

MICHIGAN FARMER

AND *LIVE STOCK*
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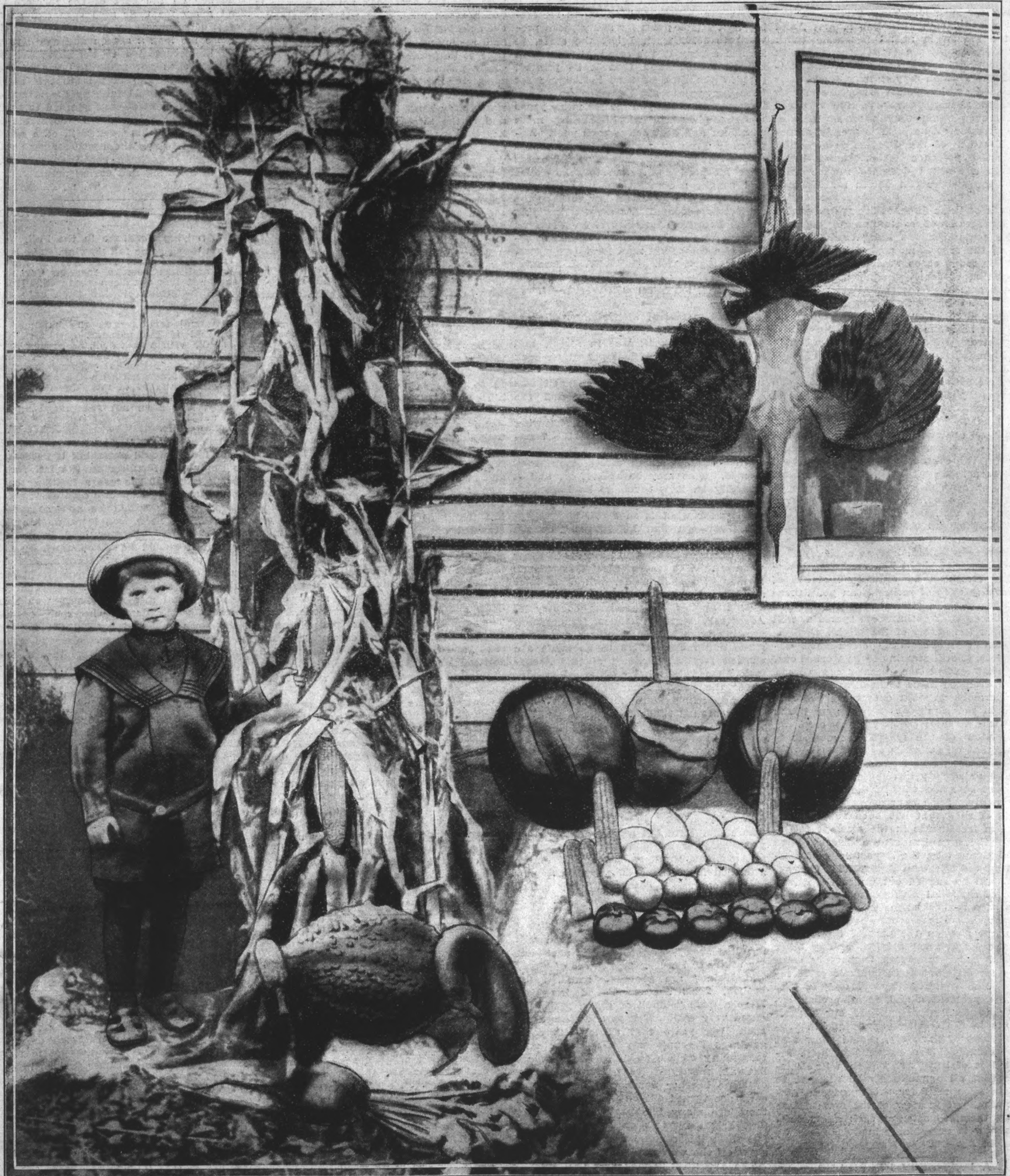
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Symbols of our Material Prosperity, which is a cause for Thankfulness, and Essentials of the Thanksgiving Feast.

The Bean Disease Situation.

