of them, but I don't want the ordinary help available when filling silos driving through a barn with ensilage corn. The driving not only takes up too much space in a barn, but it is sure to jamb the doors and the siding of the barn.

Then, what is to be gained by having a silo inside the barn? I never saw a farm yet with too much barn space. Scarcely any of us has enough barn space to store everything inside, straw and all, every year. A silo can be out of doors just as well as indoors. The outside of a silo will last just as long as the inside.

Then again, I would not build a silo with square corners. The only proper shape for a silo is circular. You don't want sharp corners in a silo, if you do, you will not get good ensilage there. You can't pack it well enough so that the ensilage will be as good. The circular silo has the greater strength, is more easily constructed and is better in every way. No good and sufficient reason can be given for having a silo any other shape than circular.

My advice is, to think this matter over carefully, and if necessary, visit barns where silos have been put on the inside, including circular barns with silos on the inside before you make the mistake of building the silo as you intend. The material you propose to use would be entirely proper for a circular silo out of doors and there is where I should build it. I would build it not less than 12 or 15 feet in diameter and I would build it more than 28 feet high. Build it 40 feet high anyway and 50 feet would be better. If you don't want to use as much ensilage as that now, you will later on, and it will not cost you very much more to build 50 feet high when you are building it. The silo which you propose to build, being 7x11 feet and 26 feet deep, would only hold about 40 or 45 tons of ensilage. Four or five acres of good corn would fill

it and I would advise you to build a larger silo because you will certainly need it.

A NEW ONE.

A law on the statute books of Pennsylvania prohibits the sale of oleomargarine that resembles yellow butter in color, whether the color is obtained by using an artificial coloring matter or by selecting certain ingredients for the product.

At a recent trial of an oleomargarine dealer in that state, one of the arguments (?) used by the oleomargarine people was that "A law which requires that oleomargarine that has the color of butter—without the addition of artificial coloring material—must be bleached before it can be sold is ridiculous."

Isn't that a good one? After spending thousands of dollars in learning how to secure a yellow color in oleomargarine without the use of coloring matter so as to avoid the federal internal revenue tax of ten cents per pound, such a claim is really amusing. Probably their next claim will be that it is absolutely impossible to make oleomargarine that does not have a golden yellow color.

Such claims are not made, however, to influence thinking people. They are made for the purpose of obtaining temporary results and to prejudice the minds of the consumers of the country against the present oleomargarine law.

The National Dairy Union is spreading the truth among these same consumers and the misstatements of the oleomargarine interests are becoming less effective as time elapses. Dairymen can, therefore, well afford to be patient and wait until congress is ready to take hold of this question in earnest and draw a real color line between the genuine and the substitute.

DAIRY NOTES.

Dairy goods are selling at lower prices than usual because of their liberal production throughout the country, butter being in large supply in the cold storage warehouses everywhere, while fresh lots are being marketed in extremely large amounts. The best creamery butter has been wholesaling at 21c per pound in the Chicago market. Eggs, however, have suffered the greatest decline in prices, being from seven to ten cents per dozen lower in the Chicago wholesale market than a year ago, and their cheapness has brought out a good demand for eggs to place in cold storage, buyers believing that there can be no great risk in purchasing strictly fresh lots at ruling figures.

The condition of the butter market is far from encouraging. While feed is cheaper than for some time back, the reduction in the cost of raw material does not keep in the farmer's pocket the amount he loses through lower prices for butter and cream. The basis of prices is just ten cents below what it was a year ago. It is probable that a number of factors have entered to give this result: It is generally believed that every section devoted to the production of milk and dairy products has materially increased the number of cows. The practice of freshening the cows in fall instead of spring, thus using the silo instead of the pasture, has increased to an extent that the market is being disturbed, according to some thinkers. The cold storage men misjudged the situation and put in more than conditions warranted last season thus working to the detriment of the market this spring, is another belief. The change of the tariff schedule on the importation of cream from five cents per pound to five cents per gallon as provided by the Payne-Aldrich tariff law has allowed large quantities of cream to come in from Canada and thus pushing our prices down because of the increased supply; this is a reason advanced by many. It is possible that all of these factors mentioned and others have worked for the downward movement of butter prices. Nevertheless the dairyman suffers.

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HORTICULTURE

GARDEN SUGGESTIONS.

Care of the Hotbeds.

From this time out, and especially as the weather grows warmer the growing plants require careful attention. A few hours of sun will often work much damage unless abundance of air is allowed and judgment which is only gained by experience must be our guide. In airing the beds the sash should be raised from the windward side so that while free circulation is gained the plants should not be exposed to heavy drafts of cold air.

Watering should not be neglected for evaporation goes on very rapidly and unless this loss is compensated the growth will not be satisfactory. Tomatoes require more moisture than almost any other plants and seem to thrive even when the ground is too wet for some other sorts. All things considered, evening is the best time for this work and it is a good plan to allow the water to stand exposed to the sun and air for some time previous to using. Frequent stirring of the soil is important as crusting must be prevented and the most convenient tool for this is the old-fashioned steel table fork, one with four tines is best, and it is a convenience to fasten a handle of any desired length on the fork handle. It will do better work than any special tool that I have ever seen on the market and can be worked very close to the plants without injury.

Transplanting should be done whenever the plants begin to crowd, but they, of course, should be well established before the work is done. Tomatoes should be reset when the second set of leaves are formed, and all plants should be shaded for a time afterward. The great object is, of course, to keep the plants thriving from first to last, and must be done for best results. So whatever can be done for their betterment is effort well spent.

Treatment of Seed Potatoes.

Observation convinces the writer that comparatively little is being done to check the drainage to the potato crop by the scab. We believe it entirely safe to say that millions of bushels of potatoes every year become entirely useless for market purposes or at best, will grade only as seconds through its ravages.

It is quite probable that the growing practice of liming the soil will encourage its spread as we are told that that will induce it. Be this as it may we need the lime on most soils and if, as is said, it really does induce the spread of the disease, the relief is not in discarding the lime but rather in more vigorously applying the remedy. As to this latter, the writer has no doubt but that the corrosive sublimate treatment will effectually control the disease, especially on ground clear, or at least, not badly infested. On clean ground I have never had any fear of using affected seed after treatment but in soils where the potato crop has succeeded itself and the disease is already there, to greater or less extent, then I believe that a liberal use of sulphur at planting time is also of very great use. Personally, I believe that with entirely clean seed the sulphur treatment is nearly always effectual, but the danger is that apparently clean seed is liable to carry the germs. So I believe that the double treatment is safest and will always give remunerative returns. The cost of the sublimate treatment is practically nothing other than the time required. The sulphur is but little expense and the time required in applying it amounts to nothing. So, in these days of the rapid spread of the disease and the very small expense of effectual treatment, it stands every grower in hand to make thorough use of the remedies.

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KIND OF SPRAYER.

Is a barrel sprayer of any use in spraying a ten-acre orchard if the trees are quite large?

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Yes, a barrel sprayer can be made of much use in an orchard, even where the trees are quite large. Mount the barrel on a high-wheeled wagon and build upon the wagon a derrick upon which a man, with a run of hose, stands to apply the spraying mixture to the top of the trees. With a good pump, a good man at the handle and a careful man holding the hose and nozzle the mixture can be well spread over the surface of the limbs and leaves. Of course, one must remember

that forcing the spray to the top of a large tree is more difficult than spraying potatoes. The mechanical problem entering makes this difference, for it is easier to pour a pail of water in a wood-chuck hole than throwing it on the roof of a house. By investing in a more expensive spraying outfit you would save much of the hard labor necessary with the barrel sprayer. If you have the money to so invest, it would pay you, no doubt, to do so, for one is more apt to neglect the spraying that should be done, if he has a hard time getting it on than he would were the work easier. Then, too, with the power sprayer he usually gets a higher pressure on the hose which results in a better distribution of the spray. But where one cannot afford to advance the money for the more costly outfit, but is rather in a position where labor can be better expended he will certainly find that the hours spent in applying spray to the orchard will be richer in results, one year taken with another, than the time put upon any other work on the farm, providing, of course, that his trees are otherwise in producing condition.

THE CULTIVATION OF BRUSSELS SPROUTS.

The soil for this vegetable requires to be rich, and it is essential that it be deeply worked in order that good results be obtained. Care should also be taken to procure a good strain of seed, there being many spurious stocks in the market. Brussels sprouts should on no account be planted among potatoes or other crops, as they thus become unduly weakened and do not give such full crops as when shown by themselves. The seeds should be sown thinly in beds of fine-dug, prepared soil and covered to the depth of about an inch with fine mould taken from the alleys. For the principal fall crop sow during the month of April or May. The young seedling plants will require protection from the depredation of birds, which will soon make sad havoc among them, if not prevented in time. A little finely sifted coal or wood ashes dusted over the bed on the first appearance of the young plants will be of great service in protecting the latter. As soon as the young plants are sufficiently strong enough to handle, they should be pricked into nursery beds, where they are to remain until strong enough for planting into their permanent quarters. Dark showery weather should be selected, if possible, for planting out, as plants put out in this sort of weather will root much quicker and require less labor in watering than those that are planted in dry, parching weather. In rich soils, where the plants grow tall, the main crop may be planted in rows of about two feet apart, and the plants 18 inches apart in the rows. The latest sowing may be planted two feet from row to row, and one foot apart in the row. The after cultivation consists in watering, stirring of the soil and keeping it clear of weeds. A little earth may be drawn to the stems, except when these are furnished with sprouts too low to admit of such being done. As the side leaves get old, or begin to fade away, they should be gradually removed, commencing with the lowest. Some cultivators cut off the head entirely when the sprouts are formed; this should not be done, as the leaves are very useful in sheltering the sprouts from the frost and snow. The cultivation of sprouts ought to be more extensively adopted, as any good garden soil is favorable for their growth. In poor ground manure may be given but its application in large quantities is not desirable, for it stimulates the plants into great luxuriance, and thus tends to make them produce larger and less compact sprouts.

Canada.

W. R. GILBERT.

SAWDUST NOT SATISFACTORY FOR STRAWBERRIES.

In regard to the question of A. R. K. as to the advisability of using sawdust for mulching strawberries I will say for his benefit that I experimented with sawdust several years ago and did not find it at all satisfactory. While this material may answer fairly well as a winter protection and moisture conserver, it is no good to keep berries clean. At least, it was our experience that the sawdust particles cling to the berries after rains, making a bad mess of it. Straw over the sawdust would, of course, protect the fruit but if one must use straw to protect the fruit, one might as well apply the straw at first.

M. N. EDGERTON.

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SETTING THE TREES.

In previous articles we have treated of orchard plans and methods of marking out the orchard. I now wish briefly to state our method of setting the trees.

We will presume that the orchard is staked out and that the planting board is to be used. This is set so that the center notch is about the stake and stakes are then set in the holes near each end of the board. If desired a number of holes may be staked out ahead so that the one digging need not bother with the staking. We save our stakes from year to year so as to have a good supply on hand.

The person digging the hole then begins at the proper distance from the center stake and digs entirely around it before removing the stake so there will be no danger of getting the hole more at one side of the stake than at the other. The surface soil down to the usual depth of plowing is put in a heap on one side and for year trees we like to have the hole dug so as to be 18 inches in diameter at the bottom and from 15 to 18 inches deep. Some of the lower soil may only be loosened but not removed.

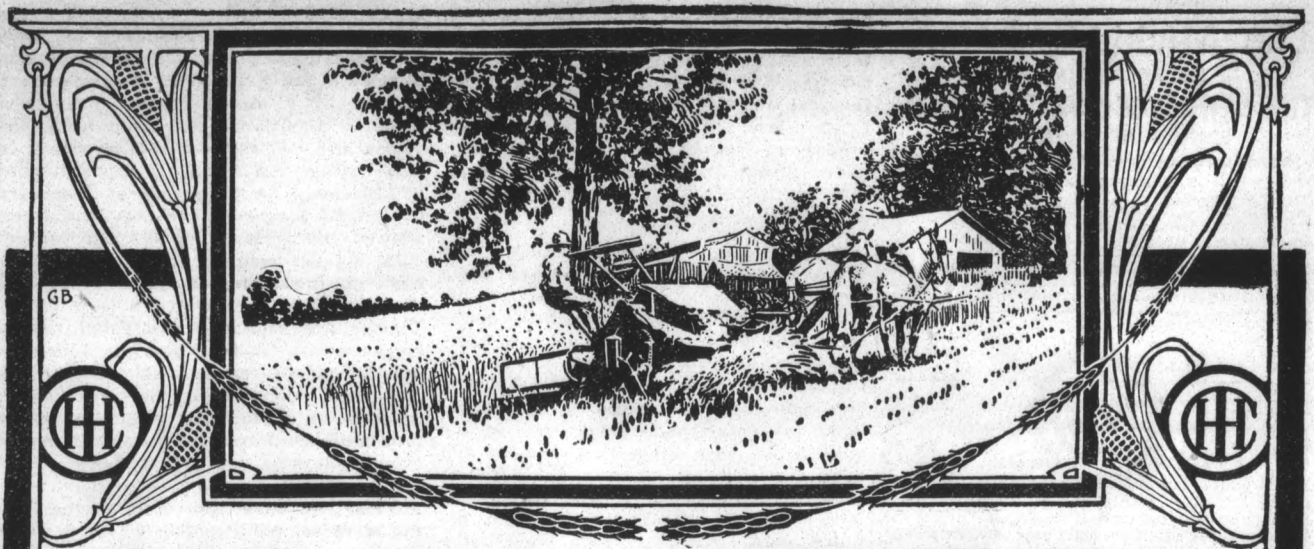
In setting the tree two are needed to do the work conveniently. One takes the tree and sets it in the hole to determine the depth needed for this particular tree so as to bring the graft a little below the ground ordinarily, or at least to set the tree a little deeper than it set in the nursery row. The shoveller now fills the hole with the surface soil to the proper depth to set the tree, while the second man adjusts the planting board over the stakes, and the tree is then set in the center notch of the planting board in such a way as to make the crook or lean of the tree to the southwest a little so the prevailing winds from this direction will tend to blow it straight rather than more slanting. The roots are straightened out so as to radiate as evenly as possible from the trunk, and surface soil is sifted in and worked and packed about the roots with one hand while the tree is held in position with the other. When the soil has been packed firmly about the roots and the tree is located in place the planting board is removed and the filling progresses, using the surface soil first and the subsoil last. One man continues to tramp the soil about the tree with the feet, as a thorough packing of the soil so it will hold the moisture is the secret of successful tree planting. As the filling progresses the tree is given the proper slight angle to the southwest. If the slant or alignment is not correct when set the tree may be moved slightly by stamping hard on the soil opposite to the direction it is wished to incline it. It is best to scatter a layer of loose soil over the top to prevent rapid evaporation. Cultivation or mulching should follow soon, also pruning. If the tree can not be shaped and the scaffold branches selected this season the tree may be pruned quite closely and the top started the following spring. This is generally true of the peach anyway as it does fully as well with the top removed, that is, pruned to a whip. One-year apple trees can be cut back to about 2½ or 3 feet, and the head formed the next season.

We usually remove the trees from the place where they are headed in, and trim the roots, taking out bruised and broken ones, and any crown gall that may be present, and making a fresh cut at the end of the larger roots, usually so the cut surface will be down. Extra long roots may be cut back rather than bent in the hole. The trees are then set in barrels of water on a low-down wagon, each bearing its proper label, and the wagon drawn along as needed. The trees are taken from the barrels and scattered along in the holes as set, taking care not to scatter many trees ahead.

This may not be the best way of setting trees, but we have found it as convenient as any we have tried, and we have had good success in setting them. Last year only two apple trees out of 900 failed to live. We have never used water in setting as I do not think it necessary if care is taken to firm the soil well and it is reasonably moist.

Calhoun Co. S. B. HARTMAN.

Young celery and tomato plants, (just transplanted), should be protected from hard rains by covering with boards resting on blocks or stones to raise them above the plants. Many plants are destroyed by a beating rain falling just after they are transplanted. We find those covered to be in much better condition than any left to the full effect of a down-pour.



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DETROIT, APRIL 22, 1911.

CURRENT COMMENT.

First read the letter written **Do It Now.** by Mr. M. J. Lawrence to President Taft, published on this page, giving his views of the Canadian reciprocity agreement and some of the reasons why it should not be ratified by congress. In that letter Mr. Lawrence states his position clearly and concisely. He has been in Washington devoting a great deal of time and energy to this proposition during recent weeks, and states in a recent letter that he is much encouraged at the present outlook and believes that if farmers will get busy at once and write their congressmen and senators in opposition to this agreement, its approval by congress may yet be averted. But if our readers would bring any further effective influence to bear in this matter they must do it now! A great many members of congress are wavering in their attitude on this great question which is dividing the country. It will take a great deal of pressure to make some of them see that it will be so injurious to the farmers as to be bad for the country at large, and some are divided in their allegiance to an urban population who erroneously think the cost of living will be greatly decreased by the adoption of this agreement, and a rural population who are unanimous in the well founded opinion that their business will be injured by it in an unwarrantable and unjust manner. Undoubtedly the bill embodying the terms of the agreement will be passed by the house, the controlling faction in which is pledged to it, but the less the majority which it receives, the less will be its prestige in the senate, and senators from any state from which all congressmen having a rural constituency are opposed to it will hesitate longer before favoring it. For this reason every reader should write his congressman at once, unless he has positive assurance from him that he will be opposed to the bill. But it is still more important that he should write both United States senators, telling them courteously but convincingly the writer's attitude upon this proposition which so vitally affects the welfare of the farmers of the country and particularly of the border states like Michigan. If every reader will act upon this suggestion at once we believe their protests will be effective. If these gentlemen receive thousands of letters from their rural constituents protesting

against the passage of this bill just on the eve of its consideration by the senate, they will undoubtedly give serious consideration to these communications. To this end we urge every one of our readers to get busy. Write the congressman from your district, also Senators William Alden Smith and Charles E. Townsend, at Washington, D. C., without further delay. Do it now!

The condition of the

The Wool Situation. wool market is a source of not a little disappointment to sheep owners the country over. There is a single grain of comfort in the outlook, and that is in the feeling that the market has touched the bottom. However, there is no telling what the future may bring forth in the wool trade, with congress in session and with the revision of the wool schedule under consideration by the democratic leaders who are now in control in the house. Recent advices from Washington state that a bill providing for the revision of schedule K of the tariff law, which deals with wool and woolen goods, is now being prepared by the majority members of the ways and means committee of the house and will be reported out at an early date. Just what the provisions of this bill will be is impossible to state at this time, but it is said on good authority that it will place all duties of this class of imports on an ad valorem basis, with considerable reductions on both wool and woolens.

After the tariff board was created by congress in response to the recommendation of President Taft, that body was directed to devote its attention to an investigation of present conditions in the wool and woolen goods trade, and it was the general understanding that the President would make some recommendation based on their report for the revision of schedule K. But with the reversal of the political complexion of the house and the assembling of congress in special session, it is now declared to be certain that congress will not wait for the report of the tariff board as desired by the President, but will attempt to revise this schedule at once. This apparent certainty has had the unavoidable effect of paralyzing the wool trade right at the season when the new clip was ready to market, and such movements as have occurred have been consummated only through the making of ample allowance for anything that congress might do in this connection. At the present time our market is only slightly above the foreign market, notwithstanding the 11-cent duty which affords needed protection to our wool growers under normal conditions, dealers and manufacturers naturally being averse to loading up with wool while the future is so uncertain in this regard.

As above noted it is only a guess what congress may do in the consideration of this matter. The most general guess is, however, that little will be done at this session in the way of actual legislation. The situation is a most complicated one. The democratic leaders of the house are not agreed as to the extent of the reductions which should be made or as to the classifications or grades of wool to which they should be applied. Other differences also exist which will require compromises to be made, and in order to formulate a bill which will pass the senate the aid of the "insurgent" senators, so called, must be enlisted, which would require further compromises. When all these factors are considered it is believed by close students of the situation that if any agreement for the revision of schedule K is reached by congress at the present session, the duty on wool will not be reduced below the equivalent of seven or eight cents per pound, in which case there would probably be some improvement in market conditions. However, this is only a guess, and not a very helpful one to the wool grower who is trying to decide whether it is better to hold his clip for an improvement in the market or sell it and take the loss which is the present result of the agitation for the lowering of the tariff. Positive conclusions, however, are practically impossible, and the best the grower can do is to make a guess and abide by the result.

Among the notices of

Scope of the Food and Drugs Act. prosecutions for the violation of the pure food and drugs act of 1906, sent out by the Department of Agriculture in compliance with the conditions of the law, are some that show the wide scope of this law and the beneficial results of its general application. Among documents of this kind recently received is one giving

notice of a judgment rendered for the adulteration and misbranding of oats. The case upon which this judgment was based was the shipment of a consignment of oats by a Missouri grain firm to a point in Louisiana, the same being invoiced and sold as "No. 3 white oats." An examination of a sample of this shipment of oats, made by the Bureau of Chemistry of the U. S. Department of Agriculture showed the presence of 73.6 per cent of oats, 8.4 per cent of barley and 18 per cent of miscellaneous weed seeds and chaff.