HERE are two very serious diseases of beans widely prevalent in the state of Michigan at the present time, viz., anthracnose, caused by *Colletotrichum lindemuthianum*, and bacterial blight, caused by *Bacterium (Pseudomonas) phaseoli*. Besides these two, there are a number of other diseases which are, taken together, quite destructive but which are so overshadowed by these two that the ordinary observer does not even notice their presence. The anthracnose is found in the whole eastern United States, i. e., in the humid parts of the country. The bacterial blight, however, is found over the whole country, being equally destructive in California, Colorado, Louisiana, and Michigan. Both of them cause lesions on the stems and leaves, and are frequently very destructive to germinating beans, destroying them before or shortly after they appear above the ground. They persist on the leaves and stems until late summer, and if the season is at all favorable (with considerable periods of moisture), attack the pods, causing the formation of discolored spots which may or may not discolor the seeds, although the latter are usually affected if they occur in the diseased pods, even when they show no sign of discoloration. The yield is greatly reduced if either of the diseases is abundant and the presence of discolored beans causes a marked decrease in the price that the grower can obtain for his product.

Both of these diseases are spread mainly by means of contamination of seed, these contaminations being both internal, (i. e., the organisms are within the seed even in many cases when there is no discoloration evident), or they are attached to the outside of the seed, having become deposited there in threshing or from contaminated sacks or in various other ways. It must be borne in mind and emphasized very strongly that lack of discoloration is no sign, whatsoever, that the beans are free from one or both of these diseases, for unless the beans are taken from pods that are perfectly free from either disease and these pods are sterilized externally to destroy any adhering organisms and then are shelled by hand and placed in sterile sacks, avoiding to the utmost degree, the contact with any object that has been in contact with the beans, bean pods, or bean straw, one cannot hope to have seeds that are even reasonably free from this trouble. It is indeed possible, by following out these methods, to obtain seeds that are reasonably free from anthracnose infection, but no such freedom from bacterial blight has yet been obtainable. However, by ordinary methods of threshing even of rather clean pods, there will result quite general contamination of the beans with anthracnose spores as well as with the germs of the blight.

Even were absolutely clean seed obtainable, it still remains to be worked out, to what extent the disease can spread from diseased fields to healthy fields, and furthermore, to what extent the use of a field in previous years for growing beans will lead to infection of the new crop.

In view of the foregoing facts, it is clear that all attempts to control the disease by using seed from supposedly uninfected or slightly infected regions should at first be made only in the form of experiments. Such experiments, as well as tests of seed that has been subjected to various treatments in the attempt to destroy the organism of the disease, have been planned by the Department of Botany of the Michigan Agricultural College, and will be carried out under the direction of a special man whose appointment has been authorized for this purpose. Until such experiments have been made, any attempt now on the part of the College, or the Experiment Station, or any other official body, to obtain supposedly clean seed for distribution in badly infected regions like the Thumb, will only lead to false expectations, and, in all probability, later to disillusionment. If our experiments in the coming year, made in various parts of the state, should show that seed from fields comparatively little infected is of benefit it will then be desirable that all agencies should attempt to obtain such seed for rather general distribution, but in view of the facts as we know them, to attempt such a distribution now is exceedingly inadvisable.

Mich. Ag. Col. ERNST A. BESSEY.

A PROPHECY FULFILLED.

As nearly as I can remember, it was at least 20 years ago that I began teaching

classes the species of fungi that lived on bean plants—noting in particular, anthracnose and the bacterial disease, the worst two at that time. I knew these two fungi worked on the leaves and on the pods where the mycelium or roots penetrated the seeds which carried the trouble over to be ready to destroy the crop of the next year. In some cases, these diseased beans could not be detected from those which were clean and exempt. I could pick out, in some cases, seeds that were infested, distinguishing one disease from the other. For five years I planted such beans in the botanic garden, to see them fail to produce a crop of new beans.

No treatment of the seeds that I could find, would avail anything, for the trouble in each case went beneath the skin. The proper thing to do was to select healthy pods wherever found, using the beans contained for seeds the next year.

You, Mr. Editor, will doubtless remember that I took pains for many years previous to 1910, when I left the state, to furnish a copy of the essential facts with the recommendation that it be printed, just in the nick of time in August for bean growers to avail themselves of the information. This you did for many years while the disease was becoming more abundant and destructive each year. Apparently little or no attention was paid to the reports. More recently the growers were hit hard and began to take notice and sought a remedy, even to inducing the Legislature to pass a law to have the subject investigated. At a recent meeting of the Board of Agriculture, I understand a move was made to authorize the selection of a competent man for this purpose.

Mich. Agril. Col. W. J. BEAL.

MAINE POTATO GROWING.—II.

General Methods.

Less than fifty years ago the great county of Aroostook was in forest, and after the lumberman had passed on back to the tall timber it was found that all this rich and beautiful alluvial soil was capable of producing potatoes and the wonderful natural resources are being cashed in on the tuber. Some observing economists are reasoning that the cashing in process is extravagant, that much of the land is being mined instead of farmed. This may be and, if so, and it probably is, it is much to be lamented; but the new, speculative farmer, who is playing for what is in sight, is rarely a conservationist and he figures that the land's ability to grow potatoes will probably continue as long as he cares to draw upon it. The more careful, economic farmer who shall abide, will come later and marvel at the waste that went before.

This applies to the new country of Aroostook, where fortunes from potato growing have been and others are being made and many others to be made are worked for and dreamed about. Aroostook farm values have advanced rapidly under the potato stimulation, and cases are not rare where farms have been bought around \$200 per acre and paid for with two or three good crops bringing fair prices.

In the remainder of the state, however, where the farms are older—some of them indeed, looking very old and worn—there is more thought given to conservation of fertility and winning back that which has departed; hence, in "Central Maine," where they have but recently learned that potatoes grow as abundantly as they do in Aroostook, if not so spectacularly, more attention is given to dairying, dairy cow production, sweet corn and berry growing, grass and clover crops and tried grains.

Aroostook is practically a beautiful vast plain, some land slightly broken and rolling, little wood—in the farming part—left for utility or beauty. The farms of "Central Maine" are generally small, much broken, fields are small and irregular. Here a good "stand" of grass, really secured very easily, is kept and mowed for such long years that at last its early goodness becomes only a memory; and, too, many of the so-called pastures are I think, merely called pastures for lack of some harsher name, and because the cows are turned out on them. Of course, there are many fine pastures and many fine, bright farmers on beautiful farms, but these latter make the other majority show off the worse.

The Aroostook farmer, as a rule, follows his potatoes with oats, in which clover and timothy are sown. One season's hay is cut, as much of the hay as the farm

horses need, likewise the oats, is fed. The remainder is sold. The land is then fall plowed, generally, for another big potato crop. This cannot be counted as an unwise rotation or practice, and I think where followed it cannot be proven that the farmer is a miser. Further in his favor he plows and tills well, cultivates his potatoes thoroughly and uses chemical manures to the limit of size of application, and no doubt often wastefully as to composition. Potato land so tilled, the crop planted with a planter, cultivated, and the crop harvested with a mechanical digger is not outraged, if we believe, with Jethro Tull, that "tillage is manure."

The soil doctor asserts that the land must have animal manure, and I am told where dairying is followed in Aroostook, or steers fed and potatoes and the grains and grasses and clover grown, that all the crops are better and the land in better heart. This is, of course, reasonable and true, but the Aroostook potato grower is not a stock man, does not want stock—even selling his surplus horses in the fall and re-buying for spring work—has not time to be fussing about cows and is generally pushed for men at potato picking time, paying from \$2.00 to \$3.00 with board, per day. Such prices for labor will not rapidly bring in the cow or the steer, and if the above outlined rotation, with heavy doses of chemicals for the potatoes does not hold the fertility the fertility will go.

The use of fertilizers is extremely heavy—from 1,500 to 2,500 pounds, of about 4:8:7 per acre. This mixture costs about \$38 to \$40 per ton. It is shipped to the farmers in barrels and into these barrels the enormous crop of 300 to 500 bushels per acre on great fields is gathered and hauled to the farm potato houses, built about half under ground and equipped with heating arrangements; or to the cars direct from the fields for shipment. Thus the Aroostook farmer does not think or talk of bushels of potatoes but of barrels.

The potatoes grow too big and are thickly planted to keep down the size. For seed the smaller tubers are used, about 18 to 22 bushels of seed per acre. The hill row method of culture is general as being best to get rid of surplus moisture—it is a pond-lake country. The Aroostook horses come from the corn belt and are fine, big and costly. The latest in farm tools are bought, spraying for blight and bugs is followed.

In "Central Maine" less careful and thorough attention is generally the rule, but many of the potato men who are crowded out of Aroostook, come farther west and south and on the cheaper lands and following the better methods find that the best and most productive potato land is not all in Aroostook but all over the state. In Aroostook, the snow comes early and the ground is but little frozen. The land having been fall plowed can be tilled almost upon the heels of the going snow, and the crop can be earlier planted; and indeed, it must be hurried to escape the fall frost that does not wait for the tardy harvester.