After affording the interested parties opportunities for hearings, the Secretary of Agriculture reported the fact to the Attorney-General with the usual statement of evidence upon which to base a prosecution. Pursuant to the filing of criminal information in the United States District Court for the Eastern District of Missouri, in which the facts of the finding were set forth and in which the allegation was made that the goods were misbranded within the meaning of the law and were "an article, to wit, 'No. 3 white oats,'" the defendant entered a plea of guilty to the information, and the court imposed the fine prescribed by law, together with costs.

Other reports of judgments made public at the same time, two other cases were included where the same firm plead guilty to similar information. In one of these cases the proportion of oats found in the sample was 70.4 per cent and in the other 68.4 per cent. In a similar case against a Tennessee firm judgment was rendered on like information where the sample was 85 per cent oats. Several cases were also reported in which judgment had been rendered for the misbranding of cottonseed meal, in which the analysis did not come up to the guarantee.

The object in calling these cases to the reader's attention at this time is to illustrate the scope of this law, and the broad application which is given it by the federal courts.

THE RECIPROCITY AGREEMENT.

Our Mr. M. J. Lawrence has been hard at work in Washington for the past two weeks with senators, congressmen and the President to bring about the defeat of this agreement. At the request of the President, Mr. Lawrence wrote him the following letter on the subject:

My Dear Mr. President:—
 Your authorized note by Mr. Hilles of 11th, asks me to write more in detail my objections to the Canadian reciprocity agreement.

You will concede, I think, that the expected result of this agreement will be the reducing of the so-called "high cost of living." I think, if consummated, it will accomplish this to a slight degree, but entirely at the expense of our farmers with absolutely nothing to compensate them. So far as our farmers are concerned the word "reciprocity" is a misnomer.

The agriculturists of this country created the original wealth that made possible the origin of all other industries. They have for many years contentedly contributed their full share, by paying the high protective duties on all they had to buy, to the upbuilding and developing of all the great manufacturing and all other important industrial achievements that give high-paid employment to many millions of laborers, who are consumers, thus creating by far the largest and best markets for farm products of the world. These markets by right belong to the American farmer and it is robbery to take them from him or lessen their value to him without giving adequate returns therefor. This agreement proposes to open these great markets of 92,000,000 of people, 65 per cent of whom are consumers and non-producers of agricultural products—in return for opening the markets of only 7,500,000 people, 65 per cent of whom are producers of agricultural products.

But what is of most vital importance is the great advantage the Canadian farmer has in the way of much greater area of rich virgin soil, at much lower prices than American farm lands, cheaper labor and cheaper modes of living. Every one knows that the proposed reductions on articles that the farmer buys is simply a fallacy, as the duties retained are in every case abundant to protect our manufacturers and meat packers from Canadian competition. The reduced duties will not reduce the cost of a single article that the farmer buys to the amount of one cent.

The removal of Canadian duty on cottonseed oil will not increase its sale there, as there is no competition in Canada nor any other country for this product. The free entry of fruits into Canada is the one and only item that has a semblance of reciprocity for the farmer and this will apply almost wholly to citrus fruits from California and Florida, from where they are now buying almost their entire supply.

The Canadian surplus of agricultural products is 50 to 55 per cent while ours is 5 to 7 per cent. Is there any justice in opening our markets, on equal terms, to Canada under these conditions, when they can ship to them, in most cases, cheaper

than our producers can? It is a well established fact that the agriculturists of Canada have worked hard and persistently for this agreement for 50 years past and are now rejoicing in expectation of very material benefits from it, advance in prices of their products and increase in value of their lands, all of which must be paid for out of the pockets of the American farmer. A great claim has been made for American corn admitted free into Canada. Canada produced over 25,000,000 bushels of good corn last year and it is reasonable to expect that if this agreement is in effect five years they will produce more corn per capita than we will at that time. There is no good reason to expect that removal of Canadian duty on our corn will increase their consumption of it to any appreciable extent.

The Canadian live stock feeders produce some of the finest finished beef cattle and mutton of this continent and they are liberal winners of prizes every year at the fat stock shows at Chicago. The American meat trusts can buy beef cattle and sheep from Canada free of duty, but all fresh and cured meats and even cured and dried meats and fish retain a sufficient protective duty. To talk about our stockmen buying feeders from Canada is another fallacy, for this class of stock is as high in price there as here and if there was anything really practical in this claim it would be simply another robbery of our live stock breeders of Texas, Colorado, Montana and Wyoming who raise no corn and have their capital invested in abundant facilities for producing all the live stock feeders for the requirements.

All kinds of grain are free but all kinds of flour and cereals are sufficiently protected. Timber and rough woods are free but all kinds of finished lumber, shingles and lath, are sufficiently protected. In fact, every article in the form that the farmer has to buy is subject to sufficient protection to fully maintain present prices. I repeat that the reduction of duties on Canadian finished products will not in a single case admit them as competitors with the manufacturers, millers and packers of this country. I am and have been for many years in favor of a just and liberal reciprocity agreement with Canada, but I am most bitterly opposed to legislation that robs the very best industrial class of our country, to benefit a similar class of a foreign country.

I could cite very many more equally strong arguments in objection to this agreement but will desist with the statement that the great mass of statistics that have been promulgated by the advocates of this measure are in many cases misleading as to practical facts. I have carefully analyzed every claim of its friends and can find nothing to justify it from the American farmer's standpoint. With the wonderful prospective development of Canadian agriculture, this treaty agreement will, in my judgment, in a very few years produce the following results:

First, a material decrease in the value of farm land in the United States.

Second, a corresponding increase of the value of farm lands in Canada.

Third, a very important change in the balance of trade between the two countries in favor of Canada.

Fourth, a great and damaging increase of immigration of young farmers from this country to Canada, which to my mind is the most serious and lamentable of the four results.

With much respect I am,

Very truly yours,

M. J. LAWRENCE.

Washington, D. C.

April 13, 1911.

It is indeed a strange phenomenon in national politics to see a republican president, ostensibly the head of a protective tariff party, enthusiastically building and using all of his administrative powers and seeking the aid of democratic members of congress to make permanent, a progressive stepping stone for the free trade element of the democratic party.

HAPPENINGS OF THE WEEK.

National.

Pontiac begins government under commission plan.

Colonel Roosevelt has returned to Oyster Bay from his western speechmaking tour.

Experiments with kite-shaped aeroplanes go to prove that aeroplanes can be warded off during sieges and field engagements between forces whenever the air craft comes within reach of guns. These experiments show that by the use of rapid firing guns but a moment's work will put out of commission the machinery and vital mechanical parts of the aeroplane.

Representatives of jurisdictions along the Mississippi Valley and adjacent territory are urging upon congress the lakes-to-the-gulf deep waterway, and it appears that the question threatening the defeat of the measure is to what extent such a water course would lower the water level in the Great Lakes, since a few inches below the present level would reduce the carrying capacity of the steamers over the lime kiln crossing in Detroit river and thereby greatly affect shipping interests via the present route.

The Canadian Parliament re-assembles on Wednesday. The important measure for consideration is the trade agreement with the United States. The expectation is that the measure will be immediately passed, since the government is backed by a majority of 40.

The Calhoun county board of supervisors adopted a resolution declaring the recent vote taken upon the local option question to be favorable to the "drys" in that the votes for returning to the wet column did not amount to half of the

number of votes cast providing blank votes upon which no markings showed were counted as votes. In Jackson county the board of supervisors referred the matter to a judicial body for inquiry.

Adrian C. Joss, former pitcher of the Cleveland American team, died after a lingering illness and was buried in Toledo Monday. He was considered one of the few most effective pitchers in base ball, and his untimely death will be a decided loss to the Naps and to the base ball world in general.

It is estimated that 45,000 United States farmers have already engaged transportation for moving to Western Canada, the value of their effects amounting to \$15,000,000.

Foreign.

The approach of coronation week in London finds accommodations inadequate to house and feed the prospective visitors on that occasion.

A collision between balloons at Berlin, Germany, resulted in the car of one of the air craft being overturned, throwing the occupants to the ground, all of whom were seriously hurt and are not expected to recover.

Mormon missionaries who are working in England were attacked at Birkenhead by a mob, who demanded the strangers to leave the place. It was with much difficulty that the police restored order. An anti-Mormon campaign has started in the British Isles because of the large number of followers, especially girls who are being sent by the missionaries to this country.

A report to the French Academy of Medicine of the cancer victims in Europe showed the prevalence of this disease to be confined largely to the cold, damp countries of the north, the percentage of persons affected in northern Europe being from three to four times as large as along the Mediterranean.

American Ambassador Reid is collecting for the government at Washington resolutions from borough and city councils of the United Kingdom, favoring the suggestion of President Taft providing for a complete Anglo-American arbitration treaty.

The Canadian parliament at Ottawa has introduced the race problem by questioning whether that country ought not to bar negroes from immigrating to Canada and taking up homesteads. During the past few years the number coming in from the states have been rapidly increasing and it is feared that should the increase continue that Canada will soon have a race question to handle.

The complicated situation developing from the revolution in Mexico may draw this country into another conflict with the Mexicans. The attack upon Juarez, Monday, by 2,500 rebels who kept up firing most of that day, and whose bullets reached the town of Douglas near by and wounded several American citizens, has placed the administration in Washington in an undesirable situation, since the sending of American troops across the border would mean the endangering of lives of the hundreds of American citizens who are in Mexico, would nullify the years of work done in diplomatic circles to bring the two countries into harmonious relations, and would undoubtedly incur this country into a war that would drag out into months and perhaps years. President Taft appears to have exhausted the resources of the executive power, except the declaring of war, and is now leaving the matter to congress to decide what should be done for the protection of American citizens and American interests. Communications sent the government of Mexico have not been answered. In the battle Monday it is reported that from 100 to 200 federals were killed and from 20 to 50 rebels. After 17 hours of fighting the rebels held their positions at all points about the city. The battle is the largest during the present conflict, and undoubtedly will be renewed, since Juarez is an important point to hold, as in the federal hands it prevents the rebels from having free communication with this country.

Rebels are surrounding Fez, Morocco, and France and Spain are hurrying troops across the Mediterranean to protect their interests in the troubled African country. The Sultan of Morocco is being opposed by many of the tribes who formerly stood by him and it seems that chances for overcoming them are few.

CROP AND MARKET NOTES.

Genesee Co., April 1.—Weather cold and backward for past two weeks. No oats sowed yet. Last year the crop was about all in the ground at this date. Hay about all sold. Potatoes at 35¢/40¢ still in the farmer's hands to a great extent. Wool market not yet opened but prospects are that prices will be low. Hired help very scarce at \$24/26 per month and board. Live stock wintered well. Common sows sell at \$55/60. Horses very high, from \$200 apiece up for good ones. Wheat on the ground has suffered from drought since March 1st until some rain and snow fell the past week. Meadows in same condition. Wheat is bringing 80¢; oats, 30¢; corn, 47¢; dairy butter, 24¢; creamery, 27¢; eggs, 16¢; live chickens, 13¢; dressed hogs, 8¢; dressed beef, 6¢/8¢; veal 9¢; mutton, 6¢; lambs, 10¢.

Mecosta Co., April 3.—April came in more like March than April. Snow on the ground and quite cold. Quite windy today but appearances indicate better weather just ahead. Hay seems fairly plentiful and is selling at from \$10/13 per ton. Corn the same and selling at 25¢/30¢ per bu. Fodder is quite scarce and sells at from \$2.75/3 per 100 bundles. Live stock wintered well. Cows are not selling like they did a year ago. Hogs are worth 8¢ live weight. Horses were selling at about the same prices as last season until about a week ago, when they took a drop. Butter-fat has dropped so low that now, since the creameries are

grading it, many of the farmers are either going to make butter or sell their cows. Eggs are cheaper than they have been for years. Butter-fat, first grade, is worth 19¢; eggs, 13¢; potatoes, 46¢ today, the best they have been this season. They are mostly all out of this section.

Washtenaw Co., April 3.—The weather for the past month has been more favorable for the industry of maple syrup and sugar making than for the wheat and meadow fields. The constant freezing and thawing is having a bad effect. Clover in clay and wheat ground is already badly heaved and indications are that such crops are injured 25 per cent. No work on the ground has been possible as yet. Live stock has wintered well. A very unusual number of auctions and farm changes, and an extremely large sale of silos has taken place; probably 40 or 50 of the latter will be erected in this vicinity. Prices of commodities working nominal rise of 10¢ per bushel. Creamery lower except potatoes, which had a phe-butter lower than in many years, 22¢; eggs, 13¢. Farmers alarmed at the sudden change of outlook.

Lapeer Co., April 8.—The prevailing winds are northerly so far in April. Hard freezes nights and thawing partially through the day. Good weather for maple sugar making but not good for the wheat crop on the ground. Clover, new seeding, intended for meadows this year is in many cases killed out badly, and we apprehend that the hay crop for the season ahead will bring large prices next fall. Horses and milch cows bring good prices and eggs and butter begin to boost in price. Ground too soft now for hauling out manure and plowing. The price for lambs is a surprise, being much better than looked for. We do not look for a \$3 price for spring pigs this spring.

Wayne Co., April 5.—The weather has been very open through March, freezing and thawing nearly every day, and snowing a little nearly every day. April beginning with wet cloudy weather. Very little plowing done yet. Lots of manure being drawn out. The wheat in general looking bad, being frozen by the cold winds, especially where sown late. Clover badly heaved. Wheat, 80¢; corn, 50¢; oats, 30¢; potatoes, 35¢; butter, 22¢ per lb; eggs, 13¢ per dozen.

Montgomery Co., April 10.—March and the fore part of April have been changeable, with rain or snow every few days, and quite cold weather part of the month. Considerable plowing done. No oats sowed as yet. Wheat and clover looking fine. Tobacco mostly all sold. Wheat, 85¢; oats, 28¢; potatoes, 50¢; butter, 22¢; eggs, 14¢; cattle, 4¢/5¢; hogs, 6¢/4¢.

Hardin Co., April 13.—The weather for the past two weeks has been rather wet for farm operations; good time for cleaning seed oats and doing odd jobs about the farm. Some are having bad success with their spring pigs. Quite a large acreage already plowed; some oats have been sowed for the past four weeks and not up yet. The grass is just starting nicely. The oats on the low ground where there is no tile are rotting and will have to be sown again. Fresh cows in good demand. Fat hogs, 6¢/c; chickens, 10¢; eggs, 14¢; butter, 20¢.

Wisconsin. Ashland Co., April 1.—March has been a very mild month for this section of the country and snow is all gone except a little in the woods. Most of the loggers cleaned up their contracts and very little cut timber remains in the woods. The farmers are preparing for spring work by hauling out manure, cleaning and repairing fences and as soon as the frost is out of the ground plowing will commence. Ground is very dry and is taking up all the moisture from the snow, very little running away. Hay is a little lower, now only \$18; oats, 50¢; potatoes, 40¢; eggs, 20¢; cows are very scarce and are in great demand, bringing \$50 and higher. Horses are selling for \$350/600, according to weight, per span.

Indiana. Laporte Co., April 8.—April so far has been cold, wet and freezing almost every night. Snowing most of last week; good for wheat and fruit but will be late sowing oats. Very few have started to plow. Stock is in fair shape and cows are milking fairly well yet shrink if exposed to the keen cold wind. We hope to have a fruit crop this year. Roads fair but autos have driven the horse from the road for pleasure. Grass is only a trifle green but rye is good pasture. A good season for hauling manure.

Clinton Co., April 8.—The last two weeks have been unfavorable for the seeding of oats. All that is needed now is warmer weather as farmers have their work well in hand. Now is the farrowing time for pigs, but on account of the cold weather, expect a good many will be lost. Hay is selling at \$10 per ton for clover. Some cattle on feed and looking well. Wheat is looking exceptionally fine, especially that which has been fertilized. Horses are very scarce and high. Not many gardens planted here yet, at this date. Potatoes for seed are selling around a dollar. Hog prices have taken a decided drop. Now selling around \$6.75; wheat, 79¢; oats, 29¢; corn, 35¢; butter, 23¢; eggs, 13¢. Outlook for fruit is good.

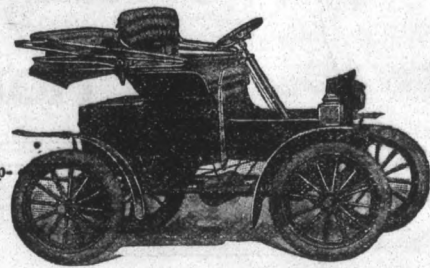
BOOK NOTICES.

Report of Country Life Commission. Since ex-President Roosevelt approved the work done by the country life commission there has been a great demand for copies of the report. Congress had copies printed, for its own purposes, but did not provide for furnishing the public. This copy is very readable because of the large clear type and will make a valuable addition to the farmer's library, as it touches upon vital questions of rural life on which the farmer should be well informed. 150 pages, cloth. Price, 75 cents. Sturgis & Walton, New York.

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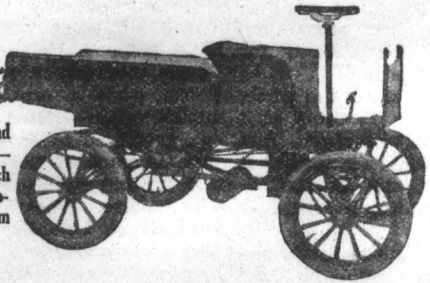
This Car is characterized by greater simplicity, efficiency, economy and increased desirability than has ever been embodied in any runabout. ECONOMY IS A FEATURE of this remarkable car. There is no other Car that you pay so little for and get so great a return. The expense for up-keeping is practically eliminated, owing to the simplicity of mechanism and construction. The HARDA parts are so simple that they can be easily cared for by local mechanics.

Remember, when you think of the HARDA, think of ECONOMY AND SIMPLICITY, for this splendid Car was built with these exceptionally desirable points as dominant features. The transmission is improved planetary type with brake; also foot brake on rear axle, making the speeds forward and reverse as nearly automatic as is possible for any mechanism actuated by human will. Added to these highly desirable features is the important fact that this model easily gives from four to thirty miles an hour on high gear.

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FARMS AND FARM LANDS FOR SALE OR EXCHANGE

FOR SALE.—574 acres, good grain and stock farm, partly improved. \$8 per acre. Owner D. S. WALTER, Terry, Montana. This ad. will not appear again.

Homesteads—Berthold Indian Reservation will open for settlement this summer. A complete map of Mountrail County including Reservation can be purchased for 25¢ from E. P. Gibb, Stanley, N. D.

FOR SALE.—120 acres, 65 acres improved, fenced, House and fair buildings, good water, would make a good stock farm. Price \$2,000. 1 1/2 miles from Wolverine, Cheboygan Co., Mich. Enquire of Thomas Pankhurst.

TWO 80-ACRE TRACTS IRRIGATED RAW LAND at French, New Mexico, just over the Colorado line, \$60 and \$70 an acre. Elegant climate, water on land \$1.00 per acre per year. Two railroads, fine soil. C. J. SPEAR, 223 Gardner Bldg., Toledo, Ohio.

WHY PAY RENT when you can buy the Best Land in Michigan at from \$5 to \$10 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. Stafford Bros., (owners) 15 Merrill Bldg., Saginaw, W. S. Michigan.

FOR SALE.—233 acres of best Michigan farm land located 4 miles east of Ann Arbor. Large modern house and barns, fine water supply and 20 acres wood lot. Inquire at 424 S. Main St., Ann Arbor, Michigan.

I SELL FARMS in Oceana, best County in United States. Fruit, Grain, Stock, Poultry. Write for list. J. S. HANSON, Hart, Mich.

MINNESOTA—Free 200-page Book. Accurate information about price of lands in, and products of each county. 2,000,000 Acres Homestead Lands. Farm Laborers Wanted. Farms for Rent. Address STATE BOARD OF IMMIGRATION, Room 205, State Capitol, St. Paul, Minn.

116-ACRE DAIRY and FRUIT FARM, 25 miles from Detroit, one mile from electric and steam road, Oakland Co. 100 acres under cultivation, 16 acres timber, running water, good buildings; immediate possession; \$9000, part down. 80 ACRES on electric line, 30 miles from Detroit, large stone house, basement barns, (Oakland Co.), \$6000. 60 ACRES, on electric line, 15 miles from Detroit, Oakland County, best of soil, \$5000. 40 ACRES, near Mt. Clemens, fine soil, good buildings, \$4000. MERTON L. RICE & CO., 1427 Majestic Bldg., Detroit, Mich.

180 Acres, \$3,400, Part Cash. Complete Equipment Included. 36 head high grade Jersey cattle, 4 horses and a fine set of farming machinery thrown in free with this splendid farm; rich loam fields, spring watered pasture, 300 cords wood and \$1,000 worth standing timber, good fruit orchard, 300 sugar maples, 10-room house, telephone, big barn, silo, never failing spring water, near neighbors, schools, mail delivered; complete information and traveling directions to see this and two 275-acre farms with everything included, page 119, Strout's Farm Catalogue 34 which gives reliable information regarding railroads, schools, climate, soils, crops raised, markets, etc., just out, copy free. Station 101, E. A. STROUT, Union Bank Building, Pittsburg, Penna.

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The Nation's Garden Spot—THAT GREAT FRUIT AND TRUCK GROWING SECTION—along the

Atlantic Coast Line RAILROAD

in Virginia, North and South Carolina, Georgia, Alabama and Florida, write to WILBUR McCOY, A. & I. Agt. for Florida, Jacksonville, Fla. E. N. CLARK, A. & I. Agt. for Virginia and the Carolinas, Wilmington, N. C.