Central Maine has less and somewhat later snows, more frost gets into the ground and the farmer must wait longer for its departure in the spring. He says when he plants late he gets bigger crops. His rainfall was small during the summer and October was all rain when the late crops were to have been dug. Quite a hard freeze the first of November caught thousands of bushels of needed tubers yet undug. More mild weather since has started the diggers but the ground is wet and cold, the potatoes have developed rot and of course the frost-nipped ones are lost also.

Pennsylvania. W. F. McSPARRAN.

THE SEED CORN CAMPAIGN IN GENESSEE COUNTY.

While Genessee county ranks well up in the counties of the state there is great chance for improvement in the matter of varieties grown. While Genessee county has good soil in a majority of cases for corn, yet many farmers are not devoting enough time to the selection of varieties or to selection of good seed. There are several reasons for this, the fact that many farmers think it too costly to spend their time in selecting from the field. It is not too costly and there is probably not another short job on the farm that will actually pay in dollars so well, as the time spent in selecting good seed corn.

The Genessee County Crop Improvement Association in co-operation with the Farm Crops Department of M. A. C., staged a two-day campaign for the selection of

pure and good seed corn. Five demonstrations were held one day and six the next, in widely separated parts of the county. The idea intended was to excite interest in rather than to select seed. In fact, the most salient feature of such a campaign is the interest and discussion which is aroused and which continues long after the campaign is over.

The following points were emphasized in the campaign work: Maturity of the plant, maturity of the ear, selection from fall stand (three-four stalks) in hill; if from drills from normal stand in row. Percentage of grain to cob, location of ear on stalk, general adaptability of the variety. Storage in well ventilated dry place, leaving the ear on stalk as long as possible in order to get full maturity and hardness.

As to varieties already growing, a great deal may be done to improve them and in some cases the variety is wholly unsuitable for our climate. There seems to be a tendency on the part of the farmers to send away for their seed corn and as a result oftentimes they get varieties which require too long a season and again they may be accustomed to too short a season and thus not make full use of our season here. The fact is that if some good farmers would take up the breeding and improvement of corn adapted to their locality other farmers who do not feel disposed to do this work with corn could well afford to pay them well for seed upon which they have spend considerable time in selecting and curing properly.

Genessee Co. W. H. PARKER.

SOIL AND FERTILIZER QUESTIONS.

Applying Fertilizer in the Fall.

I am doing some fall plowing. The land is rolling and runs from clay to heavy sand and has been a meadow for five years but has not been pastured. Have allowed aftermath to fall back onto the ground. I only had manure to cover it partially, and have considered sowing commercial fertilizer on the balance. I wondered if I could not sow fertilizer this fall, with a disk drill, as sowing it in the spring with corn has been very unsatisfactory. I thought perhaps it would become incorporated with the soil during the winter and be of more benefit to the field. I have watched my farm papers closely, but have not seen anything on this subject.

Lenawee Co. J. W. W.

Since commercial fertilizer is soluble plant food I would not think it necessary to apply the fertilizer in the fall for a spring crop. If you use a fertilizer containing simply phosphoric acid and potash there probably would be no loss unless there would be a loss from washing or erosion. You say your land is rolling. Now if it should be an open winter and plenty of rain, some of this soil might be gullied or washed out and you would certainly lose some fertilizer. It would be removed, soil and all. There would be practically no danger, however, of the phosphoric acid and potash, the mineral elements, getting away. On the other hand, if you used a complete fertilizer containing the three essential elements of plant food, nitrogen, phosphoric acid, and potash, there might be some danger of loss with the nitrogen. With excessive rains this might leach out of the soil and be lost entirely, and therefore I would not think it advisable to apply the fertilizer this fall for corn next spring.

However, I do believe it to be a good plan to apply it on the ground before the corn is planted, a week or two for instance, or it would do no harm if it was two or three weeks before the corn was planted. Then there is no chance for leaching or loss in any way and the plant food in the fertilizer becomes dissolved in the soil moisture so that it can be readily utilized by the plant. There always is danger in applying fertilizer late in the spring if we have a dry season, that it is not absorbed or dissolved in the soil moisture, and consequently we do not get the benefit out of it. For instance, I have applied fertilizer on potatoes planted late in June, by opening a furrow with a shovel plow, planting the potatoes, covering lightly with a hoe, and then applying some fertilizer, and then finishing filling the furrow. It was an extremely dry season, and when we dug the potatoes we found lots of the fertilizer just as it was applied in the spring. It had not been dissolved in the soil and consequently the potatoes didn't use it. Now had this ground been plowed earlier and the fertilizer applied there were plenty of rains so that it would have been dissolved in the soil moisture and well distributed in the soil so that the plants could have utilized it. But to apply it this fall I think is unnecessary and I don't think advisable.

COLON C. LILLIE.

RAINFALL AND FARMERS' CROPS.

During the present fall I have experienced a feeling akin to disgust when I have heard people in other occupations than farming, as well as the critics who loaf at the street corners say: "Well, the farmers are never satisfied; they are always grumbling. They complained all summer because the rain didn't come, and now we are getting plenty of it they grumble, saying they can't harvest their crops.

Such people are overflowing with conceited ignorance. They are not aware of the fact that water is the freighted agent that sustains plant and animal life. They would appear astounded if they were told that every pound of bread they eat has cost two tons of water in the making. If the critics would spend but a small portion of their time studying to understand the manner in which the food that sustains them is produced, they would enjoy life just as well as they do at present, and would not be as ready to make derisive remarks about the farmers who spend their time on the farms, labor hard, and take their chances with the drouths and excessive rainfalls, in their efforts to coax from the earth the food that sustains the nations.

In producing crops on the farms it makes a great difference as to the time of year the rains come. In the middle west, in order to produce maximum crops there must be at least 35 inches of rainfall during the year. If the rain is evenly distributed over the growing season, from March to October, then there is what is called a growing season. But if the rain falls during the fall and winter, and but little comes during the summer, the sun pumps from the surface of the ground what moisture there is coming up out of the ground by capillary movement of moisture, and no gravitational water going into the soil, then there is distress. The farmer sees the crops he has labored hard to plant, wither and, in some soils, perish from the lack of moisture.

On the other hand, if there is but a small amount of rain or snow during the fall and winter, and nearly all of the 35 or 40 inches of rainfall comes during the spring and summer, on the heavy lands the soil becomes water-soaked; the air can not circulate through it, and there is no life in it; the vegetation can not grow under such conditions, and there is distress.

The farmers living on the farms know very well conditions necessary for the production of crops, and when the conditions are adverse to their growth, they see it, and very properly mention the fact. The lack of moisture, or an excess of water, is a hindrance to crop production, and if carried to an extreme, means not only a diminution of the year's income, but may mean a lack of sustenance for the stock kept on the farm and a living for the family. Many a family has been driven from the farm selected for a home, because a year of drouth or a series of years of drouths, had made it impossible to live and meet the debts which were a part of the purchase price of the home. It is justifiable for farmers to watch their crops closely, and the needed rainfall, for it means success if the rains come at the right time, and in the right manner, or if they fail to come during the growing season, crop failure and disaster must necessarily follow.

The maximum amount of rainfall at the proper time, if well distributed over the whole country, means national prosperity. If the summer drouth is universal there will be a general shortage and high prices will prevail. The present small potato crop and the prevailing high prices for the time of year, is an example. Excessive rains in the fall, which would have prevented the gathering of the crop, would have caused a greater potato shortage, and those who deride the farmers for watching the rains and the drouths, would have been obliged to pay much higher prices than they are now paying for this important article of food.

Much has been said and written about the conservation of moisture that is already in the soil, by proper cultivation which maintains a just mulch, and prevents loss of moisture by evaporation. A good deal can be accomplished with hoed crops on clay, loam and fine sandy soils, but on coarse sandy lands and gravelly loams, evaporation is rapid, and the hygroscopic water which constitutes the films of moisture that surrounds the soil grains, is not replenished by capillary water for any great length of time, and on account of a lack of rainfall, or gravitational water, the crop must fail. There

are numerous spots of such soils in all parts of our state.

Our grasses are an example which will show very clearly the necessity of a continuous distribution of gravitational moisture by rainfall. A single ton of hay pumps from the earth 500 tons of water before it is ripe for harvest. If the supply of water is diminished the amount of hay produced is correspondingly reduced. If the grasses are consumed by cattle, it takes from 15 to 20 tons of water to make a pound of beef.