Woman and Her Needs

At Home and Elsewhere



A RIFT IN THE LUTE.

HAVE you ever had a friend grow away from you for that most common of reasons, because she climbed the hill of prosperity at a more rapid pace than you could acquire? If you have, how did you feel about it? Didn't you think bitterly, or cynically, on the frailty of friendship? Did you not remark, "Some people can not stand prosperity," and ruminate for hours at a time on the snobishness and shallowness of the person, who having got money, would not notice her old friends? Have you not told yourself over and over again, that you could not act in such a way, no matter if you were worth millions? Have you not dwelt at length on the first little slights your friend put upon you, and recounted to yourself if not to others how she first quit inviting you to parties, then forgot to call, and now merely nods and hurries by when you meet? And you think of your one time friend now as being purse-proud and unfaithful, a worldly woman who counts show more than friendship. You blame her entirely for your estrangement, do you not?

I want you to stop and think the whole matter over again, and try to think of it from a third party's point of view. Just ask yourself this question and answer it honestly, "Did the first step in the estrangement originate with my friend or with me?"

To begin with, her failure to invite you to parties, honestly now, did you not refuse a few invitations before she quit sending them? Did you not get an idea somewhere that you could not dress as well as the other women who would be there, new acquaintances of your friend, and that therefore you would not go? Was there not pride on your part, a foolish pride that made you think that if you could not look just as well as your friend and her new set you would be snubbed? Or perhaps you thought your friend would be ashamed of your old-fashioned dress and you would not humiliate her. Some such reason, kept you away and finally after repeated refusals your friend stopped inviting you.

You quit running in to see her, too. Somehow you had a little sore feeling in your heart every time you saw her in her comfortable home, so much better furnished than yours, with a servant to do the heavy work. Your friend, thus relieved of drudgery, had time to take care of her clothes and her complexion and to retain her youthful looks, while you in your inconvenient house with no help, spent all your strength and energy in keeping the work up and making both ends meet. You could have stood seeing the prosperity of a woman you didn't know, but to go and look at your old friend, freckle-faced Mary Smith you had known from infancy, taking life easy while you toiled and milled, was more than you could bear. You stayed away from her, and after she had called and called on you with no return of the courtesy, she finally stayed away, too. You thought she might come just the same, she ought to know you would be glad to see her, but how was she to know it if you never took the trouble to look in on her?

You stayed away, nursing a hurt, proud heart, and she stayed at home with a grieved, hurt heart, wondering what she had done to turn you against her? You never thought she cared a mite, but she did. You simply looked at the matter from your own point of view, the point of view of a jealous woman, and never gave a thought to the fact that a friendship to be maintained must be worked from both sides. You thought your lack of money was sufficient excuse for you to be suspicious, cool, and resentful, but you would not have allowed that the possession of money was any excuse for your friend to show any sign of aloofness towards you.

I heard the woman who got rich express

her side of the case recently. "I saw some old friends of mine the other day, and how I should have liked to stop and talk over old times with them," she said. "But I didn't dare. I knew just what they were thinking of me. I could have told it by their coldly critical inspection of everything I wore, if I had not heard before just what their opinion of unworthy me is. We were all in school together, graduated together, formed a club together, and all married almost together, anyway we all married the same year. They married men on salaries and those salaries have not gone up by leaps and bounds. I married a man who had a little business of his own. The first two years we hadn't as much to live on as the other girls and we were all friends. Then the business took a sudden start and we jumped away up in the Dunn book. I planned all sorts of treats to give those girls, but I noticed they did not appreciate my efforts. 'Trying to show off. We don't want her charity. Stuck-up little snip, why, she's nobody but Bell Lundy, her father was just a carpenter.' These were a few of the friendly remarks which drifted to me. Yet I kept on. I wanted to show the girls I thought just as much of them as ever and that I had no intention of dropping them. It was no use. They dropped me, dropped me so hard I finally gave up. They will blame me all their lives. I'll leave it to any jury of my peers to decide where the blame belongs."

DEBORAH.

APPLE BLOSSOMS IN APRIL.

BY GLADYS HYATT SINCLAIR.

"When February days are drear,
When March his fiercest blast sends forth,"

is the time of all times when we would most appreciate flowers. It is quite possible to have them, too, even though we were improvident enough to force no bulbs and spent all our winter flower money for Christmas.

We all have apple, peach and plum trees. Cut some of the slender twigs, set thick with buds of promise. Put them into a pitcher or fruit can full of warm water and set them in a warm, dark place until the buds are big and ready to burst. Then set them in a sunny south window and you will have the beauty and fragrance of spring in about two weeks. Flowering currant and flowering or Japanese quince will blossom under the same treatment. So will lilacs but the blossoms will not be as large as when blooming outdoors.

If you haven't plenty of seed catalogs, get plenty. A postal apiece will bring them. One isn't enough, nor two. You will not want to buy all your seeds from any one. While the good old sure-to-grow stand-by's will furnish the bulk of your flowers, it is fun to try a novelty or two each season. If they measure up to only half the beauty of the wonderful catalog plates we may feel well satisfied.

If you have no dirt stored in cellar or shed for starting early plants, watch your chance and scrape up some from the south side of barn or out-building, some sunny day. It may not be good garden dirt, lightened with sand, as is best, but it will be better than none. Lobelia, asters, pansies, snap-dragons, cosmos and nicotianas should be sown thinly in boxes in April. Set them in the kitchen windows where they will get the steam of wash boiler and tea kettle. They are humble aristocracy, thankful for the fresh, damp air of a kitchen.

See if you can't make the geraniums, rose-geraniums, flowering begonias and impatiens yield bigger returns in beauty and brightness this summer than they usually do, stilted up on long-legged plant stands on the porch. The impatiens is the brittle, pale green, water-loving plant

that bears us such quantities of little round, rosy blossoms. Slip all of these, at once, taking the slips from the tops. The old plants will be all the larger and handsomer for this beheading in a few weeks. Put the slips into sand or sandy soil in the sunshine and keep damp. They will have plenty of roots before planting-out time, the last of May.

Then, in the place you want to look the prettiest—if it is not shady—dig out the dirt 18 inches or two feet deep and fill in with good garden or woods dirt, making it nearly a third fine old manure. Plant your rooted slips here, the tallest growers at the back or in the middle, according as your bed is long or round. Firm the earth hard around the roots. With such food and room to grow, how they will spread out and blossom! With a few old plants to cut from, you can have a bed or porch boxes that would cost ten dollars to fill at a florist's.

Cultivate the earth in the bed lightly about once a week until the plants cover the ground. Flood with water after sun-down if the ground dries out and do not water again until the ground looks really dry. Constant dripping and sprinkling is as bad for plants as constant lurching is for children. Water plants thoroughly and quit for a week at least.

WHAT THE MENU TERMS MEAN. No. 40.

BY MRS. ALTA L. LITTELL.

EVERY woman who does her own cooking enjoys going away from home for a meal. A trip to town with a dinner in a hotel is a delight to her, unless she is confronted by a menu card covered all over with terms which she can not understand nor pronounce. Probably her favorite dishes are there disguised under some strange name, and she fails to get what she would really enjoy eating, because she does not understand the terms on the card.

For example, so many dishes are contain the term "au or aux." Just remember that this only means "to or with." As, "Au Gratin," means any dish covered with buttered crumbs and browned in the oven.

"Bisque" is a thick soup, usually thickened with crumbs and a meat chopped fine, cooked and pressed through a sieve.

A "bombe" is an ice formed in a mold, with the outside coating of one sort of ice and the inside filling of another.

"Bouillon" is broth, either of some sort of meat, fowl or tomato.

"Caviare" is salted and smoked sturgeon's eggs.

"Entrees" are dishes made of meat or vegetables, leftovers would be used at home, and served between courses.

"Foie-gras" is the name given to fat goose livers.

"Francaise" means in French style and "Italienne" in Italian style.

A compote is fruit cooked in such a way as to preserve the shape, while "macedoine" means a mixture of several fruits or of several vegetables.

"Marrons" means chestnuts.

"Meringue," a mixture of sugar and white of eggs beaten together.

"Mignon" means small.

"Noir" means black, and "cafe noir" is simply black coffee.

"Parfait," means perfect, so the dish thus described should be delicious.

"Pate," means a paste, and "puree," ingredients rubbed through a sieve.

"a la Printaniere," means with young vegetables.

"Pie a la mode," as described in some restaurants, is simply a slice of pie with a spoonful of ice cream on top.

A "ragout" is a dish of stewed meat or fish in a rich gravy.

"Sabayon" is a custard flavored with wine.

"Sorbet" is a frozen punch, or a fruit ice to which a liquor has been added.

"Frappe" means half frozen. Thus

cider frappe is sweet cider half frozen round, rosy blossoms. Slip all of these, and served in punch glasses.

"Souffle" means anything light and puffy.

"Franconia" potatoes are potatoes baked with roast.

French fried potatoes are potatoes cut in eights lengthwise and fried in deep fat.

"Maitre d'Hotel butter" is butter creamed and seasoned with lemon juice, salt, pepper, and parsley.

FLOWERS FOR BUSY WOMEN.

BY GERTRUDE K. LAMBERT.

Farm housekeepers are often heard to say: "Oh, I love flowers, but I really have no time to fuss with them," or, "no money to expend on them," or, "the chickens are sure to destroy them, if I try to have flowers." All of which are very good excuses for barren, flowerless yards and homes, but hardly sufficient as reasons in every case.

Taking the first, "No time." There are the beautiful, hardy, flowering shrubs and plants that require little care after being set, to give abundant returns in growth and bloom; the old-fashioned lilac, flowering currant, snowball and honeysuckle, or even wild shrubs from the woods. What can be more beautiful than the wild, white elder blossoms or clusters of black berries which succeed the flowers. If I could have but one, I think I should choose wild roses instead of tame ones. Then there are the hardy perennials and bulbs, that make such a fine display with little care; columbine, phlox, pinks, gladiolus, dahlias, and a variety of lilies. A bed of either, or all, will prove a lasting delight in return for very little care and attention.

As for the money consideration, many roots and plants will be gladly given away by friends and neighbors, when thinning their own overgrown garden plats or lawns; while seeds, even the best, are very inexpensive.

The chickens! That is a problem. Small sticks driven down, near together, or medium sized stones or pieces of broken crockery, set in the flower beds, will sometimes serve to protect the plants from the hens. Poultry netting is cheap, when compared to the damage even a small flock of hens will do if running at large. There seems little more reason for allowing a large flock of poultry the free run of the place, than for giving the other farm stock, cows, horses, sheep and hogs, the same privilege; and, really, the latter will often be thought preferable, when contemplating the havoc wrought by the former in a garden.

No place for flowers? Have a large barrel sawed in two, midway between the ends; paint each half red or green and mount upon short posts; bore a few holes in the bottom of each for drainage, and fill with rich soil to the top. Now sow to hardy annuals, petunias, portulacas, nasturtiums or any of a long list, will make a fine showing if well sprinkled often.

Enclose a corner or strip of waste land beside the fence or walk, with large stones, shells, brick, or even boards set on edge. Spade up the enclosed soil, add a few wheelbarrow loads of well rotted barn-yard soil if necessary, smooth and sow seeds or set plants suited to the situation. This last is of more importance than may appear. Many flowers thrive best in the full glow of the sun; others require shade.

Bricks set in the ground far enough to stand firm, at an angle of 45 degrees, and overlapping each other one-half their length, make an attractive border, especially if alternate red and cream bricks are used.

COOK PORK UNTIL WHITE.

Cases of illness sometimes occur from eating uncooked or insufficiently cooked pork which is infested with a microscopic parasite commonly known as trichina or flesh-worm, the scientific name being

Trichinella spiralis. An average of one or two per cent of the hogs slaughtered in the United States are infested with this parasite. When transmitted to human beings, trichinae may cause serious illness, sometimes resulting in death. Out of about 15,000 cases of trichinosis recorded in medical literature, most of which occurred in Europe, 830 resulted fatally.

No method of inspection has yet been devised by which the presence or absence of trichinae in pork can be determined with certainty, and the government meat inspection does not include inspection for this parasite. All persons are accordingly warned by the United States Department of Agriculture not to eat pork, or sausage containing pork, whether or not it has been inspected by federal, state, or municipal authorities, until after it has been properly cooked.

A temperature of about 160 degrees Fahrenheit kills the parasite, therefore pork when properly cooked may be eaten without any danger of infection. Fresh pork should be cooked until it becomes white and is no longer red in color in all portions of the piece, at the center as well as near the surface. Dry salt pork, pickled pork, and smoked pork previously salted or pickled, providing the curing is thorough, are practically safe so far as trichinosis is concerned, but as the thoroughness of the curing is not always certain, such meat should also be cooked before it is eaten.

A pamphlet giving information on the subject may be obtained on application to the Secretary of Agriculture, Washington, D. C.

SWEET PEAS.

BY RUTH RAYMOND.

In the year 1700 the first sweet peas were sent to England from Sicily. This was 32 years before Washington was born, when William III, of Orange, was on the throne. These same sweet peas that grew wild in Sicily were as sweet as those of today, but differed in color, being pink and white, very similar to the standard pea we call "Painted Lady." After the sweet peas were well established in English gardens they were brought to America. It is said that Thomas Jefferson, the third president of the United States, loved sweet peas dearly and cultivated them in his gardens at Monticello. Henry Eckford, of England, was the originator of the Grandiflora type of sweet pea and to him we owe much for bringing these beautiful flowers to their present perfection of bloom and coloring.

When the first bluebird appears plant the sweet peas," was grandmother's rule, and we find it a good rule to go by. Peas will grow within the Arctic zone and the rough winds of March are their delight.

The roots grow deeper if they are planted in cool weather so that the tops develop slowly. This gives them power to withstand dry weather in the hot summer months. If the soil is fertile the roots will go down and gather moisture all the way. It is useless to try to raise them on a thin shallow soil, as soon as the hot weather comes on they will turn yellow and die.

Prepare the ground by deep spading, then scoop out a trench four or five inches deep. Sow the seeds in the trench and cover with two inches of soil. Firm it down well, and when the seeds come up have the support all ready for their dainty fingers to cling to.

When the plants have been above ground about six weeks fill up the trench with well rotted barnyard manure and garden soil, equal parts. This will hold the moisture they will need. Though sweet peas delight in sunshine they should have a partial shade from the blazing afternoon sun.

A morning sun bath is fine for them. They do well on the east side of a building or wall.

Sweet peas grow from four to six feet tall and wire netting, if attached to strong posts so it will not weave about in the wind, is the most satisfactory support. It is better to sow two rows of the seed, one each side of the netting and thus one side will shade the other and the blooms will be more abundant. Keep the seed pods off for when they begin to form pods which are left on they will stop blooming.

YARN FOR CAPS OR TOQUES.

German town zephyr yarn is just as satisfactory and quite as pretty in the crocheted caps or toques, as the very "coarse rope-like yarn" sold expressly for the purpose, and which is so hard to find in

the country stores. One cap requires six skeins. Use three strands as one thread and crochet very loosely, using a large wooden hook. No. 11 is the proper size. I could not find, in any of the shops visited, a bone hook large enough.—E. F. T. (Thank you.—Ed.)

SHORT CUTS TO HOUSEKEEPING.

A tablespoonful of kerosene added to cooked starch will prevent the starch from sticking to the sad-irons when you iron.—Mrs. W. H.

Wash your white enamel sink with kerosene then with soap and water and see how easily the stains are removed and how much cleaner it looks.—Mrs. W. H.

If you wish to save soap, use a handful of salsoda in the dishwater.—I. O.

When making a skirt, fasten a hook and eye in proper position at bottom of placket hole and press down, this prevents the opening from tearing deeper which it is so liable to do.—H. P.

In polishing boots and shoes put dressing on soles as well as uppers. You will find them twice as durable and neater appearing.—F. H.

Your shoe will not untie if you will pull strings twice through top holes then tie.—F. H.

When popping corn instead of using a small and slow corn popper, try using a roaster. It can be placed on the top of the range and shaken backward and forward. If a roaster is not handy, use a common dripping pan with a newspaper pinned over the top with clothes pins.—N. F. M.

In the morning when washing dishes make a soapsuds in the pan before the dishes are placed in, and wash the lamp chimneys with a clean cloth. This saves getting a separate pan and water.—N. F. M.

When ironing take an old carpet and fold it up to about an inch in thickness and stand on it. It is fine for those whose feet get tired.—B. M. C.

We girls living on the farm always use charcoal to clean our teeth. Take live coals and drop in cold water. When cold, take out and let dry. Put through your meat chopper, using the nut butter attachment.—B. M. C.

OUR LETTER BOX.

Three Cheers for Northern Michigan.

Editor of the Household Department:—I have been very much interested in the discussion regarding the college girl marrying, and while I heartily endorse the views of Mrs. J. W. Monroe and others, I do not write to discuss that question, but I do write to defend my home country, northeast Michigan.

I have lived in some of the best counties in southern Michigan but for eighteen years I have lived in northern Michigan, about 100 miles north of Bay City, my father being a minister and I having taught school throughout this north country until my marriage with a farmer, when we came here to start on a new place, consequently, I think I am competent to write a truthful account of northeast Michigan. As for the northwestern part of the state I know nothing personally but have been told that the same conditions exist there as here.

The country schools here are the best in the state, as well as the best equipped. You may travel for 200 miles and you will not see a poor schoolhouse; fifteen years ago they were all sided and painted and \$300 would not pay for the charts, maps and globe contained in the first school I taught in northern Michigan, and in scores of others.

Now these schoolhouses are being replaced by large modern buildings of cement and stone, many of them containing two and three rooms and hiring from two to three teachers, country schools at that, we have three teachers in our home school, and we pay our principal \$800 per year. Latin, as well as all the other higher branches are taught. Deborah tells us, "There are no churches, no Sunday schools," here.

Every settlement has at least one church, and the ministers of these churches usually preach at one or two schoolhouses, thus enabling everyone to hear the gospel, and we also have Sunday schools, B. Y. P. U. and Christian Endeavor societies.

Here in the backwoods there are two churches, organs in both, a bell on one to call us to worship.

All our school buildings have bells and nearly all have free text-books.

From my kitchen window I can count ten windmills, including our own. There



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It's the very nature of a soda cracker to absorb moisture and foreign odors.

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The advent of Uneeda Biscuit and the moisture-proof and odor-repelling package changed all this—for Uneeda Biscuit, the perfect soda cracker, keeps select company—its own.

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Why rent?
Own your own farm.

Nothing down—9 years to pay.

Don't give up the best of your crops to a landlord.

Haven't the money to buy!
You don't need money.
Here is a wonderful opportunity.
The Panhandle of Texas needs settlers.
It is the country along the Santa Fe, in the northwestern part of Texas.
The land is level prairie. It is the original residual soil—deep, rich and fertile. For years it furnished the finest pasture. Now it is too valuable for range purposes. The owners are selling it for general farming.
I want to tell you about the opportunities for settlers on these Panhandle lands. (The Santa Fe has no land to sell.)
I know one owner who will sell you a farm for only \$20 an acre. You don't have to pay a cent for two years. After that you pay one-seventh each year, with interest at 6 per cent from date of purchase.
But you must live on and cultivate the soil.
Have you ever heard of a proposition like that?
Another proposition, at the same price, requires \$2 an acre down, the balance in ten equal payments, with interest at only 6 per cent.

These are but two of the many opportunities open to real homeseekers in the Panhandle.
Owners of these lands will not sell to speculators. The land must go to actual settlers. They want to see the country built up. They want the crops coming into their towns and the trade of prosperous farmers who are owners of the land they farm.
The Santa Fe, too, is anxious to see the country developed. It wants to haul the people and their goods and products.
The country is in splendid condition this spring. Nearly 3 inches of rain in February. Everything ready for you.
Let me send you our folder, "The Panhandle and South Plains." It tells all about this country—its soil, climate, rainfall, water supply and crops. Let me put you in touch with the men who own the land. Let me tell you about the opportunity the Santa Fe affords twice a month to go and see this land at reduced rates.
Don't wait. Make the break. Write me to-night, if only a postal. You will be glad.
C. L. SEAGRAVES, Gen. Colonization Agt., A. T. & S. F. Ry., 2213 Railway Exchange, Chicago.

HOME CANNING FOR PROFIT

Many dollars' worth of fruit and vegetables go to waste on the farm that could be made into a profit. Many times the markets are glutted on some articles, where, if you had one of our **CANNING MACHINES** you could can these articles and sell them on a much higher market.

You realize Mr. Grower, that it is not the grower that makes the large profits, but the middleman does, and you do the hard work. Why not can your own products and get a portion of this profit? Write us for full particulars.

THE CANNERS SUPPLY CO., Wabash, Indiana.

When you are Writing to Advertisers please Mention the Michigan Farmer

are many cream separators here, also acetylene lights and automobiles, a telephone line passes through here and is used by the farmers.

Lodges are plentiful from Bay City to Cheboygan, the Gleaners and Grangers are very strong in this part of the state, besides many other lodges and church societies.