The more we look into this matter of moisture the better we can understand the necessity for a continuous supply in order to make the required amount of food for an existence a possibility. It is calculated that on an average, one thousand parts of moisture are required to grow one part of dry matter. With the facts in the case in mind, it is not strange that those who labor to produce the necessities for the sustenance of the population of the country, apprehend a shortage and disaster when the rainfall is not plentiful during the growing season of the year. Unless the rain falls, and the sun shines, the art of cultivating the soil and all the light thrown upon the great subjects which pertain to agricultural pursuits by our scientific investigators, will go for naught. Given the rain and sunshine alternately and continuously, prosperity and happiness is assured.

Wayne Co. N. A. CLAPP.

GROWING LIMA BEANS FOR THE CANNING FACTORY.

Canning factories, of course, grow some common white beans and put them up in various ways. Some canning factories even go into the pork and beans proposition as the big packers and packing concerns do, but canners all want dwarf lima beans to can. This is an entirely different proposition from growing ordinary white beans. The dwarf lima beans require a longer season to ripen in. You can't raise them too far north or they will not properly develop. Of course, they don't want to be ripe when harvested. They want to be just right for canning. The original lima bean was a pole bean, one had to use poles, but they have been changed by selection to a dwarf bean, which grows about one and a half to two feet high. We are just attempting to grow these beans in this vicinity for the canning factory. So far the results have not been satisfactory. Last year was an exceedingly wet season and cold and the beans didn't do well at all, some fields were never harvested. This year the beans were put in earlier and the season was dry and warm. They grew well, but for some reason or other they did not fill well. Even the canning factory man can give no explanation. In some sections lima beans are quite a profitable crop. Many people near canning factories receive as high as \$50 and \$60 and sometimes as high as \$75 per acre for the green beans. They are pulled at the right time and drawn to the canning factory and run through the viner and separated from the pods and then the canner pays so much a pound for the pods. The straw is usually taken home by the farmer and fed to live stock.

The farmer should receive more for crops grown for the canning factory than for ordinary crops, owing to the fact that he must haul them in a green condition to the factory. This is costly, because it takes the teams away from the farm work just when you are sure to want them on the farm. In raising ordinary beans it is much the same as wheat. You can draw them to market after the farm work is done, but with canning factory crops they must be drawn at just the right time, it is very exacting, and the farmer can't afford to raise them unless he can get more for them than he can for ordinary crops.

COLON C. LILLIE.

RUNNING AN ENGINE.

Ten or fifteen years ago almost no one but an engineer knew anything about running an engine. Now, the ability to start an engine and keep it running is almost as necessary on the farm as knowing how to milk a cow.

Almost every farmer now has an engine and many of those who have not are in the market—looking, studying, thinking and deciding. This fall and winter will see a great many engines purchased by farmers.

Permit us to make a suggestion. Before deciding, watch the advertisements in the Michigan Farmer; get all the information possible, and then choose the engine that seems best adapted to your needs, regardless of price.

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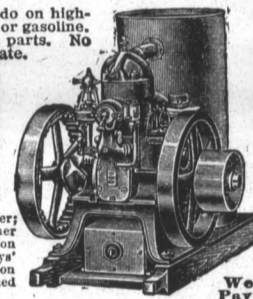


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GRAIN TO FEED WITH CORN FODDER AND OAT STRAW.

I would like very much to have you tell me how to balance a ration for my cows. I am a young farmer just starting out in the dairy business and I would appreciate your advice very much. I have no silo but expect to build one next year. The following is the feed I would like balanced: I have plenty of good corn fodder and excellent oat straw but no hay. How much and when is it best to feed this roughage? For grain I have wheat bran, cottonseed meal, corn meal, and oil meal. How much of each should I mix together to balance properly?

Eaton Co. W. H. J.

Oat straw and corn fodder do not make a very satisfactory combination for the roughage part of the ration. In food constituents they are very much alike, both being deficient in protein. They are carbonaceous foods and have a low coefficient of digestibility, that is, much of the oat straw and the corn fodder passes through the cow without being digested. However, they are good fillers, and by feeding a proper grain ration you can get good results; although it will not be the most economical results because you will have to feed a heavy grain ration in order to make the cows yield anywhere near their maximum.

The roughage being deficient in protein would necessitate feeding a grain ration that is quite rich in protein; and since you have no succulent food in the roughage I would prefer to have oil meal as one of the grain feeds, although it is a little bit higher priced than cottonseed meal. But oil meal is naturally a little laxative and tends to keep the bowels of the animals in good condition, while cottonseed meal is constipating, and if fed heavily in connection with cornstalks and clover hay it probably would decrease the digestive efficiency of the cows.