We have rural free delivery from Bay City to the Straits and books, magazines, etc., are as plentiful as in the south. Our own township library boasts of over 700 books, embracing histories of all countries, as well as late fiction and the classics, and this place is only typical of others. All townships may have libraries, a certain township fund is set aside for that purpose and cannot be used for any other.

You must remember, Deborah, that our good state laws are for we in the north as well as you more favored ones in the south. Then, too, the state circulating library is as free to we northern people as to you in the south and there is no one, however poor, who cannot afford to pay the freight on one of these libraries.

If you will look on the map, you will see that we have railroads, we also have elevators and markets. Yes, markets for our crops, for no more productive land lies under God's sunshine than lies in northern Michigan.

I have seen this country change from a lumbering country to a prosperous farming country, and I know whereof I speak. Every kind of fruit is raised here that is raised in southern Michigan. Our apples are the finest in the United States, having taken the prize at the St. Louis Exposition and again at the State Fair. Last year our grain and cheese took first prize at the State Fair.

Statistics are not interesting, but here are a few facts concerning our crops raised here last year:

Oats yielded 80 bu. per acre; corn 100 to 125 baskets per acre; potatoes from 200 to 300 bushels per acre; wheat from 35 to 40 bushels per acre.

This country is new, but conditions can never be the same here as they were two generations ago in southern Michigan, because we have railroads at our door, we do not have to wait for years for a railroad, they are here before us, put in by the lumbermen who lumbered this country. We do not have to travel miles to mill, or use oxen, we have horses and all modern improvements.

New inventions are for us as well as you. Let me tell you what we have done here on this place in five years and you may judge for yourself if the country is fertile or not.

We came in here with three small children, one team, one cow, and our two hands, as capital. In that time we have cleared 60 acres, fenced and cross-fenced our 80 with woven wire, put up a wind mill, have the upright to a good house on a cement wall, with a good cellar. We have a fine young orchard growing, and lumber on the ground for a barn. We have 15 head of cattle, a nice flock of sheep, chickens, pigs, etc. Our children go comfortably clad and we have plenty of good, nourishing food. I do not own a silk dress but can be happy in a gingham if I know that some day I can have better.

We are not college graduates but we enjoy good reading, music, and the refinements of life, all of which we have in our home.

I know college women even in northern Michigan who are happy farmers' wives.

Now, I hope someone will write from northwestern Michigan. I have described one-half of the elephant as it exists here. —Mrs. F. J., Iosco County.

Women Are Readers.

Editor of the Household Department:—Your editorial in a recent issue has prompted me to say a word in defense of our sex. Perhaps you intended to stir us. I can't think you mean to be taken seriously. Possible, your allegation is true of some women but not of the ones with whom I mingle. So far as my acquaintance with women goes, it is usually the wife who is better informed than her husband, except it may be in the matter of politics or sporting news. As I recall those with whom I was associated in my school days, they all, with possibly one or two exceptions, are much better informed on all subjects that make for usefulness and culture than when they left the schoolroom.

For those unfortunate ones who are as "mum as a clam," while their husbands discourse learnedly on popular topics, I would say, organize a club at once after the advice given by Deborah in a former

editorial. A woman's society, if rightly conducted, is certainly a great factor in self-improvement, if it goes no farther. I fancy I see the woman who writes papers and leads discussions in the Grange and Farmers' Clubs smiling when she reads those assertions of our editor. Even the missionary society, that much-ridiculed organization, is educating and elevating its members, aside from the spiritual development which always comes with sacrifice for the good of others. The woman, today, who does not know a zenana from a new kind of fancy work, or a Boxer-uprising from a prize fight, is very much behind the times. The workers in reform organizations have found it necessary to understand something of state and federal government and can tell not only who is governor of their own states but of many other states as well, and can tell you quite as intelligently as can their husbands what is the political situation in many places. In some instances it is the wife who gleans the most interesting items of current news and discusses them with the family. Such a woman, however, is not the one who spends much time in making "crazy" things simply to kill time.

If there is one woman who reads these words who can honestly place herself in the class described by Deborah, I would advise her to begin self-improvement at once. Commence with the Michigan Farmer, for instance. Read the woman's department, find out what is new and correct in wearing apparel and house-furnishing, try some new recipe, find out how to prepare and serve a meal; then turn to the page of Current Comment and the Week's Happenings, digest a few thoughts each week; read the stories and magazine articles aloud to the family, if they care to listen; commit to memory some little gem of poetry; try your wits on the "Kinks," and if that doesn't brighten you up and set you longing for more, you are, indeed, one of those "domestic animals."

I know one woman who had been reading the discussion on reciprocity with Canada in The Farmer, who was able to help her daughter in a debate on that subject. She came home almost in despair because she had been chosen to speak for it and "couldn't think of a thing to say." The mother remembered that she had read extracts of one of President Taft's speeches and together they found points for her side—and she won.

Some will make the objection that they have so little time; but we always find time for those things we most profoundly desire to do. Keep a good magazine at hand where it can be picked up for a few minutes while waiting for the men folks to come to meals, and other odd times; pin the little selection you wish to memorize over the worktable and you will be surprised at results.

Try it, sister of the "torpid brain." —A. E. H. M.

Dishwashing Again.

Editor of the Household Department:—In the letter box of a recent issue of your valuable paper, I found a letter from a woman who can never get help that will wash dishes in the right way. Even her own girls of eight and twelve years, have many of the slouchy ways the hired help has.

I am somewhat of a crank on dishwashing myself. But with children I think the best way is for the mother to work with them. She can wash and the child wipe, and change about occasionally, in that way the child will learn mother's ways and also will not get so tired and hate the work so much. It takes quite a long time for a child to wash only a few dishes. Not that they are so slow or lazy, but they don't know just how to go at them the easiest way. If only mother helps, the "terror" of dishwashing is done away with, and it is wonderful how they will improve.

If there should be more than one little helper, let one help one week and one the next. —Mrs. H.

Disagrees with "Dangerous Economy."

Editor Household Department:—I noticed in the paper a short time ago an article on "Dangerous Economy." I agree with the writer, that it is unwise and dangerous to draw a cloth into a leaky pail or pan, but I think it would be really extravagant to throw away a new piece of granite ware just because a little enamel got chipped off. Few could afford to throw such away. One might accidentally drop a pan the first day they bought it, and, of course, the enamel would be very apt to chip off. I can hardly believe that anyone, even though they were rich, would throw it away im-

mediately and buy another. The writer of "Dangerous Economy" also stated that cases of poisoning had been traced to cooking foods in defective granite ware. Now, do you really think it was the cooking of the food in the defective granite ware or allowing the food to stand in it after it was cooked? Cases of poisoning from canned goods are usually caused by opening the tin can and not removing the contents immediately. And is it necessary, now, to throw away your leaking pans, kettles, galvanized wash tubs and copper boilers when one can purchase the soft metal rivets at most hardware stores and very easily mend one's own household articles? I have used them for sometime without ill effects, but would like very much to have the opinion of others on the subject. —Mrs. R. A. W.

CHAPPED HANDS.

No woman likes to have her hands get rough and red, yet in changeable weather one doing housework will be particularly fortunate if she wholly escapes them. Frequent use of water in preparing vegetables and washing dishes, exposure, while moist, to the outside air as well as other causes, contribute to a series of "chaps" during the spring. Some skins are more susceptible than others, and those having a tendency to eczema will be the greatest sufferers winter after winter.

There are a number of things which can be done to relieve such a condition. The difficulty lies in taking the necessary time to bother with them. It sounds so complicated to read in the beauty columns about gloves and emollients and washes that the busy woman gets discouraged from attempting anything of the kind.

AN INQUIRY.

Editor Household Department:—Can any of our readers tell me how to remove ink spots from a white silk dress? —Mrs. A. W.

Each one of us is bound to make the little circle in which he lives better and happier. Each of us is bound to see that out of that small circle the widest good may flow. Each of us may have fixed in his mind the thought that out of a single household may flow influences that shall stimulate the whole commonwealth and the whole civilized world. —George Eliot.

MICHIGAN FARMER PATTERNS.

These patterns may be obtained from the Michigan Farmer office at the price named. Be sure and give pattern number and size.



No. 4047—Ladies' Shirt Waist. Seven sizes, 32 to 44 inches bust measure. For 36 bust it requires 3 1/4 yards 27 inches wide. Price, 10 cents.

No. 5086—Ladies' Shirt Waist.—Cut in five sizes, 32 to 40 inches bust measure. Size 36 requires 2 1/2 yards of 36-inch goods. Price, 10 cents.

No. 5338—Girls' Box-coat.—Cut in sizes 4, 6, 8, 10 and 12 years. Age eight requires 1 1/4 yards 44 inches wide. Price, 10 cents.

No. 4971—Children's One-piece Dress.—Five sizes, 2 to 10 years. For six years it requires 1 1/4 yards 36 inches wide. Price, 10 cents.

No. 5351—Ladies' Three-piece Skirt.—Cut in six sizes, 22 to 32 inches waist measure. Size 24 measures three yards around lower edge and requires 3 3/4 yards 44 inches wide. Price, 10 cents.

COFFEE CONGESTION

Causes a Variety of Ails.

A happy old lady in Wisconsin says:

"During the time I was a coffee drinker I was subject to sick headaches, sometimes lasting 2 or 3 days, totally unfitting me for anything.

"To this affliction was added, some years ago, a trouble with my heart that was very painful, accompanied by a smothering sensation and faintness.

"Dyspepsia, also, came to make life harder to bear. I took all sorts of patent medicines but none of them helped me for any length of time.

"The doctors frequently told me that coffee was not good for me; but without coffee I felt as if I had no breakfast. I finally decided about 2 years ago to abandon the use of coffee entirely, and as I had read a great deal about Postum I concluded to try that for a breakfast beverage.

"I liked the taste of it and was particularly pleased to notice that it did not 'come up' as coffee used to. The bad spells with my heart grew less and less frequent, and finally ceased altogether, and I have not had an attack of sick headache for more than a year. My digestion is good, too, and I am thankful that I am once more a healthy woman. I know my wonderful restoration to health came from quitting coffee and using Postum." Name given by the Postum Co., Battle Creek, Mich.

"There's a reason," and it is this. Coffee has a direct action on the liver with some people, and causes partial congestion of that organ preventing the natural outlet of the secretions. Then may follow biliousness, sallow skin, headaches, constipation and finally a change of the blood corpuscles and nervous prostration.

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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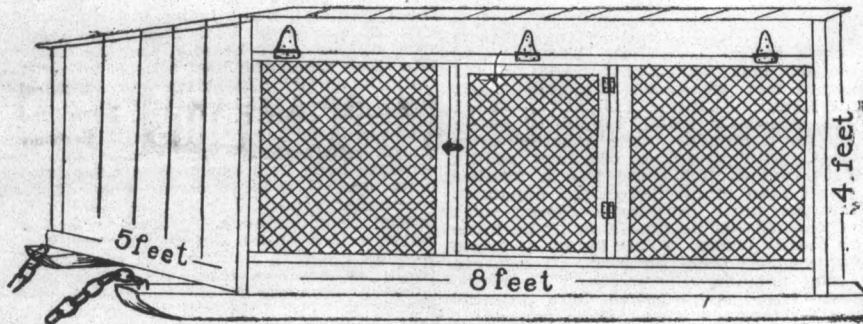
POULTRY

PRACTICAL COLONY HOUSES AND BROOD COOPS.

Colony houses for the young stock should be of a size that will permit of their being moved from place to place as occasion requires, and so constructed that they may be easily cleaned. At the same time they must not be so small as to crowd the chickens, nor so open as to expose them to drafts or inclement weather. In my poultry work I have not adhered strictly to any one size of house, as most of them were constructed of odds and ends that precluded the possibility of making them uniform, but, in all, the same general principles have been observed. I make them as roomy as possible without making them too cumbersome to be easily hauled about by one stout horse. A house just large enough to accommodate fifty chicks six weeks old will be entirely too small for the flock in two months, hence it is necessary to allow for the rapid increase in size of chickens when building.

I have found fifty to be the most convenient number of chicks to keep in one flock, and to accommodate them until fall a house about 5x8 feet is required. Perhaps this will seem entirely inadequate to many, as the chickens must remain in these small houses until ready to be placed in the laying pens next fall; but when it is taken into consideration that practically the only time all of the chicks are in the house is at night, and that the houses are of the open-front pattern, it will be seen that there is no overcrowding. During rainy days a wide canvas, stretched across the front of the house, gives the chickens shelter and a place to scratch.

A 5x3-foot house for young chickens should be 4 feet high in front, 3 feet in rear, and built on 4x4 runners 10 feet long. The frames are best made of 2x4 pine scantlings, with iron braces at each corner. This makes a strong, yet light,



Colony House with Entire Front Hinged for Convenience in Cleaning.

frame. Make the back and ends of 1/2-inch matched pine and the front, except a six-inch board at top and bottom, may be of poultry netting. The most convenient plan is to have the netting on a hinged frame that may be raised to clean the house. In the middle of the large frame there should be a 2x3-foot door to use at other times. The roof may be of boards covered with prepared roofing or, for lightness, a frame covered with wire netting and then with 3-ply roofing. If the latter is used the roof will need to be secured by hooks.

Inside the house there should be nothing but hover and perches, grit box and drinking fountain. My plan is to place a roomy hover in one corner, facing the wall. When the chickens begin to desert the hover and roost on top of it, perches are provided, but the hover is not removed until all the chickens are using the perches. In cool or inclement weather a canvas curtain is dropped over the open front. Grain is sometimes fed in litter in the houses, but the dry-feed hoppers are kept outside under shelter.

Ohio.

NAT S. GREEN.

Brood coops providing plenty of room and light are necessary during the damp, cold days of early spring. Even during the summer, showers which come up suddenly give us no chance to get the young chicks under shelter and they receive a drenching which is likely to prove a serious setback. A good brood coop that affords sufficient light allows us to keep the chicks confined during the early part of the day while the dew is on the grass and at the same time gives a well lighted place in which to feed them.

I have built several brood coops this spring which answer the purpose admirably. The length of the coop is 3 ft., height in front 2 ft., and 1 1/2 ft. at back.

The bottom is made of matched boards. In the front is placed a window 21x26 inches in size. This window is hinged at the top so it can be opened when desired. A light frame, covered with inch-mesh poultry netting, is made to fit inside the window-opening. When the weather is very warm, but too rainy for the chicks to run out, the window is opened to allow more fresh air, the netting keeping the chicks from getting out. A door is placed in the front of coop, near one end, for feeding purposes and also to let the hen out when desired. The roof consists of one piece of tin with the edges turned down at sides and ends to prevent the water from entering, but any waterproof material will answer the purpose. A few small open spaces are left under the edge of roof to provide ventilation.

If desired, a small run can also be provided. A frame 3 ft. wide, 2 ft. high, and as long as desired, is made. To this is tacked inch-mesh poultry netting. This frame is placed in front of the coop so the chicks may run out on the grass but at the same time are prevented from straying. A roof of some waterproof material can be placed over this run to keep the grass dry so chicks may run out early in the morning. In hot weather this roof will provide shade for the chicks.

A coop and run constructed in this manner will prove entirely satisfactory. There will be no anxious moments when sudden showers come up. Such a coop can also be moved about as desired. If the weather is very cold the coop may be turned several times a day so it will face the sun at all times, thus providing lots of sunshine and warmth inside, insuring natural, steady growth and healthy chicks.

Indiana.

O. E. HACHMAN.

CHICKS DIE IN SHELLS.

A Grand Rapids reader reports his incubator-hatched chicks having trouble in getting out of the shells. It is impossible to tell just what is the cause in any particular case without a full knowledge of all the conditions. In this case a hot-air

machine was used and it is possible, even probable, that an insufficient supply of moisture was at the bottom of the trouble. On the other hand, this trouble is often ascribed to lack of vigor in the breeding stock or improper handling of the eggs before starting to hatch them, the argument being that the germ has not enough vitality to develop a strong chick, and that a weak chick has little chance of getting out of the shell unless all other conditions are exceptionally favorable. However, it is hardly probable that weak or immature breeders are at fault in this case, since it is not likely that all eggs produced would prove to be weak in germinating power. Why so many chicks die in the shell is a question which has puzzled poultry raisers for years, and much careful study has been given the problem in recent years. As the result of investigations the poultry expert at the Oregon station holds that the trouble is sometimes due to the eggs becoming infected with bacteria which attack the germ. As to the means of infection he advances the theory that the bacteria either come in contact with the eggs before they enter the incubator or that they exist in the machine and attack the eggs during the process of incubation. He therefore recommends fumigating or disinfecting the incubator before starting the hatch. Some go still farther and advise disinfecting the eggs before placing in the incubator, and a well known eastern poultryman claims to have reduced the percentage of weak chicks and prevented the development of leg weakness and white diarrhea after hatching by dipping his eggs in a solution of 1 gill of creolin to 8 1/2 quarts of water. At any rate, the thorough cleansing and disinfection of both incubators and brooders has come to be regarded a preventative measure that should not be neglected.



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MARKETS

DETROIT WHOLESALE MARKETS.

Grains and Seeds.

Wheat.—There was a bulge in wheat quotations the past week, No. 2 red reaching 89c on Saturday. The bears have taken hold since that day and reduced the figures to the level of a week ago. Crop reports are favorable in nearly all seed-growing sections of the country, while the crop in India and Argentina is small, news indicates an easy feeling in the markets of both countries. Liverpool continues to be a bullish element, as the continental markets are getting an unusually large proportion of the world's shipments. The visible supply decreased over one and one-half million bushels during the week. One year ago the price for No. 2 red wheat was \$1.05 per bu. The quotations for the week are:

	No. 2	No. 1	Red.	White.	May.	July.
Thursday	87½	85½	88½	87		
Friday	87½	85½	88½	87		
Saturday	89	87½	89½	88		
Monday	88	86½	88½	87½		
Tuesday	87	85½	87½	87		
Wednesday	87	85½	87½	87		

Corn.—While wheat prices fluctuated, the quotations for corn have gradually advanced and taken a higher position in the market. Local trade is firm. Receipts are small and the demand active. The visible supply showed a million bushel decrease. One year ago the price for No. 3 corn was 59c per bu. Quotations for the week are:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	49½	51½
Friday	50	52
Saturday	50	52
Monday	50½	52½
Tuesday	51	53
Wednesday	51	53

Oats.—In spite of the liberal advance of last week oats have continued on the up grade since, they now being about 3c higher than two weeks ago. The market is quiet and steady, the visible supply showing a liberal decrease. The price one year ago for standard oats was 44c per bu. Quotations for the past week are:

	Standard	No. 3
	White.	White.
Thursday	36	35½
Friday	36½	36½
Saturday	36½	36½
Monday	36½	36½
Tuesday	36½	36½
Wednesday	36½	36½

Beans.—There has been a nominal decline in bean prices the past week. A few bids for future beans have been made, but holders are not inclined to sell at the figures offered. October deals were advanced 25c, now being quoted at \$1.75. Nominal quotations for the past week are:

	Cash.	May.
Thursday	\$1.96	\$1.98
Friday	1.95	1.97
Saturday	1.95	1.97
Monday	1.95	1.97
Tuesday	1.95	1.97
Wednesday	1.95	1.97

Clover Seed.—Prices remain unchanged in this deal. Both for the common seeds and alsike. The market is quiet and firm at the figures. Quotations are as follows:

	Prime.	Alsike.
Thursday	\$8.75	\$8.75
Friday	8.75	8.75
Saturday	8.75	8.75
Monday	8.75	8.75
Tuesday	8.75	8.75
Wednesday	8.75	8.75

Rye.—The rye market continues steady at 93c for No. 1, which was the quotation of last week.

Timothy Seed.—There is no change in this deal. The market is active and firm at \$5.25 per bu. A record price was made in Toledo on Tuesday when the quotation advanced to \$5.75 per bu.

Visible Supply of Grains.

	This Week.	Last Week.
Wheat	30,993,000	32,580,000
Corn	9,258,000	10,259,000
Oats	11,974,000	12,375,000
Rye	106,000	98,000
Barley	1,503,000	1,544,000

Flour, Feed, Provisions, Etc.

Flour.—Market continues slow with clear and straight a little advanced. Quotations are:

Clear	\$4.75
Straight	4.45
Patent Michigan	4.90
Ordinary Patent	4.96

Hay and Straw.—Values are unchanged. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$16.50@17; No. 2 timothy, \$15.50@16; clover, mixed, \$15; rye straw, \$7@7.50; wheat and oat straw, \$6@6.50 per ton.

Feed.—Prices are steady with a week ago. Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$22; coarse corn meal, \$22; corn and oat chop, \$20 per ton.

Potatoes.—The advance of last week has been lost. All over the country a weaker tone prevails. Heavy receipts of old tubers and the arrival of new stock from Florida and Bermuda have beared the market. Demand good. In car lots Michigan potatoes are selling at 45c per bushel.

Provisions.—Family pork, \$19@20; mess pork, \$17; medium clear, \$16@17.50; smoked hams, \$13@14c; briskets, 9½@10c; shoulders, 11c; picnic hams, 9½c; bacon, 14½@14½c; pure lard, in tierces, 9c; kettle rendered lard, 10c.

Hides.—No. 1 cured, 10c; No. 1 green, 8c; No. 1 cured bulls, 8½c; No. 1 green bulls, 7c; No. 1 cured veal kip, 11c; No. 1 green veal kip, 10c; No. 1 cured murrain, 9c; No. 1 green murrain, 8c; No. 1 cured calf, 13½c; No. 2 kip and calf, 1½c off; No. 2 hides 1c off; No. 1 horsehides, \$3.75; No. 2 horsehides, \$2.75; sheepskins, depending on wool, 50c@1.50.

Dairy and Poultry Products.
Butter.—There exists a good demand for butter and the market is satisfactory to dealers and consumers. Prices are steady and firm. Quotations are: Extra creamery, 21c; firsts, do., 19c; dairy, 16c; packing stock, 13½c per lb.
Eggs.—The egg deal is settling back into a normal condition after the Easter excitement and the advance noted last week is lost. The quotation now is 15½c per dozen for current receipts, cases included.

Poultry.—Market quiet and steady with live chicken values a little lower. Quotations: Dressed—Turkeys, 16@20c; chickens, 16@17c; hens, 16@17c; ducks, 17@18c; geese, 12@14c per lb. Live—Spring chickens, 15@16c; hens, 15@16c; old roosters, 10c; turkeys, 15@18c; geese, 12@13c; ducks, 15@16c per lb.

Cheese.—Michigan, old, 15@16c; Michigan, late, 13@14c. York state, old, 16c; do. late made, 14c; limburger, early, 14@15c; Swiss domestic block, 16@18c; cream brick, 15@16c.

Veal.—Market easier. Fancy, 8c; choice 7c per lb.

Fruits and Vegetables.

Cranberries.—Higher. Quoted at \$4.75 per bu.

Cabbage.—Selling at \$1.75@2 per crate.

Onions.—Higher. Quoted at \$1.75@2 per bushel.

Apples.—The demand is active at advanced prices. Baldwins, \$6.50@7; Steel reds, \$6.50@7; ordinary grades, \$4.50@5 per bbl. Western apples, \$2.75@3 per box.

OTHER MARKETS.

Grand Rapids.

The potato market has recovered its strength and prices are fully 5c better than a week ago, the buying prices at loading stations ranging from 35@40c. There is a good movement of potatoes and prospects indicate a firm or higher market. Eggs continue firm, dealers paying the country shippers 15c, or ¼c higher than a week ago. The butter market is steady, dairy quoted at 19c and creamery at 20½c. Wheat has advanced to 84c for No. 2 red.

Chicago.

Wheat.—No. 2 red, 90@91c; May, 88½c; July, 86c per bu.
Corn.—No. 2, 49½@50½c; May, 49½c; July, 50½c per bu.

Oats.—No. 2 white, 33½@34c; May, 31½c; July, 31½c.

Barley.—Malting grades, 90c@1.10 per bu; feeding, 70@85c.

Butter.—The tone of this market continues to show improvement. Receipts are running about even with those for this season a year ago. Dealers are showing more interest and the market is comparatively firm at the prices which have ruled for several weeks past. Quotations are: Creameries, 14@21c; dairies, extra, 18c.

Eggs.—Receipts are running ahead of trade requirements, despite the fact that business is active. Prices are ½c lower than at this time last week, and a feeling of weakness developed with the close of the Lenten period. Quotations are: Prime firsts, 15c; firsts, 14½c; at mark, cases included, 13@13½c per dozen.

Potatoes.—With last week's receipts showing a gain over the previous week, and running nearly 125 cars above those for the same week last year, prices naturally declined, a loss of 7c being recorded. Offerings continue liberal but the market is reported firm with outside figures ruling this week. Choice to fancy are quoted at 56@58c per bu; fair to good, 53@55c.

Beans.—Pea beans are holding the recent advance, while red kidneys are higher this week. Choice hand-picked beans quoted at \$2.05@2.10 per bu; prime, \$1.85@1.95; red kidneys, \$2.90@3.20 per bu.

Hay and Straw.—Market firm, last week's advanced values being well maintained. Quotations are: Choice timothy, \$20@21; No. 1 timothy, \$18.50@19.50; No. 2 do. and No. 1 mixed, \$16@17.50; No. 3 do. and No. 2 mixed, \$10@15; rye straw, \$7@8; oat straw, \$6@6.50; wheat straw, \$5@6 per ton.

Wool.—The trade is largely in the control of buyers and while sellers are anxious to realize as much as possible from their stores, they do not hesitate to accept reasonable bids. The transactions of the week included liberal contracts for fleeces, the demand for which, at present, exceeds the call for territory grades. Quotations for the leading domestic grades are: Ohio and Pennsylvania fleeces—Delaine washed, 30c; XX, 28@29c; fine unmerchanted, 23@24c; ½-blood combing, 26@27c; ¾-blood combing, 25@26c; ¼-blood combing, 24@24½c; unwashed, 24@25c; fine unwashed, 19@20c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 20@21c; Delaine unwashed, 23@24c; ½-blood unwashed, 25@26c. Kentucky, Indiana and Missouri—¾-blood, 25@26c; ¼-blood, 23½@24c.

New York.

Butter.—Market is higher and firm. Creamery specials are quoted at 22c; extras, 21c.

Eggs.—Market is easier and a shade lower. Fresh gathered extras, 17½@18½c; firsts, 16@16½c; seconds, 15@15½c; storage packed, firsts, 17@17½c.

Poultry.—Live, dull and lower. Roasting chickens, 13@13½c; fowls, 15½@16c; turkeys, 13c per lb. Dressed, easy.—Fowls, 14½@16½c; turkeys, 15@20c.

Elgin.

Butter.—Market firm at 21c per lb., which is the quotation of last week. Output for the week, 516,000 lbs., as compared with 503,600 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

April 17, 1911.

(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 167 cars; hogs, 14,400; sheep and lambs, 18,000; calves, 3,000.

With 150 loads of fresh cattle on sale here today and 17 cars of cattle left over from last week, we quote all cattle from 1,200 lbs. up fully 15c per cwt. lower than last week, and all other grades from 10@15c per cwt. lower.

We quote: Best 1,350 to 1,500-lb. steers \$6.25@6.40; good prime 1,200 to 1,300-lb. do., \$5.85@6.15; best 1,100 to 1,200-lb. shipping steers, \$5.50@5.90; medium butcher steers, 1,000 to 1,100 lbs., \$5.15@5.50; light butcher steers, \$4.50@5; best fat cows, \$4.35@5; fair to good do., \$3.40@4.15; common to medium do., \$3@3.50; trimmers, \$2.50@3; best fat heifers, \$5.25@5.75; good do., \$4.60@5; fair to good do., \$4@4.50; stock heifers, \$4.25@4.50; best feeding steers, dehorned, \$5@5.25; medium to good feeding steers, \$4.75@5; stockers, all grades, \$4.25@4.50; best bulls, \$5@5.25; bologna bulls, \$4@4.65; stock bulls, fair to good, \$3.50@4; best milkers and springers, \$5@6; good to best do., \$35@45; common to good do., \$25@35.

The hog market opened generally 15@20c higher on all the mixed grades and York weights, and 10@15c higher on pigs. The heavier grades sold generally from 10@20c higher. The bulk of the good quality mixed grades and York weights sold for 7c per pound, with some of the heavier mixed around \$6.85@6.95. Heavy hogs from \$6.50@6.75. Pigs mostly at 7c per pound. Roughs, \$5.65@5.75; stags, \$4.25@5. Market ruled fairly active at the prices; hogs are well cleaned up; market closing steady at the opening prices.

Lamb market opened active today; most of the choice handy clipped lambs selling at \$5.75@5.85; wool lambs, \$6.75@6.90; one or two loads choice, 7c; heavy wools, 6c; few at \$6.25. Look for steady prices the balance of the week unless receipts should be heavy. Majority of receipts now clipped lambs; wool lambs should all be marketed this week. Sheep market was dull today; most of the choice ewes selling at \$3.50@3.75; wethers, \$4@4.25. Look for about steady prices on sheep balance of week.

We quote: Best handy clips, \$5.75@5.85; heavy clips, \$4.90@5; bucks, \$2.50@3.25; best wool lambs, \$6.75@6.90; heavy do., \$6@6.25; yearlings, \$4.75@5; wethers, \$4@4.25; ewes, \$3.50@3.75; cull sheep, \$1.50@3; veals, choice to extra, \$7.75@8; fair to good do., \$6@7; heavy calves, \$4@5.

Chicago.

April 17, 1911.

Cattle. Hogs. Sheep.
Receipts today17,000 23,000 20,000
Same day last year..26,241 38,781 13,802
Receipts last week..48,472 120,978 74,651
Same week last year..49,086 88,778 60,541

The unusually small supply of cattle today for a Monday made a better early market, with desirable offerings selling 10@15c higher, but there was a smaller demand than might have been expected.

After the most pressing orders were filled the market became slow at no more than steady prices. A big bunch of prime weighty steers went for \$6.65. Hogs were in good demand this morning at 5@10c higher than early prices, but dullness prevailed towards noon. Sales ranged at \$6.90@6.65, compared with \$5.85@6.75 a week ago. Hogs received last week averaged in weight 238 lbs., compared with 242 lbs. several weeks ago, 229 lbs. a year ago and 211 lbs. two years ago. Stags sold at \$6.10@6.55, subject to 80 lbs. dockage per head, while boars sold at \$2.50@3 and "governments" at \$2.50@5.25. Pigs brought \$6.30@6.55. Sheep and lambs were in improved demand and averaged a little higher for the best on account of the moderate receipts for Easter Monday. This followed last week's decline of 40@60c in the market, due to the poor demand. The sales included two double-decks of feeding lambs at \$5.50 for shipment to Michigan. Clipped flocks were salable as follows: Lambs, \$4.50@5.50; wethers, \$3.65@4.30; ewes, \$3.25@4; yearlings, \$4.25@4.90. Woolled lambs were salable at \$5@6.15, and a consignment of woolled yearlings brought \$5.50. The tendency is for sheep and lambs to come to market on the slightest encouragement, and increased supplies appear probable. This is likely to force further declines. Cattle should be marketed conservatively for the near future and until conditions change hogs that are matured had best be shipped. Others should be kept back.

Cattle were in an extremely bad way nearly all of last week, with decidedly more furnished than the trade called for, and prices suffered average reductions of 25@35c. The better class of cattle have weakened the most this spring, cheap beef being largely wanted everywhere, and cows and heifers have sold relatively better than steers, while even bulls, cutters and canners have sold much better than might have been expected under the circumstances. Beef steers sold last week at \$5@5.75 for the commoner lots and at \$6.30@6.80 for the better class of weighty shipping lots, with pretty good lots of cattle going at \$6.10@6.25. Good to prime yearlings sold at \$6.10@6.75, and export steers found buyers at \$5.65@6.15. Cows and heifers on the butchering order brought \$3.60@6, while cutters sold at \$3.10@3.50, canners at \$2.35@3 and bulls at \$3.90@5.75. The great activity that was seen constantly in stockers and feeders several weeks ago was lacking last week, and the general run of the offerings ruled still lower, but the best lots continued to sell at high figures, with no large supplies. Stockers sold at \$4@5.50 and feeders at \$5 to \$5.85, while stock and feeder heifers had a fair sale at \$3.45@

4.65. Calves were offered in liberal numbers, the receipts coming largely from the dairy districts tributary to Chicago, and prices looked low when compared with those seen earlier in the spring, sales ranging at \$3@6.95 per 100 lbs. Milk and springers were in ample supply and in only moderate demand at \$30@60 per head, the best demand being for prime Holstein cows to ship east. The great bulk of the beef steers sold during the week at \$5.65@6.40, and country shippers felt greatly disappointed in many instances with the prices received. Reports from the country are that grass is good and that farmers are going to do a good deal of grazing this spring and summer.

Hogs had their rallies at times last week, fair to good advances taking place, but the general trend of the market continued downward, and the lowest prices seen in two years were paid. Little that was of an encouraging nature could be discerned in the situation, and the only hope for the market lies in curtailments in the offerings. This is difficult at a time when the hogs are maturing so fast, with many droves that have already reached maximum weights. Furthermore, these extremely heavy hogs are very bad sellers, being neglected by eastern shippers and selling at bottom figures. As is always the case when light bacon hogs and pigs are especially scarce, they are in great demand and sell at top prices. Monday is still the day of particularly generous receipts, nearly 49,000 hogs arriving on the opening day last week, and, of course, such liberal offerings mean sharp breaks in prices. It seems to be the best policy for farmers who own hogs that weigh as much 225 lbs. to get them to market without unnecessary delay, although no one can say just what the future will bring forth. On the other hand, it would be folly to sacrifice healthy pigs before reaching maturity.

Sheep and lambs were extremely bad sellers last week, the restricted general demand, such as is usually expected at this season of the year, resulting in sharp breaks in prices all along the line, as the receipts were maintained on altogether too generous a scale. An exception was furnished in the demand for prime fat light-weight lambs adapted for the Easter trade, these having a good outlet at a good premium over other offerings, but even these failed to bring what in other years would have been regarded as fair prices. The general market suffered reductions of 50@65c per 100 lbs., the bad condition of the Buffalo and other eastern markets exerting a detrimental influence, while the Missouri river markets were also badly overstocked. Prime clipped lambs were much the best sellers, and some Ohio flocks were received that were forwarded from very near Buffalo, the Chicago market being the higher of the two markets. Both sheep and lambs were apt to weigh heavily, and the lighter lots were much the best sellers, as usual. Only a small percentage of unshorn flocks showed up, and they were discriminated against by buyers.

Horses would have sold on the whole more satisfactorily last week had the receipts been held down to smaller numbers, and this is true not only of the commoner grades, but also of medium to pretty good animals. There is still a fairly active outlet for choice horses, as well as for farm horses, but the general trade is smaller than heretofore, and country shippers should send in smaller numbers. Farm horses are wanted at \$135 and upward, with prime breeding mares salable up to \$225@265, while good 1,200 to 1,500-lb. work horses go at \$180@210. Good drafters are selling at \$215@245 and high-grade heavy drafters at \$250@275 and occasionally higher. Drivers are usually sold at \$150@250. F.

LIVE STOCK NOTES.

A Kansas cattle feeder who marketed recently four car loads of branded Wyoming heifers at Kansas City figures that his profits were nearly \$5 per head. They were fed out last winter, and this shipment was the first out of 300 head, their average weight being over 1,000 lbs., and the price obtained \$5.60 per 100 lbs. The owner has made a great success in cattle feeding for many years. The heifers were fed a ration of ground corn, cobs and all, cottonseed meal and alfalfa, the whole making a very rich feed. The cattle gained 300 lbs. per head.

Hogs are being marketed steadily from most sections, now that they are maturing rapidly, many swine having become too heavy in weight to be good sellers. Prices have been the lowest seen in a period of two years, and there does not seem to be much chance of a radical upturn so long as marketings are maintained at recent proportions. Of course, the cheapness and abundance of corn has all along been a powerful incentive to making hogs heavy, and it may be some time yet before this is changed.

Kentucky and Tennessee have the largest "crops" of spring lambs ever known, according to all accounts, and by June there are expected to be liberal marketings. Meanwhile the markets of the country will be supplied with sheep and lambs from middle western feeding sections and by Colorado. Despite their disappointment the past season in not obtaining high prices for their flocks, the demand for feeders is unabated, many farmers wanting sheep and lambs for summer grazing.

The Chicago market for milkers and springers has not been very animated recently, and all that has kept the best grade of Holstein cows from declining in price was their scarcity. As for the commoner cows, slaughterers stood ready to pay about as high prices as dairymen, and a good many have gone for cheap beef. Owners of dairies and farmers generally are more particular than ever before in the grade of cows they buy.

THIS IS THE FIRST EDITION.

In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

April 13, 1911.

Cattle.

Receipts, 1,478. Market 15@25c lower than last Thursday.

We quote: Extra dry-fed steers and heifers, \$5.75@6; steers and heifers, 1,000 to 1,200, \$5.25@5.50; steers and heifers, 800 to 1,000, \$4.75@5; steers and heifers that are fat, 500 to 700, \$4.25@4.75; choice fat cows, \$4.50@5; good fat cows, \$4@4.25; common cows, \$3.25@3.75; canners, \$2.50@3; choice heavy bulls, \$4.75@5; fair to good bolognas, bulls, \$4.25@4.50; stock bulls, \$3.50@4; milkers, large, young, medium age, \$4@5; common milkers, \$25@35.

Roe Com. Co. sold Rattkowsky 2 cows av 1,010 at \$4.35; to Newton B. Co. 2 steers av 840 at \$5, 19 do av 1,002 at \$5.50, 2 cows av 985 at \$4.50, 4 heifers av 717 at \$5, 1 steer weighing 510 at \$4.50; to Regan 2 heifers av 500 at \$4.75; to Newton B. Co. 1 do weighing 740 at \$4.50, 6 do av 791 at \$5.25, 13 stockers av 524 at \$4.75; to Heinrich 2 heifers av 740 at \$5, 12 steers av 866 at \$5.40; to Newton B. Co. 1 cow weighing 870 at \$3.50, 21 steers av 1,002 at \$5.40; to Breitenbeck 6 cows av 1,030 at \$4.50; to Newton B. Co. 1 steer weighing 950 at \$5.50, 1 cow weighing 940 at \$5, 4 do av 832 at \$4.25, 1 do weighing 1,040 at \$4.25; to Sullivan P. Co. 2 bulls av 2,030 at \$4.75.

Spicer & R. sold Bresnahan 8 heifers av 566 at \$4.70, 2 do av 660 at \$5, 1 cow weighing 840 at \$4, 1 heifer weighing 530 at \$4.50, 4 do av 665 at \$5.10, 1 cow weighing 830 at \$3.25, 10 stockers av 648 at \$4.90; to Goose 6 cows av 1,026 at \$4.25; to Mich. B. Co. 1 bull weighing 1,300 at \$4.50, 1 do weighing 1,390 at \$4.65, 1 do weighing 1,900 at \$4.90, 2 heifers av 465 at \$4; to Sullivan P. Co. 2 cows av 915 at \$3.50; to Joe Rattkowsky 3 do av 1,060 at \$3.85, 3 butchers av 637 at \$4.40, 3 cows av 847 at \$4.20; to Newton B. Co. 17 steers av 853 at \$5.40, 1 cow weighing 760 at \$2.75, 1 do weighing 810 at \$3, 20 steers av 923 at \$5.60, 4 do av 760 at \$5, 22 do av 1,009 at \$5.60, 12 do av 950 at \$5.50, 2 cows av 1,140 at \$4.50, 2 do av 925 at \$3.50, 1 do weighing 730 at \$2.50; to Mich. B. Co. 20 steers av 1,124 at \$6, 20 do av 1,034 at \$5.90, 10 do av 730 at \$5, 1 heifer weighing 1,430 at \$5.90, 2 butchers av 600 at \$4.25; to Kamman B. Co. 1 steer weighing 940 at \$5.25, 6 do av 1,140 at \$5.60, 2 do av 1,090 at \$5.35, 1 do weighing 800 at \$4.75, 8 cows av 991 at \$4, 1 do weighing 860 at \$3; to Kamman 4 cows and bulls av 1,220 at \$4.35, 12 steers and heifers av 893 at \$5.35.

Bishop, B. & H. sold Hammond, S. & Co. 1 cow weighing 920 at \$3.75, 1 cow weighing 940 at \$4.25, 1 bull weighing 1,490 at \$4.65, 1 steer weighing 810 at \$5.25, 9 do av 1,046 at \$5.75, 12 do av 746 at \$5.25, 3 do av 923 at \$5.25, 2 heifers av 530 at \$4.50, 4 cows av 1,005 at \$4, 3 do av 933 at \$3.50, 3 do av 880 at \$4.25, 6 do av 1,141 at \$4.75, 3 do av 870 at \$3.50, 2 bulls av 1,115 at \$4.75, 9 steers av 886 at \$5.50; to Sullivan P. Co. 2 cows av 1,035 at \$4.50, 1 steer weighing 1,000 at \$5.25, 1 bull weighing 1,370 at \$4.50; to Mich. B. Co. 1 do weighing 1,830 at \$4.50; to Breitenbeck 9 butchers av 807 at \$5.05; to Rattkowsky 3 cows av 970 at \$4.25; to Marx 11 steers av 1,003 at \$5.55, 16 butchers av 745 at \$5; to Newton B. Co. 5 cows av 900 at \$3.40, 1 do weighing 820 at \$2.50; to Schuman 2 steers av 965 at \$5.40; to Parker, W. & Co. 6 cows av 965 at \$4.25, 2 do av 750 at \$3.25; to Sullivan P. Co. 3 steers av 866 at \$5.50; to Mich. B. Co. 1 bull weighing 1,920 at \$4.50, 3 cows av 1,030 at \$3.75; to Sullivan P. Co. 1 bull weighing 1,820 at \$5; to Gerish 19 steers av 1,070 at \$5.80, 9 do av 970 at \$5.60; to Sullivan P. Co. 1 cow weighing 1,250 at \$5.25, 3 do av 900 at \$4.50, 11 steers av 794 at \$5.25, 6 cows av 908 at \$4.25, 2 do av 890 at \$3.25; to Thompson Bros. 4 cows av 807 at \$4, 9 steers av 777 at \$5; to Sullivan P. Co. 1 bull weighing 1,820 at \$5, 1 do weighing 1,580 at \$4.60, 1 steer weighing 1,020 at \$5.75, 3 cows av 944 at \$4.50; to Breitenbeck 3 cows av 973 at \$3.90; to Newton B. Co. 4 do av 940 at \$3.40; to Sullivan P. Co. 6 butchers av 846 at \$5.75, 4 cows av 970 at \$4.40, 9 butchers av 805 at \$4.85, 4 cows av 952 at \$3.60, 5 butchers av 690 at \$5, 3 do av 1,083 at \$5.60, 7 steers av 994 at \$5.80; to Parker, W. & Co. 3 cows av 1,013 at \$4, 1 bull weighing 1,780 at \$5, 3 steers av 907 at \$5.25.

Haley & M. sold Rattkowsky 1 cow weighing 1,000 at \$3.50, 4 cows and bulls av 905 at \$4.45; to Lachalt 11 steers av 785 at \$5.40, 4 do av 895 at \$5.15; to Regan 1 heifer weighing 700 at \$5; to Goose 7 cows av 1,014 at \$4.50; to Marx 2 do av 950 at \$4.60, 5 steers av 768 at \$5.35; to Hammond, S. & Co. 26 do av 960 at \$5.55, 10 do av 682 at \$5.25; to Heinrich 4 steers av 1,430 at \$6.10, 4 do av 841 at \$5.50; to Starrs 4 do av 1,060 at \$5.10; to Schuman 9 do av 706 at \$5.25.

Sandall sold Sullivan P. Co. 15 steers av 844 at \$5.40, 4 cows av 927 at \$4, 4 butchers av 927 at \$4.75, 2 canners av 765 at \$2.50.

Stephens sold Mich. B. Co. 11 butchers av 843 at \$5, 6 cows av 850 at \$4.25.

Lowenstein sold same 5 cows av 1,070 at \$4.50.

Heeney sold Parker, W. & Co. 2 cows av 830 at \$3.25, 16 do av 997 at \$4.25, 2 bulls av 1,200 at \$4.50.

Johnson sold Hammond, S. & Co. 2

steers av 870 at \$5.35, 4 butchers av 695 at \$5, 1 cow weighing 1,070 at \$4, 1 bull weighing 800 at \$4.50.

Veal Calves.

Receipts, 1,132. Market 50@75c lower than on Wednesday or last week. Best \$7@7.25; others, \$4.50@6.50.

Bishop, B. & H. sold Newton B. Co. 3 av 145 at \$7.75, 6 av 150 at \$7.50, 3 av 100 at \$6, 21 av 140 at \$7.50; to Hammond, S. & Co. 3 av 165 at \$7.50, 6 av 150 at \$7.75; to Parker, W. & Co. 19 av 125 at \$7.50, 25 av 140 at \$7.75; to Sullivan P. Co. 13 av 90 at \$5, 35 av 125 at \$5.50, 16 av 135 at \$7.50; to Mich. B. Co. 11 av 135 at \$7.75; to Parker, W. & Co. 20 av 130 at \$7.25, 2 av 100 at \$5, 31 av 135 at \$7.25, 5 av 104 at \$5.

Roe Com. Co. sold Newton B. Co. 6 av 115 at \$5, 24 av 135 at \$7.25, 3 av 145 at \$7.50, 5 av 130 at \$7.50; to Thompson Bros. 10 av 108 at \$5.50, 34 av 135 at \$7.

Haley & M. sold Sullivan P. Co. 11 av 125 at \$7.

Spicer & R. sold Hammond, S. & Co. 7 av 125 at \$6, 24 av 130 at \$7.50; to Goose 2 av 115 at \$6.50, 9 av 140 at \$7.50; to Bront 7 av 125 at \$6.25; to Breitenbeck 48 av 130 at \$6.75; to Hammond, S. & Co. 21 av 145 at \$7.50, 3 av 140 at \$7.50, 8 av 145 at \$7.75, 9 av 140 at \$7.50.

Stephens sold Mich. B. Co. 6 av 135 at \$7.50.

Sharpe sold same 13 av 145 at \$8.

Kohler sold same 18 av 145 at \$8.

Sandall & B. sold Hammond, S. & Co. 31 av 133 at \$7.10, 12 av 110 at \$5.

Johnson sold Brant 2 av 110 at \$5, 13 av 130 at \$7.25.

Eddy sold Goose 3 av 107 at \$6, 11 av 130 at \$7.

Sheep and Lambs.

Receipts, 4,545. Market 50c lower than last Thursday; steady with Wednesday. Best wool lambs, \$6@6.25; fair to good wool lambs, \$5.50@6; light to common lambs, \$5@5.50; clip lambs, \$4.75@5.25; fair to good sheep, \$4@4.50; culls and common, \$3@3.50; spring lambs, \$6.50@7.50.

Bishop, B. & H. sold Parker, W. & Co. 127 lambs av 75 at \$6.25; to Sullivan P. Co. 33 do av 90 at \$5.60, 9 sheep av 125 at \$3.75, 12 do av 80 at \$4.50, 11 lambs av 90 at \$5.50, 42 clip sheep av 75 at \$4.50, 15 clip lambs av 70 at \$5, 27 wool lambs av 85 at \$5.50; to Mich. B. Co. 125 do av 75 at \$6.50; to Newton B. Co. 41 sheep av 100 at \$4.25.

Roe Com. Co. sold Newton B. Co. 133 clip lambs av 78 at \$5.25; to Mich. B. Co. 3 do av 100 at \$5, 17 lambs av 67 at \$6.

Adams sold Nagle P. Co. 25 clip lambs av 85 at \$5.25, 366 wool lambs av 78 at \$6.25.

Spicer & R. sold Street 58 lambs av 70 at \$6, 28 do av 85 at \$5.75; to Hammond, S. & Co. 2 sheep av 105 at \$3.50, 25 lambs av 90 at \$5.35.

Sandall & B. sold Hammond, S. & Co. 9 lambs av 95 at \$5.75.

Hogs.

Receipts, 4,366. Market steady to firm at Wednesday's prices; 50c lower than last week.

Range of prices: Light to good butchers, \$6.40@6.45; pigs, \$6.50; light yorkers, \$6.40@6.45; heavy, \$5.80@5.90; mixed, \$6@6.40.

Bishop, B. & H. sold Hammond, S. & Co. 2,750 av 170 at \$6.45, 825 av 200 at \$6.40, 120 av 225 at \$6.35.

Haley & M. sold same 350 av 170 at \$6.45, 250 av 190 at \$6.40, 150 av 190 at \$6.25, 250 av 210 at \$6.25.

Bishop, B. & H. sold Parker, W. & Co. 756 av 176 at \$6.45.

Spicer & R. sold same 650 av 170 at \$6.45, 355 av 190 at \$6.40, 225 av 220 at \$6.25.

Roe Com. Co. sold Sullivan P. Co. 740 av 190 at \$6.45.

Friday's Market.

April 14, 1911.

Cattle.

Receipts this week, 1,615; last week, 1,478. Market opened Friday with a light run in all departments, but plenty for the demand, as the run on Thursday was a record-breaker for this time of the year, nearly 10,000 hogs arriving, breaking all previous records for April. Still every head arriving was sold and business for the week was over by noon Friday. In the cattle department the trade was dull at Thursday's prices on all grades.

We quote: Best steers and heifers, \$5.75; steers and heifers, 1,000 to 1,200, \$5.25@5.50; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4.50@5; choice fat cows, \$4.50@4.85; good do., \$4@4.25; common cows, \$3.50@4; canners, \$2.50@3; choice heavy bulls, \$5; fair to good bologna bulls, \$4.50@4.75; stock bulls, \$3.25@3.75; milkers, large, young, medium age, \$4@5; common milkers, \$25@35.

Veal Calves.

Receipts this week, 2,032; last week, 1,132. The veal calf trade was dull at Thursday's closing prices, the best bringing \$7 per hundred. Never was so many calves seen on the Detroit stock yards as there were this week. Still all were sold. We quote: Best grades, \$6.75@7; others, \$3.75@6.50.

Sheep and Lambs.

Receipts this week, 3,975; last week, 4,545. The run of sheep and lambs was very light and the market held steady with the opening on Thursday. Best wool lambs, \$6@6.25; fair to good do., \$5.75; light to common lambs, \$5@5.25; clipped lambs, \$4.50@5.25; fair to good sheep, \$4@4.50; culls and common, \$3@3.75.

Hogs.

Receipts this week, 9,591; last week, 4,366. The hog trade was 5c lower than on Thursday, bulk of sales being at \$6.40. Packers were not looking for such heavy receipts here this week and bought heavily in the west early in the week, which made them very bearish.

Range of prices: Light to good butchers, \$6.40; pigs, \$6.50; mixed, \$6@6.40; heavy, \$6.10@6.30.

LIVE STOCK NOTES.

Young hogs made faster gains upon corn meal and skim-milk than upon shelled corn and skim-milk, but, subtracting cost of grinding, there was little to favor the meal, according to experiments just completed at the Maryland Experiment Station. It was also found that pigs fed corn soaked for 24 hours made both faster and cheaper gains than the same fed dry or given freshly mixed with water. Soft coal in unlimited quantities seemed not to be hurtful to pigs confined in pens, another experiment showed.

A Chicago stock yards paper of late date says: "A new set of conditions has been established in the southwest. Instead of buying stock cattle in Texas, as was their custom from the infancy of their industry, many Kansas and Oklahoma grass owners are going to Kansas City for their stock cattle this spring, so that a very large proportion of the cattle reaching that market is going into maturing hands."

Cattle, hogs and sheep are marketed this year unusually heavy in their average weight, due to the unusual abundance and cheapness of corn and other feeds everywhere. Corn has been selling in the country around 40c per bushel, and oats for May delivery sell in the Chicago market below 30c. Meanwhile the popular demand centers on the fat light weights of cattle, hogs and lambs.

Injunction proceedings have been started by the sanitary district of Chicago against sixteen firms doing business at the stock yards to restrain them from dumping refuse into "Bubbly Creek," thereby damaging the main channel of the Chicago river and endangering the health and lives of the public. The packing firms have been called before the engineering committee.

Since the first of April all stations of the Chicago post office have been closed on Sundays, and all who desire special delivery stamps on their letters. The sale of these stamps has increased enormously, and the post office authorities have had to greatly increase the force of special delivery boys. In order to facilitate receipt of letters from live stock feeders and shippers containing instructions regarding the sale of and remittance of funds of Monday consignments, stock yards firms are advising their country patrons to mail letters early enough to reach Chicago Saturday. The Chicago postmaster has arranged for deliveries to the firms in the Chicago Live Stock Exchange building on Mondays an hour earlier than heretofore, the carriers to leave the stock yards post office at six o'clock in the morning.

It is learned that the depleted condition of the Texas cattle ranches is likely to lead to the large importation of cattle from Mexico to graze on the luxuriant grass that has been developed by the recent good rains.

"Unless the lamb market makes some goodly gains, we stand to lose around \$1 per head on our feeding operations this season," remarked F. P. Rudolph, the widely known farmer and sheep feeder, of Colorado, who marketed a consignment of prime woolled lambs at Chicago recently at \$6.40, their average weight being around 82 lbs. "Unless I miss my guess, the farmer feeder of the eastern states will not be the hungry buyer of feeding lambs the coming fall that he was last fall. However, it seems to me that he needs about as much as we do the valuable fertilization that the lambs leave."

J. D. Sturgis, the well-known stock feeder of Michigan, marketed at Chicago recently a consignment of 275 head of shorn western fed lambs that averaged 81 lbs. at \$6 per 100 lbs., a most satisfactory figure. "These lambs were bought at Chicago," remarked Mr. Sturgis. "They showed a reasonable profit and left about 80 loads of manure valued at \$1.00 per load. They cost \$5.70 on the Chicago market, averaging 56 lbs. Before shipping the lambs weighed 85 lbs., having sheared 35 pounds of wool. Thus, they gained 35 lbs. on the four months' feed. Shocked corn, shelled corn and clover hay once a day for three months, and then shelled corn and clover hay the balance of the feeding period, consisted of their ration. They were fed in the open with the exception of the last six weeks, when they were shut in. Western wool brought 21c at Middleburg recently. This is the only sale I have heard of, buyers being slow to take hold. There are a good many western lambs back in Michigan. The bulk are being shorn."

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat on April 1 in the state was 87, in the southern counties 88, in the central counties 84, in the northern counties 88 and in the upper peninsula 96.

The condition one year ago in the state was 88, in the southern counties 82, in the northern counties 97 and in the central counties and upper peninsula 93.

The average depth of snow on March 15th in the state was 1.77, in the northern counties 4.02 and in the upper peninsula 11.98 inches, in the southern counties 0.10 and in the central counties 0.14 of an inch.

On March 31st the average depth of snow in the state was 1.74, in the southern counties 1.08, in the central counties 2.16, in the northern counties 1.87 and in the upper peninsula 4.95 inches. The number of days protection to wheat by snow in the state was 6, in the southern and central counties 3, in the northern counties 12 and in the upper peninsula 24. In answer to the question, "Has wheat during March suffered injury from any cause?" 245 correspondents in the southern counties answered "yes" and 133 "no," in the central counties 138 answered "yes" and 37 "no," in the northern counties 96 answered "yes" and 68 "no" and in the upper peninsula 5 answered "yes" and 29 "no." The average condition of wheat in the state, on April 1, for the past five years was 82 and the average yield per acre for the same period was 16 bushels; this shows the present condition is five per cent above the five year average and with favorable weather during the balance of the season this year's yield should be considerably above the normal. The total number of bushels of wheat marketed by farmers in March at 103 flouring mills is 127,492 and at 91 elevators and to grain dealers 126,843 or a total of 254,335 bushels. Of this amount 193,494 bushels were marketed in the southern four tiers of counties, 49,168 in the central counties, and 11,673 in the northern counties and upper peninsula.

The estimated total number of bushels of wheat marketed in the eight months, August-March, is 8,200,000 and the amount of wheat yet remaining in the possession of growers, after deducting 2,000,000 bushels used for seed and home consumption is 5,000,000 bushels. Fifty-seven mills, elevators and grain dealers report no wheat marketed in March.

Rye.—The average condition of rye is 90 in the state and northern counties, 91 in the southern counties, 88 in the central counties, and 97 in the upper peninsula. One year ago the condition was 92 in the state, 89 in the southern counties, 95 in the central counties, 98 in the northern counties and 93 in the upper peninsula.

Meadows.—The average condition of meadows in the state is 86, in the southern counties 88, in the central and northern counties 83 and in the upper peninsula 95. The condition one year ago was 92 in the state, 90 in the southern counties, 94 in the central counties and upper peninsula and 93 in the northern counties.

Live Stock.—The average condition of horses and swine in the state is 96, cattle 94 and sheep 95.

Fruit.—Fruit correspondents in all parts of the state are mostly of the opinion that fruit prospects at present are very favorable for an abundant crop. The following table shows the prospect for an average crop of the various kinds of fruit in the different sections of the state.

	State.	Sou.	Cent.	Nor.	Up'r Pen.
Apples	88	88	92	90	97
Pears	88	88	86	88	95
Peaches	85	85	84	84	96
Plums	86	86	85	89	100
Cherries	90	90	88	94	96
Small fruit	88	88	83	93	98

In regard to the question, "What per cent of orchards are being sprayed?" correspondents report 32 per cent in the state and southern counties, 33 in the northern counties, 29 in the central counties and 23 in the upper peninsula.

ADDITIONAL VETERINARY.

Worms in Pigs.—I have some pigs that are troubled with worms and I wish you would tell me what to give them. W. W. T., Remus, Mich.—Open abscess with a clean knife and wash it out daily with one part coal-tar disinfectant and 20 parts water. For worms in hogs give fluid extract of spigelia and fluid extract of senna and the dose of each is ½ oz. doses and it is good practice to give the medicine every eight hours until the bowels act freely, then the hog will be pretty well rid of worms. If your pigs are not matured treat them according to weight, for the dose I have prescribed is enough for a hog weighing 150 pounds or more.

Arsenical Poisoning.—One hundred and fifty-eight of my sheep have been partially poisoned on account of my hay being sprinkled with either strychnine or arsenic. I was at a loss to know what was causing my sheep to sicken, but now I am quite sure that someone had poisoned their food in above way. The sheep seem to last from two to four days after showing symptoms of sickness. Now, if I am right in suspecting poison, can any of them be saved? J. S. G., St. James, Mich.—In cases of poisoning by strychnine, tannic acid, or vegetables containing should be freely administered, followed by an emetic, or the stomach pump. The tetanic spasms are best controlled by chloral or bromide of potash; however, I imagine it would be too late to use any of these remedies. Toxic doses cause trembling and twitching of the muscles, lasting a minute or two, but, of course, these spasms soon return and large doses usually paralyze the cord, much the same as a blow that would cause almost instant death. Full medicinal doses of arsenic, if long continued, cause oedema, an itching of the eyelids, increased flow of saliva, nausea, vomiting of mucus, diarrhoea or dysentery, weak heart, soreness over region of the stomach, an itchy condition of the skin, with eruptions and giving the skin a yellow appearance. In toxic doses it causes two different sets of symptoms, first producing an inflammation of a mucus membrane of stomach and an inflammation of the bowels with shivering, retching, vomiting, thirst, straining, purging, with blood stools, violent colic pains, weak heart, sometimes bloody urine, followed by delirium, collapse, coma and death, but in other forms it produces greater nervousness and profound coma as if an overdose of opium had been given. In chronic arsenical poisoning which is very common around tin and copper smelting work, the symptoms are indigestion, thirst, wasting, chronic disease of joints and bones, the knee joints swell and the animal goes lame, is hide-bound, hair falls off, skin gets scurfy, the teeth turn black and fall out; besides, the bones usually become diseased. Now, if your sheep show above symptoms your suppositions are perhaps well grounded, but I have a doubt. Try and write down as many of their symptoms as you can and I shall try to make a correct diagnosis.

HOME AND YOUTH

A TREE.

BY Z. I. DAVIS.

A shade by day, a tent by night,
For pilgrims an abode.
It upward grew for man's delight,
A green tree by the road.

Like bannerets, its glossy leaves
Toss gently to and fro;
Here joyful children garlands weave,
Where songs of Heaven flow.

Its branches, like strong arms, extend
The sunbeams to enfold,
Then with a playful, mild caress
Sift down the flakes of gold.

List to the message of the tree
That speaks at sunset's glow;
"God cares for you. He cares for me,
In Him we live and grow."

The trees, though speaking, yet are
Mute.
Come, plant them in the sod,
That they may yield abundant fruit
And help men think of God.

JUST A FEW TREES.

BY CLIFFORD V. GREGORY.

Florence dropped her head upon the desk of the little country schoolhouse and cried. She was almost discouraged. She had tried so hard, but the children just wouldn't take any interest in their studies. They frankly owned that they hated school, and they stayed away on the slightest pretext. And Florence had almost given up trying to find out where the trouble lay. She had surely done all she could to make it interesting for them. She had always liked to go to school when she was a little girl. She smiled through her tears as she remembered the pretty little white schoolhouse, nestled among the trees and flowers.

Suddenly she sat up straight. Could that be the reason? Mentally she compared that cosy little schoolhouse with this—dingy and desolate, standing in the middle of a bare and cheerless yard. Could she blame the children for not liking it? For a long time she sat thinking; then she started down the road toward her boarding place, swinging her dinner pail and humming a little tune.

That night she wrote a long letter to her cousin who was attending the state agricultural college. In a few days the reply came, together with a good-sized package of bulletins. She read the letter several times and studied the bulletins carefully. She went about the rest of the week with such a happy, infectious smile on her face, and her temper so unruffled in spite of all provocations, that the children wondered "what had got into teacher" and almost forgot to be bad.

Florence boarded at the director's, and after supper Friday night she broached the subject to him.

"I dunno," he said slowly, "Teacher's has tried plantin' trees there ever since the schoolhouse was first built, but they allus died."

"It was because they didn't do it right," persisted Florence. "You can't expect a tree to grow in a hole in the sod. Now why can't we have a picnic some day, and have everyone in the district come. Someone can bring a plow and someone else a harrow, and everyone can bring a tree or a bush or some flower seed. We can have a splendid tree, and fix up the school grounds at the same time."

Mr. Potter smiled, but he could not resist her enthusiasm. "Waal, go ahead and do what you can," he said. "I'll bring a team and plow. When do ye calkulate to have the doin's?"

"Next Friday. That's Arbor Day, you know. And say," she added coaxingly, "Won't you let me take old Ruth tomorrow to go around and see some of the folks about it?"

"I might as well say yes and be done with it," laughed Mr. Potter. "Ye'd talk me into it sooner or later anyhow."

Florence's enthusiasm was contagious, and before night the whole district was almost as heartily in favor of the plan as she was herself—that is, all except Jim Graves, or "Old Man Graves," as he was usually called.

"Can't the children larn jest as well without trees around the schoolhouse?" he asked, shifting his quid into the other cheek. "I send my Johnnie to school to study his books, and not to pick flowers and play in the shade."

"But you don't understand, Mr. Graves," said Florence, leaning toward him. "If we make the school grounds a beautiful place that the children will love,

they will take so much more interest in their lessons—"

"Pooh! Forty years ago I went to school in a little log schoolhouse and sat on a hard plank bench, and the teacher put interest into us with a birch rod. We didn't larn many fol-de-rols, but we did larn a dum sight more common sense, if I dew say it."

Florence looked around the dooryard, filled with sticks, tin cans, and old machinery, and sighed. An argument for the beautiful would evidently have little effect on Mr. Graves.

"But you'll let Johnnie and Mary come, won't you?" she asked.

"Not much I won't! Let them waste a whole day monkeyin' around that way? Huh! They might a blamed sight better stay home and plant taters. And what's more, the board won't allow you any pay far that day if I can help it. Taxes is high enough now, without payin' teachers fer havin' picnics!"

But the picnic idea grew apace, notwithstanding "Old Man Graves'" objections. Friday morning dawned clear and warm. Before nine o'clock the people began to arrive. The Baxters, big and little, came in the big lumber wagon, with a well filled lunch basket in front.

Mr. Potter brought his team and plow, Jimmie Forman, one of the big boys of the district, came with a harrow, and several of the other boys brought spades and hoes. Mr. and Mrs. Anderson had no children in school, but they were very much interested all the same, and their buggy was so full of trees that it looked like a forest on wheels.

Everybody brought something, from an elderberry bush to a dried-apple pie, and everyone was out for a good time. Even old Mr. Brown, who was reported not to have smiled for five years, cracked a dry joke at which everyone laughed uproariously, though there wasn't really anything very funny about it.

Mr. Potter set to work at once to plow the yard. "I guess we might as well plow it all up while we're at it," he remarked. "It's nothin' much but weeds now, and we can smooth it off and sow it to grass."

"I thought of that, too," chimed in Grandpa Hodges. "I've got a bag of blue grass seed in my buggy."

Jimmie Forman followed the plow with his harrow, and in a couple of hours they had the ground all fine and level. In the meantime the others had not been idle. The men were setting new posts and fixing up the dilapidated fence, while the women and girls were rapidly transforming the dirty interior of the little schoolhouse into at least a semblance of respectability.

"Jest tie my team to the wagon, Tommy, so they can git a bite of hay," said Mr. Potter to one of the crowd of boys who were trying their best to help, but who only succeeded in getting in the way. "Here, Walter, help me stretch this string across the yard," he went on. They had the string nearly stretched when Florence came running out of the schoolhouse.

"What are you going to do with that?" she demanded.

Mr. Potter looked up with an air of puzzled surprise. "Why, plant trees by it, of course," he said.

"What plant them in rows, and right in front of the schoolhouse, too?"

"Why not? I never heard of anyone plantin' trees any other way than in rows. And shade's just as good in front as anywhere else, ain't it?"

"But it isn't just the shade we want. We want to make the whole yard look like a picture. This front space ought to be all left clear for a playground, and the trees scattered around in groups at the side and back."

"Ho! Ho! Ho! How that would look! People would say we didn't know how to plant a tree straight. I can plant a corn field the straightest of any man in this county, and I guess I ain't goin' to be behind when it comes to plantin' trees."

"But we don't want a corn field in the school yard," persisted Florence. "We want it to look natural, and stiff and solemn rows don't look natural."

Half a dozen others had gathered around by this time, listening eagerly to the discussion. The men were mostly of the same opinion as Mr. Potter, but the women and girls thought that whatever "teacher" said must be right. The argument seemed likely to result in a deadlock, when Florence tactfully suggested that it was time for dinner.

The good things were soon spread on the grass on the opposite side of the road, and the hungry workers gathered around.

After dinner Florence ran into the schoolhouse and came back with one of

her bulletins. "Which is the prettiest?" she asked, holding it in front of Mr. Potter.

There, on opposite pages, were two pictures, one of a school yard filled with trees standing in stiff, straight rows up to the very door, the other having the schoolhouse for the central figure, with a large playground in front and the back and sides filled with trees and shrubbery. He studied them a moment and then looked up at Florence with a comical expression of resignation on his face.

"I might have known you'd have your own way, somehow or other," he said. "Come on, boys, the schoolma'am's the boss for the rest of the day."

Everybody worked with a will. Under Florence's direction clumps of trees were set along the back and sides of the yard, with bushes and flowering shrubs in between. Someone had brought a climbing rose, which was planted beside the schoolhouse door, and a space under one of the windows was made into a flower bed. Then the rest of the yard was sown to grass seed, and the tired but happy teacher dismissed her not less happy assistants.

"It's been the pleasantest day I've spent in a long time," said one worn looking mother as she was leaving. "The children make so much work that I don't get away from home very often."

"We've had a bully time, teacher," said Tommy. "But I wish Johnnie Graves could have been here. He had to stay at home and plant taters all day."

Florence turned abruptly back into the schoolhouse. She could hardly keep from crying again. It had been a great success—all but this. How could a man be so mean?

But Mr. Graves was not content with keeping his children away from the picnic, for he went to the next director's meeting, and, though Florence could never

find out what happened there, for Mr. Potter was extremely reticent on the subject, her next check was short \$1.75. She didn't care so much for the money, but this unmerited opposition was discouraging, to say the least.

But in all other ways the rest of the term was a grand success. There was no more lack of interest, for the children were as eager to go to school as their parents were to have them, and they gave the trees and flowers such painstaking care that, as Annie Baxter said, "they just couldn't help but grow." Johnnie Graves was as interested as anyone, and he came as near to being a model pupil from that time on as it is possible for a live twelve-year-old boy to be.

"There's so many things to learn about them trees and flowers that a feller don't have time to be bad," he explained.

Eight years had passed, and Florence was in a home of her own a good many miles away, when she received an awkwardly tied bundle by mail one afternoon. It was a picture of a neatly painted little schoolhouse, nestled against a background of spreading trees, and she looked at it fully two minutes before she recognized it as the scene of that Arbor Day picnic so long before. Then she picked up a little note that had fallen to the floor.

"Dere teacher," it ran, "I ain't much on ritin', but I want to say that I'm powerful 'shamed of the way I acted about fixin' up the skool yard that time, and if you're ever out here again, won't you come up to our place to dinner? Here's a two-dollar bill to pay for that day I cheated you out of. Yours respec. Jim Graves."

"P. S.—You ott to see what a fine feller Johnnie's growed up to be. He's workin' here fer me till he earns money to go to college. We've cleaned up the old place till you wouldn't hardly know it."

ONCE A MORMON.

By IRMA B. MATTHEWS.

Synopsis of Preceding Chapters.—Promoters of a new colony, claiming to be ministers, enter a prosperous New York state community and persuade a number of farmers to sell their homes and join them. Among the colonists thus secured are Amos Brandon, his wife, his young daughter, Elinor, his married daughter, Myra, and her husband, James Baldwin. Another married daughter, Rosetta, and her husband refuse to join. The site selected is on one of the Beaver islands, in Lake Michigan, and the colonists are transported there by boat. Just before reaching their destination the chief promoter reveals himself to be one James Strang, leader and ruler of the Mormon kingdom which he had established on the island. Under the title of king he claimed to rule in accordance with revelations received direct from the Supreme Being. Strang absented himself from the island the first winter, during which the colonists suffered severely, and on his return sought to relieve them and at the same time makes war on the Gentiles by making public a so-called revelation that it was lawful for his people to seize the property of the Gentiles. He also prescribed a certain mode of dress for the women, at which Elinor rebelled, although her father, who seemed completely under the control of Strang, tried hard to enforce obedience. During the first summer Strang decided to have himself crowned king, and Elinor, in the company of her young admirer, Robert Stuart, attended the coronation.

Robert and Elinor at last found seats and looked around them. The building was filling rapidly. Then began a rather tedious wait, but at last the murmur went through the crowd, "They are coming." Then all became silent as the procession entered the door and proceeded to the front of the building. Here there had been erected a large platform. First came Strang. He was dressed in a magnificent robe of bright red and marched with a slow measured step. Directly behind him were the twelve elders and his council, then the other elders and ministers, perhaps a hundred all told. It was a very impressive scene. The ceremonies on this day were conducted by one George Adams, the man who stood next to the king in authority. Adams had been an actor, and he was just the one to make the ceremony as imposing as possible. At length he placed upon the head of Strang a crown—a plain circlet with a cluster of stars in front.

Elinor had watched with interest, but as she saw that crown placed on the king's head her whole soul revolted at the act and she turned pale. Her companion noticed her and asked quickly: "Are you ill?"

"Yes," she answered, "sick at heart. I wish we could get out of here." But that was impossible at the time, for the

crowd was too great to admit of trying to force one's way through it.

When the ceremonies were over, however, and the crowd surged once more into the open air, the real festivities began. There was a feast in which a cow, roasted whole, was one of the principal viands, and there were games and dancing for the young people. Indeed, it was a day of great rejoicing, but to Elinor, at least, it was not one of happiness without alloy. Someway she could not throw off the feeling of oppression that had taken possession of her when she had seen that crown placed upon the head of Strang.

Chapter V.

One afternoon not long after the coronation of King James, as he was now called, Elinor walked through the woods to the other side of the island not far from where a number of Gentiles lived. Seating herself in a cosy little nook she proceeded to make herself comfortable and enjoy a book which had been loaned to her.

It was a beautiful day of midsummer and would have been exceedingly warm had it not been for the breeze that blew from the great lake, making it as perfect as a day could well be. Elinor read for some time, then she was aroused by voices near her. She peeped through the bushes that secreted her from observation. Seeing two men she decided that she did not care to meet them and kept quiet. Their next words, however, startled her until she hardly repressed the exclamation that arose to her lips.

"There must be some young cattle not far away," said one, "and we can easily get one. It was rather thoughtful in King James having that revelation about its being lawful for us to take anything we wish, providing it belongs to a Gentile," and he laughed brutally.

"Sure thing," answered the other. "The king doesn't want the Gentiles here. They are too interfering. They intended to put a stop to the coronation and they would if the king had not found it out in time to spoil their little plans. Now they must go, and this is but a beginning."

"Well, we better profit by it while we can," declared the other, "for they will not be able to stand such warfare long." The men moved on, but Elinor sat as if turned to stone. It was really true, then, that the king had given orders to rob the Gentiles. Elinor was indignant, but she knew that there was no use in

a girl like her having anything to say, for she would be silenced, even in her own home. She knew where she would be listened to, however, and without giving a thought to what the consequences might be to herself she hurried through the woods toward the house of one of the women she had so often met in the homes of the sick and suffering during that awful winter.

Mrs. Brown was busy with her household duties and looked up in surprise as the girl entered. It was the first time she had ever visited her home although they had met so frequently.

"This is a surprise and a pleasure," she said with a smile. "Sit down, my dear."

Elinor accepted the proffered seat; indeed she was weak with excitement.

"Mrs. Brown, my visit today was not planned and my errand is not a pleasant one, but I feel I cannot keep silent and see such an injustice done," and she repeated the conversation she had just heard and also the words the king had used when giving them this permission.

The face of the elder woman was grave. "We had feared this," she replied, "for we knew someone was stealing from us all the time and things have been getting worse and worse."

"He intends to drive you all away," the girl continued, "and he will do it. Mrs. Brown," and her voice sank to a whisper, "I cannot tell why, but I fear that man."

"There are others who share your feeling, dear, many of them, although you may not know it. They do not dare voice their feeling as you have today, and, believe me, you must do so no more. I fully appreciate your kindness, but for your own sake you must keep to yourself what you hear hereafter."

"Do you mean that when I know a crime is to be committed I must not speak of it?"

"Yes, I mean just that. You can do us no good by it and may work harm to yourself that you know not of. I shall never speak of what you have told me today, but promise me you will tell this to no one else and will not seek to interfere again. Believe me, in a short time you will thank me for telling you this."

"But," answered Elinor, slowly, "if I know and do not tell, it makes me as bad as the one who commits the crime, does it not?"

"In this instance, no," answered the woman firmly, "and, my dear, try and not know what is going on. Stay closely at home and know as little as possible; it is the only way for you."

Elinor was surprised but the words sank deep into her mind and many were the times she thought of them in the weeks that followed, but she only answered, as she arose slowly: "You may be right, I dare say you are, but it is hard for me, but I will think well of what you have said. Now I must be going home or I shall be missed."

"Take the path through the woods; take care no one sees you and do not mention that you have been here. And," she added earnestly, "although I should be glad to see you, do not come here again. Good-by, dear, and may God bless and keep you," and she kissed the cheek of the young girl and let her go.

"It is just as we thought," she murmured as she watched her until the foliage hid her from view, "but no good would come to that child if they knew she had told. I hope she will heed my warning, but I do not know. She is high spirited. To think a father would place such a daughter under the influence of that man!" and she turned back into her home with a sigh. What were they to do? It was evident it was war to the end, and she realized that the Mormons were the stronger, with recruits coming in on every boat, and yet to leave meant the loss of everything they had. "How long, O Lord, how long," she cried with pale lips.

That night her husband came home with pale harassed face. "Those Mormon pirates took one of our best cows today," he said. "I found where they had killed her and there seems to me to be no redress. I do not know what we are going to do."

"We will have to leave here, Edwin, and we had better do it while we can get away with what we have. After awhile we will not have enough left to get away with and then what can we do?"

"But that means to lose our home and the hard work we have put into it."

"I know that, and it is hard, but we have our lives now and each other, at least, and, Edwin, I do not believe that man would stop at anything to carry his point, not even at murder."

Mr. Brown glanced quickly at his wife. He had thought of the same thing but did not know such thoughts came to others and had often chided himself for thinking such things. Now he was grave.

"I am afraid you are right, wife, and I believe I will begin preparations for leaving, although it looks cowardly to leave our friends to fight the battle alone."

"There will be no battle to fight, Edwin. Do not fear. That is not the Strang policy; a fair fight is no part of what he intends. A petty warfare, never traceable, excepting by guesswork, perhaps, is the method he will use to rid the island of those who are undesirable to him. A man who would have himself crowned king in a republic will stoop to anything."

The Browns made their plans quickly for leaving the island. Some tried to persuade them not to do so, telling them that the law would surely step in and aid them; others declared that Strang would not dare carry things much farther, because there were many good people in his own settlement that would not stand for it, and this was in part true, but what the Gentiles did not know was that all underhanded transactions were kept from the good people. They were the ones who stayed at home and attended to their crops and knew but little of what was going on among the elders and advisers of the king. They would have been greatly shocked had they known what was being done and would not have believed it had they been told.

The Browns did not listen but sailed away, and Elinor smiled when she heard the news. "I am glad they are gone," she thought, but she also sighed for she knew she had one less true friend on the island and she was growing more and more afraid of King James, for events were now crowding thick and fast around the little kingdom.

Chapter VI.

Elinor had said nothing at home about the part she had taken in warning the Browns that summer day. Her father, she had seen with alarm, sided decidedly with the Mormon king and she would never have thought of worrying her mother with anything of the kind. Even Myra seemed changed to her, and so she kept her own council.

That the stealing still went on she was certain from various little remarks that she heard but she was taking the advice of good Mrs. Brown and trying not to know. She was therefore hardly prepared for the announcement made before her one evening. James and Myra had walked over to spend the evening, and James had remarked casually to her father: "I think Bedford will think twice before he meddles with the affairs of the king again."

"What do you mean?" asked Mr. Brandon with interest.

"Haven't you heard? I supposed everyone knew. Well, it seems that Mr. McKinley, the trader who keeps the store at the point, has been missing cattle and other goods of late, and he thought some one of the Mormons were taking them. Well, no one seems to know just what has happened, but you know Bedford has been working for him a great deal and it seems he told him that the Mormons were doing the stealing and that it was under orders of the king and with his sanction that they did it. The King in some way obtained information of the fact and he had Bedford given seventy-five stripes in public. It has probably been a lesson to him, and a dear one."

"Do you mean he had the man whipped in public?"

"Exactly, and most severely at that. He said he was making an example of him and hoped he would not have to repeat the punishment."

Elinor had risen, and her eyes flashed. "How did the king know he was the one that told?" she asked in evident excitement.

"I do not know how he obtained the information, but he had it and he never makes mistakes. Besides, Bedford is not considered a very good mormon. I understand he upholds his wife in not wearing the dress the king prescribes, and, by the way, Elinor, he is finding fault with you on the same score."

"Is he, indeed? Well, I shall never wear it, and I honor Mr. Bedford; if he did tell that the Mormons were stealing those cattle he only told the truth, but I suppose the truth must not be spoken in this place."

"Better take care what you say, Elinor; the king is not to be trifled with, I warn you."

"Is he coward enough to have a girl

"How long do you want your wagons to last?"

—Asks the Little Paint Man



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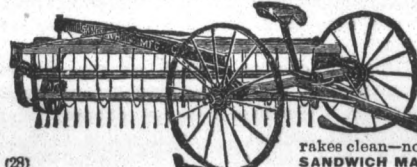
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whipped in public because she dares tell the truth?" asked Elinor, sarcastically.

"He would find a way to punish you, never fear, if he thought you deserved punishment."

"Elinor talks like a spoiled child," declared her father, "and, indeed, that is about what she is. I have humored her in her ideas, even allowing her to wear her old clothes, hoping she would see the wisdom of changing of her own accord, but it seems I was mistaken in so trusting her. But this much, Elinor, I will not hear such language again as you have used in speaking of our king. You not only endanger yourself, but your mother and I as well, by such behavior and it is very unseemly. What does a young girl like you know about such things?"

"Surely, father, I know what stealing is! I have been taught that from my childhood. Do you now expect me to undo that teaching?"

"You have also been taught to obey your parents," her father answered sternly, "and I now exact that obedience. If not for my sake, then for your mother's, who may also have to suffer from your conduct."

Elinor looked at the appealing face of her mother, for these dissensions hurt her, and then again she seemed to hear the words spoken by her friend, Mrs. Brown, and she answered slowly: "Very well, I will try and remember, but I cannot help my thoughts, and wrong is wrong, anyhow, father."

But the whipping of Bedford had caused quite a stir in the Mormon settlement as well as among the Gentiles. There was really no evidence against Bedford, excepting the fact that McKinley had accused the Mormons of stealing his property and that Bedford worked for him, but many thought that the king had used the occasion to show his followers what they might expect should they attempt to evade his commands, and also others thought that the king had been angry because Bedford did not insist on having his wife wear the prescribed costume of the Mormon women. Whatever had been the object, Bedford was angry and declared he would have revenge, while others who knew what was going on among the Mormons did not dare speak of it. Indeed, had his only idea been to intimidate the people, the act had been successful so far as his own people were concerned, but the Gentiles were very wroth over the whole thing and held indignation meetings.

Another thing that greatly excited their wrath about this time was the edict of the king that every fisherman must pay into his treasury, annually, ten dollars for the right to fish off the coast. He informed the inhabitants that he had made and intended to enforce this law. We can imagine the feelings of American citizens being told they must thus pay toll to a king within the territory of the United States. Some paid it rather than have trouble, for they recognized the fact that, for the time at least, the king had the advantage and they were in hopes that by so doing they would be allowed to pursue their calling and make their living in peace, but others declared they would never pay one cent into the treasury of king Strang. This led to much dispute and, later, to crime.

Myra was, as Elinor had said to her, ambitious for her husband, so it was she heard with delight one evening that the king had promised he was soon to be ordained as an elder in the church.

"This promotion means much," he said to his wife. "I shall have a voice in the making of the laws by which we are governed and be one of his counsellors."

Myra answered slowly, for the moment a doubt being in her mind; she hardly could have explained why, in fact, it is doubtful that she even admitted to herself that it was there: "But I thought only the twelve ever counselled with the king."

"That is true, in a way, but the elders are asked to vote on nearly all, if not all, the laws, all excepting those that come from direct revelation; they, of course, coming directly from God, cannot be questioned by man."

Mr. Brandon also was pleased at the success of his son-in-law. The place had been offered him but he had asked that it be given to James, feeling that the latter was young and had a way to make in the world, also desiring the advancement of a young man who claimed so near a relationship before himself. The king had readily granted this boon, perhaps because as he had become well acquainted with the two. He saw in James

a more willing disciple than in the firm-willed elder man. Elinor tried honestly to share in her sister's delight at the advancement, but some way, since that day when Strang had been crowned king, it all seemed like a terrible mockery to her. She said nothing, for she was growing silent and thoughtful. Robert Stuart often rallied her on her sobriety, but although she smiled at his raillery she never admitted, even to him, the cause of her sober face. She was, indeed, keeping her own council. She went, however, to the meetings at the tabernacle, for she thought that, after all, it was not best to anger the king; so she went, as did the rest, and as he paid no attention to her she concluded that he thought nothing of her, and she was glad it was so.

But in this Elinor was mistaken. The king did notice her, although she knew it not, and he was not pleased at her attitude. Instinctively he saw that the young girl was not really one of them; that her presence was rather of compulsion than of faith and it angered him that a slip of a girl should set herself, as he considered it, in defiance of him, but he did not do things hastily. He watched and waited and bided his time.

Chapter VII.

It was one sunny day quite late in the autumn that Elinor came into the house, humming a gay tune, to find the king conversing with her father. She had gone to spend the day with a girl about her own age, one Elizabeth Flint, a friend and also a Mormon.

She started when she saw Strang but, answering his salutation, she turned to her father and asked, "Where is mother?"

"I believe she went over to Myra's." "So this is the young rebel," said the king, with a laugh that sounded anything but pleasant to Elinor; "she does not look very formidable, I am sure."

Elinor turned to leave the room, saying, "I will go for mother, I think," when the king spoke again.

"Hold on, young lady; I came on purpose to see you and have waited here with your father for your coming. It is not every young lady in the settlement that has the honor of a call from me, I can assure you."

Elinor thought that it was an honor she would gladly dispense with, but as it was hardly polite to say this she answered nothing but stood waiting for him to continue, and this he seemed in no great hurry to do.

"Sit down, my dear; never stand when you can as well sit; our business may take some time."

Elinor sank obediently into a chair, her eyes still on the face of the speaker.

"I perceive that I have been told rightly," he continued, "when I was informed that you refused to wear the prescribed dress for the Mormon women. Why is this?"

Elinor's cheeks flushed at the words but more at the tone in which they were uttered. "Because I do not choose," she answered calmly. "The dress is neither pretty nor womanly, and I have no desire to appear in it."

"But I have commanded that it be worn. How dare you disregard the commands of your king?"

The girl looked straight into his eyes without flinching. "I do not consider you have any right to issue such commands. This is a free country."

"But, young lady, God revealed to me that it was sinful for woman to give so much thought to dress, and through His commands I designed this. Do you dispute His authority as well as mine?"

"No," answered the girl with spirit, "but I do not believe in your revelations. I have the Bible to live by and I cannot find therein where it tells what kind of clothes we should wear."

The face of the king had been growing dark with wrath. He had not looked for such opposition as this. "You had better understand at once, young lady, that my will here is law and I command you to wear the dress the other women wear. Were I to allow you to persist in this disobedience I would soon have discontent and rebellion among the other women."

"And I tell you I shall never wear it," answered Elinor, firmly. "Why doesn't Mrs. Strang wear it?"

The king winced. The shaft had struck home. It was a great trial to him that his wife had no faith whatever in his revelations or the doctrine he preached, and set herself in opposition to him in more ways than one. However, he answered calmly. "As reigning lady of this colony she is, of course, accorded some privileges, but that is not the case with

you. You must obey or suffer the consequences."

Elinor's lips settled into firm lines and she made no reply. Again the king was forced to ask, "will you do so?"

"Never," she answered, hotly.

"Very well, I am sorry," then turning toward her father, "Mr. Brandon, you will show me where this perverse young lady keeps her wardrobe."

Mr. Brandon arose. It was plain that he was entirely under the control of the other; he led the way to another room where, in one corner, hung the few dresses possessed by his daughter. There were not many. Girls of that day did not have the extensive wardrobes they now consider needful for their happiness; there were two or three gowns for every day and one for Sunday wear. Strang gathered them all in his arms, then returned to the other room. Elinor watched him like one fascinated.

He walked toward the fireplace where a fire still smoldered, for the mornings were cool and a fire had been kindled to warm the room. He stirred the embers until they sprang into a blaze, then thrust the clothes he held into the flames and watched them until they had burned to a crisp. Then he turned toward the girl who sat motionless in her chair, gazing with horror at what he had done.

"I think," he said, with an ironical smile, "you will learn that obedience is best in the young and that I intend to be obeyed, although I am sorry to have to take such severe means as this." Still there was no reply.

"You find, however, I am not so hard as you may think me, for I am willing to recompense you. See here!" He opened a bundle that Elinor had not noticed before, taking therefrom a number of suits of the Mormon clothes, all made ready to wear. "You see I have provided some garments to take the place of those I have had to destroy."

And yet she did not reply. Only the sparkle in her eyes and the red spots glowing in her cheeks showed that she understood. Then he came toward her and laid the garments before her for her inspection. But he had reckoned without his host. The fighting blood of the girl was up. Her forefathers had crossed the ocean that they might enjoy the liberty they craved; they had later fought in the Revolution for the same cause and their descendant was not to be so easily conquered. As the hateful clothes were placed before her, action, of which she had appeared to be deprived, returned. She sprang to her feet and swept the garments into her arms. Then before anyone understood what she meant to do she crossed the floor at a bound and thrust the garments into the same fire she had seen consume her own scanty wardrobe. Then, turning to the astonished men, she said, in a ringing voice, "That is my answer."

She stood before them a perfect personification of young America at bay. Mr. Brandon could not but admire his daughter, although wondering dimly what the result would be, but the face of Strang darkened until he looked a perfect demon.

"Take care, young lady," he said in a low, menacing tone, "you do not know what you may bring upon your head by your actions."

"I know there is a God in Heaven who will protect His children if they trust Him," answered the girl with spirit, "and against His power, King Strang, you cannot avail. It is rather for you to beware, for if you provoke His anger woe be to you."

The face of Strang paled somewhat at the words and he saw that nothing was to be gained at this time by prolonging the scene. He was boiling with anger that he had been defeated by this girl and he was already revolving many plans in his mind whereby he might yet conquer her proud spirit, but as it was not to be accomplished at this time he turned to go, pausing to say as he did so:

"Brandon, I am astonished and also much displeased at the outcome of what I had hoped would be a friendly visit, but you understand that such rebellion will have to be punished or I shall have the women swarming around me like a swarm of bees demanding their rights, as they seem pleased to consider them. It seems you have strayed far from the teaching of your Bible, for that tells us a man shall be the head of his household. Neither you nor your family must appear at the place of worship until this fiery daughter of yours has thought better of her ways and apologizes to her king," and he left the house.

(To be continued.)

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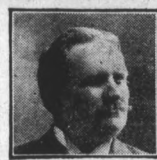
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Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

THE CONSERVATION OF OUR BIRDS.

Paper read by Miss Emily Bennett at the annual meeting of Clinton County Association of Farmers' Clubs, held at St. Johns.

The subject of bird conservation is one of such stupendous importance that to attempt to present a paper in the time allotted would be presumption indeed. May we not rather say, "Come, let us reason together," in a heart to heart talk regarding that which so nearly concerns every individual, for we are told by those who are prepared to say, that with the extinction of bird life the earth would become a desert through the ravages of insects and rodents and human sustenance would be impossible.

In the study of the economic side of this question we learn that the estimated annual loss from insects to food and fiber plants exceeds \$30,000,000 in this country alone. Nine years from the time the cotton-boll weevil entered Texas from Mexico, the loss was estimated at \$15,000,000. Over 40 species of birds are now known to prey upon this pest. From a careful conservation estimate the loss of every insect-eating bird is equivalent to four bushels of grain and probably more than 5,000,000 birds are slaughtered annually for feminine adornment. What a tax to be imposed upon a nation.

We read that in those other days before Rome had accepted the teaching of the Nazarene when he said, "Not a sparrow falleth without your Father's notice," a friend of Cicero in serving a banquet in honor of the distinguished orator regaled his guests with a dish of nightingales and other song-birds at a cost of \$4,000. Another Roman host provided his guests with a dish composed of the tongues and brains of flamingoes. But those were days when no word was found in the language to express family affection and tenderness, and we who have been launched upon a civilization and culture 2,000 years in advance are not only feasting upon the edible portion of the song-bird; we are wearing his pelt. Wearing it in imitation of a notorious woman of Paris whose manner of life rendered her unfit to clasp a little child in her arms. And so the slaughter goes on, 5,000,000 in a year. The snowy heron, with her beautiful "maternity plumes," the badge of motherhood, worn only at the nesting time, is now almost extinct.

Her devotion to her young makes her an easy prey for she will not leave them even for her life, and the last sound she hears as she lies dying at the foot of the tree, with the skin stripped from her back, is the cry of the starving nestlings. This plumage was at one time worth \$10 per ounce, then \$25, now it is said to be worth its weight in gold.

The painter, Inness, has on exhibition in New York a picture representing a forest interior in Florida with just one lone egret, prophetic of the rapid extinction of this beautiful bird.

Tons of arsenic, we are told, are used in preparing these skins of birds and that the brilliancy of the plumage may be preserved the skin must be stripped from the body while the heart is still pulsating. All birds wear their brightest plumage at the nesting time, hence they are captured at this time, leaving their young to die from the slow torture of starvation.

An eminent clergyman has declared that "if women understand what misery in the bird-realm this fashion costs, the world must lose its respect for them." Bold words these! but I am going to say this: The woman who, knowing the price by which these things are obtained and

the brutalizing influence upon the men engaged in procuring them, will still persist in decking her person with these victims, or with the moire Persian lamb, you may never trust as a friend, and I use the word in its broad sense, for should you ever stand in the way of her interests, either social or financial, she will betray you.

I read with interest that a committee of club women were taking up the work of forest conservation, but with surprising inconsistency, they seemed entirely oblivious of the economic relation between the bird, the insect and the tree. While in session in St. Louis the State federation referred to them the Audubon Pledge, which I think, specifies against wearing the aigrette. It was refused, the secretary airily remarking, "Because, if I want to wear an aigrette I shall certainly do so, and my conscience won't hurt me a particle." And a local paper stated that the club women of St. Louis would endorse the action of the committee.

What a comment! Representative American women! When the prophet was lost for words in which to express the attitude of Jehovah toward his people he said, "As one whom his mother comforteth, so will I comfort you." Tenderness and sympathy have long been attributes of the world's ideal of womanhood. Shall we nail it to the cross and from the wreckage of our faith construct a new ideal after the pattern of this moral debasement? Artist and sculptor must throw a drapery over the Portia of their dreams lest she put to shame this new woman of the 19th and 20th centuries.

We have not time to speak of the methods employed for the extermination of the wild pigeon. It is estimated that near Petoskey more than a billion birds were killed in one season. When roosting, they have been attacked by men armed with clubs, poles, guns and even pots of sulphur, and wagon loads were killed nightly. When the hunters were supplied, droves of hogs were driven to the grounds to feed upon the remainder of the dead and wounded birds. Nor of the shooting contests when thousands of quail, pigeons and doves having been confined in foul cages until too weak to make a strong flight were shot, not for food, not for adornment, but for sport, until little sensitive children, witnessing the revolting scene have been thrown into convulsions and become insane. Nor of the thousands of robins shipped from the south to be served in New York restaurants as reed-birds. Remember, these are the days of humane and liberal fraternities and liberal education.

(Continued next week.)

WHAT THE LOCAL CLUBS ARE DOING.

The Arcadia Club of Gratiot county, was represented by Mr. C. F. Beeman, who stated that the Club holds 12 meetings each year. The one question which the Club has not solved is how to interest the young people in the organization. It is, however, a question which they have in mind at all times and the members hope to educate the young people to the advantages which would accrue to them from participation in the Club meetings. The meetings are held at the homes of Club members, who volunteer instead of having a regular time assigned to them as is the case in some Clubs.

Surprise Club, of Saginaw Co., was represented by Mrs. Barney Curtis, who reported plenty of young people in the Club membership, and stated that there was never any question about finding a place for the monthly meetings as all members are willing and anxious to entertain. All aid in the furnishing of refreshments, which are served on lap boards. An annual picnic in August is a feature of the summer work of the Club.

CLUB DISCUSSIONS.

Discuss School Problem.—The Hadley and Elba Farmers' Club was entertained at Lone Elm by Mr. and Mrs. C. J. Johnson, March 16. The program was entirely devoted to the centralized school problem. Mrs. R. M. Brownell's excellent paper showed much thought and thorough preparation. Condensed reports were given of statistics from the different states that have tried the system and all statements were verified. Mrs. Brownell is a very interesting speaker, and the Club enthusiastically tendered her a vote of thanks for her kindness. A question box completed the program. The hostess tried using lap boards and all were highly pleased with the plan, as it shortened the dinner hour, thus giving more time for the program. The next meeting will be at Maple Lawn with Mr. and Mrs. Geo. Schanck, April 20. A cordial invitation is extended to all.—Mrs. C. P. Johnson, Cor. Sec.

GRANGE

Our Motto—"The Farmer is of more consequence than the farm, and should be first improved."

THE APRIL PROGRAMS.

Suggestions for Second Meeting.

Is the distribution of seeds by the government a graft?
Recitation, "Government Seeds."
Report of "The One Improvement Club."

Feed and Care of young chickens.
Roll call, responded to by each man showing a seed potato or ear of seed corn as nearly like his ideal as possible to find, and each woman showing a piece of fine sewing.
Song by Grange chorus.

"THE ONE IMPROVEMENT CLUB."

Once upon a time, in a far away country neighborhood, the lecturer of a Grange evolved the idea of a "One improvement club." This lecturer was a woman and, when it succeeded well in her Grange, she told another lecturer, woman, who in turn told others until it reached the ears of a lecturer-man. This sure was transmitting news by the "tell-a-woman" method, but it does not matter how things get noised abroad if they are only things that are worth noising. And this was a worth-while plan.

The lecturer-man stood up in his Grange, one day when there was room for only the proverbial "one more," and asked every person present to tell what one improvement he would try to make during this coming season. Later, he said, he would ask them how they had succeeded in their improvements. Then one after another of that group of men and women arose and told of what they hoped or planned to have or to do. "It was the most interesting roll-call we ever had," someone was overheard to say. Certainly the range of improvements was wide and the items varied enough to hold the rapt attention of everyone present from start to finish. Not one of the improvements named but that might have touched off a whole discussion had there been time. Not one of them but will mean a better and brighter home, or farm, or woman for having been attempted. Not all of them will be realized, of course, but, as "confession is good for the soul" so hope expressed is nearer realized than if never given a voice. Some of our dreams come true sometimes, and nothing is ever done unless somebody does "dream" it out first. No temple is reared, no ship built, no battle fought, no machine made, no book written, no field sown, no harvest reaped, except it first transpired in some person's brain. The "vision" always precedes the actual.

This is why the "One improvement club" plan is a very practical proposition to work upon in our Granges. Here are some of the improvements which members of this Grange I refer to promised to attempt: A cement silo, a porch, fifteen acres of alfalfa, chickens and flowers (despite desperate discouragements to combine them in the past), make the farm pay without work (by a father whose sons have left the home farm), secure a vacuum cleaner, dispose of accumulated things-that-may-come-handy, make over the dooryard, tint walls of living rooms, realize higher price than last year on grains fed to stock, install gasoline engine for sprayer and washing machine, make or buy a fireless brooder, lay tile drains, buy a gasoline flatiron, set out new shrubs and strawberry beds. One man hoped to enlist his neighbors with him in cleaning up an old, neglected burial ground; another resolved to do more reading that it would keep him in closer touch with public affairs, while the oldest person present promised himself to try to hold a stronger rein over his temper.

Now, was that not a fine day's work?

JENNIE BUELL.

A MODEL SOCIAL CENTER GRANGE.

The influence and uplift exerted by a Grange that is a social center of community life is most happily exemplified by Pearl Grange, of Berrien county. This Grange possesses a very comfortable home, with audience room upstairs and dining-room below. It also has a comfortable Grange barn.

This Grange is the social center of the community. Among its members are graduates of M. A. C. and of the Valparaiso normal. The members are intelligent, cultured, sociable—the Grange itself a great big family of more than a hundred children. The earthy soil in the neighborhood of Pearl Grange is admirably suited to fruit growing; the mental

soil to the raising of ideals.

It is most difficult to give a pen picture of Pearl Grange that will convey much of an impression, especially to the uninitiated, but for years this Grange has been a most helpful sociological contributor to the solution of the problem of how to keep the boys and girls on the farm. Benton Harbor and St. Joseph are very near by and yet the young folks of the community in which this Grange is located find their pleasures in the Grange meetings. How is this brought about? Every Patron is interested in Pearl Grange and interests himself in getting his neighbor interested; every Patron is doing something to make the meetings successful, the programs are interesting and appealing and debates are frequent and well contested. There are some young folks away at school, and when they come home a "greeting" social is held at the Grange hall to welcome them. There is no big "I" and little "You" in this Grange. If our educators and statesmen (?) could take a year's schooling in Pearl Grange, they might increase their usefulness and lose some of their uselessness.—D. E. McClure.

HILLSDALE PATRONS DISCUSS INITIATIVE LEGISLATION AND RECIPROCITY.

Considering the unfavorable weather the recent meeting of Hillsdale Pomona with Fayette Grange, at Jonesville, was well attended. The weather and bad railroad conditions prevented representatives of Calhoun County Granges, who had been invited, from being present. The forenoon meeting was taken up with business relating to the organization, and was for Grange members only. At noon, Jonesville Grange served a fine dinner, and in the afternoon the open meeting was called to order by Master Benjamin Lamb, of Adams.

Owing to the absence of some of the speakers, changes were made in the original program. Editor D. W. Grandon, of Hillsdale, being unable to be present, his subject, "The Initiative, Referendum and Recall," was taken by Hon. B. E. Kies, of Hillsdale. Among other things, Mr. Kies said that he had been a student of the question for more than thirty years, and that he was in a convention which voted in favor of the measure thirty-one years ago. He made the different steps in the initiative, referendum and recall plain enough for everyone who had not thought on the subject. The speaker insisted that the present legislature wished to place the percentage of voters signing the petition for initiative or referendum, much too high. He thought six or eight per cent, in case of the initiative, and ten or twelve per cent in the case of referendum, would be about right.

In regard to the recall, Mr. Kies held that people had as good a right to recall a legislator whom they have elected as a farmer has to discharge his hired man. He cited the success of the initiative, referendum and recall in Oregon, and said these measures are necessary if the people wish to get what they have coming in the way of legislation. With the initiative, referendum and recall, the people can get what they want as fast as they get wise enough to know what they want.

The address of Mr. Kies was followed by an interesting and spirited discussion of the reciprocity treaty with Canada. The discussion brought out the fact that most of the members were opposed to the measure because they deemed it unfair and one-sided. The majority favored the reciprocity measure with the proposed amendment of Senator Cummins, of Iowa, which includes manufactured articles as well as farm products in the treaty. A vote was taken to determine the sense of the Grange at this point. The discussion of the treaty revealed a surprising amount of free trade sentiment among the Grange members.

Owing to the absence of Hon. Frank Robards and W. A. Bishop, who were to have taken part in the program, the meeting was considerably shortened. A vote of thanks was extended Fayette Grange by the Pomona delegates. It was announced that Pomona would meet with Mosherville Grange the first Wednesday in May, and it was decided to invite the members of the Jackson county Granges to attend the meeting.—Walter Jack.

NEW GRANGES FOR FIRST QUARTER OF 1911.

National Secretary Freeman reports the number of Granges organized and reorganized from Jan. 1, to March 31, 1911, both inclusive, as follows:

Organized.	
California	2
Colorado	2
Connecticut	2
Idaho	5
Illinois	2
Indiana	1
Iowa	13
Kansas	8
Maine	6
Maryland	6
Massachusetts	3
Michigan	21
Missouri	4
Minnesota	3
Total	186
Re-organized.	
Connecticut	1
Illinois	2
Michigan	1
Oregon	1
Pennsylvania	4
Total	20

COMING EVENTS.

Pomona Meetings.

Antrim Co., at Bellaire, Saturday, April 29. Lecturers and workers' conference. State Lecturer present.
Hillsdale Co., with Mosherville Grange, Wednesday, May 3.

It Wins in Clover

This picture from an actual photo shows Louden Balance Grapple Fork lifting a third of a ton of dry clover hay.

How's that for a winner?

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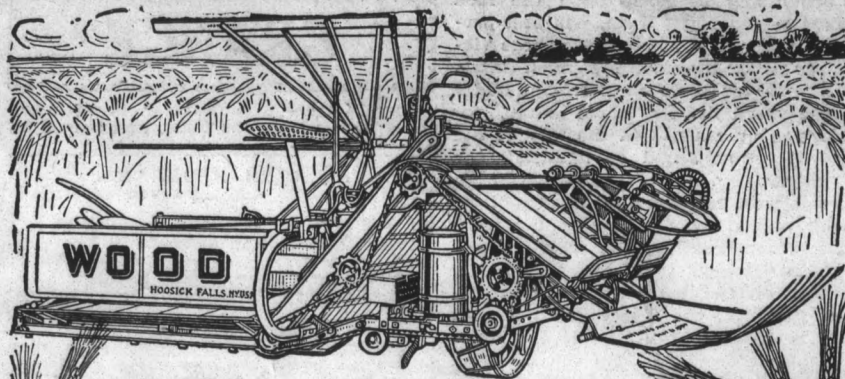
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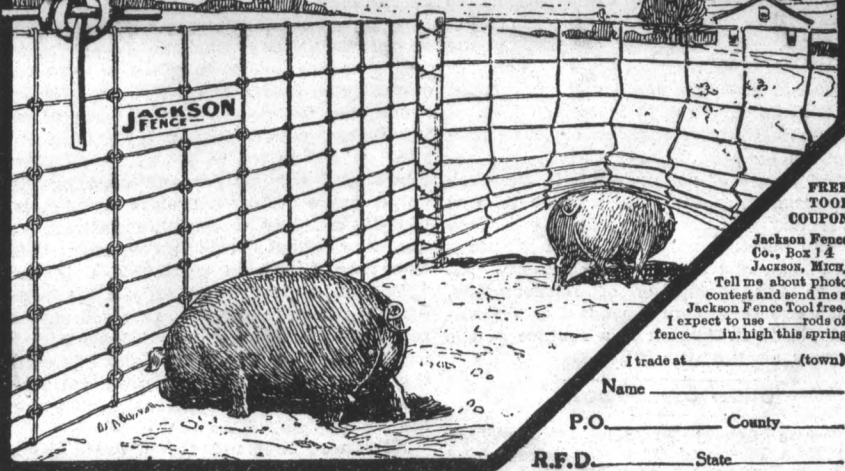
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