I don't think there is anything any better and probably nothing any more economical than the entire corn plant. Therefore, when you are feeding cornstalks I would recommend that you feed some corn meal in the grain ration as you have this product anyway; and with it I would suggest that you feed oil meal, and cottonseed meal, and mix them in equal parts by weight. That is, mix together 100 lbs. of corn meal, 100 lbs. of cottonseed meal, and 100 lbs. of oil meal thoroughly. Now feed the cows all the oat straw and all the cornstalks they will eat up clean twice a day. You can feed corn fodder once a day and oat straw once a day. It is not necessary to feed them so liberally of this that they waste a large part of it, but on the other hand you ought not to compel them to eat it all up clean, because much of it is unpalatable. You probably can get better results if you will cut the cornstalks with an ensilage cutter, that is, you will get a larger percentage of the stalks consumed than you will if you feed them whole. Now feed the cows a pound of the grain to every four pounds of milk the cows produce; or give three-fourths of a pound of grain a day for every pound of butter-fat which they produce in a week.

WHAT GRAIN TO FEED WITH COOKED BEANS FOR GROWING HEIFERS.

I wish to feed cooked beans this winter to my cattle. Would you please advise me as to the best kind of grain to use to secure the best results? I have plenty of good clover and timothy hay and oat straw for roughage. The cattle are growing heifers that I expect to make cows of.

Oakland Co. E. G.

With plenty of good mixed hay and oat straw I think you can get splendid results without any other grain than cooked beans. They probably will eat cooked beans better where you feed no other grain ration than they would if you fed another grain, and where they have no choice they will relish the cooked beans better.

Growing heifers should be urged to consume a comparatively large amount of roughage. This is better for them than it is to feed them a large amount of grain and a small amount of roughage. It increases their capacity to consume food later on when they become cows, and it is cheaper. I should expect heifers to make a splendid growth and do well upon plenty of good clover and timothy hay once a day and oat straw once a day,

as much as they will eat up clean, and then a feed of cooked beans. If you really want to feed some other grain in connection with the cooked beans or haven't enough of the cooked beans to carry you through, then I know of nothing better than corn and oats ground together. You can feed cooked beans once a day and a little corn and oats once a day, and without doubt the heifers would do well. Of course, if you fed them a little more grain you wouldn't have to feed them quite so much of the hay and straw, and it all depends upon the amount you have of each. But with plenty of good mixed hay and oat straw, growing heifers can get along on a small grain ration and do well.

PEA MEAL FOR COWS.

What grain and how much shall I feed to my cows? I can buy cottonseed meal for \$32.50 and pea meal for \$26, and bran for \$24. I also have oats and corn on hand. For roughage I have corn silage, cornstalks, bean straw and mixed clover hay.

St. Clair Co. SUBSCRIBER.

At the prices named pea meal is the cheapest and best grain ration that you can get for the cows. In fact, I don't know of any better grain ration than pea meal to coax cows to give milk. It is most excellent feed. I make a practice every year of growing peas and oats. Of course, what I am after largely is the peas, because peas are rich in protein, to balance up a ration of corn silage. This year we raised 20 acres and it has been my practice to raise about that much every year. Next year my calculations are to practically double this area of peas and oats.

We sow peas and oats together, because they harvest better, and then oats are a most excellent food for cows also. By mixing a bushel of peas and a bushel of oats together and sowing about two bushels to the acre we usually get a fairly good crop of grain, and if they are harvested before the oat straw gets too ripe the oat and pea straw is as good as timothy hay for cows, or any other stock.

I should advise you to buy pea meal. If you want to feed some oats you can mix half oats with the pea meal and get splendid results. Oats are a splendid food for all kinds of stock. The only trouble is that they are usually high priced and it makes an expensive ration. If I could get all the pea meal I wanted at the price named I don't believe I would look for anything else. On the other hand, if you can't get enough then it might pay you to mix ground oats with the pea meal. Or it would do no harm and make a good ration if you mix corn and oats together half and half to make a good corn chop, and then feed the pea meal in connection with this. I wouldn't buy any cottonseed meal or any bran at the prices stated if I could get all the pea meal I wanted for that price.

PUTTING CORNSTALKS IN THE SILO.

We have about seven acres of heavy corn fodder after filling silos. Would it be better to put this into silo as soon as we have room for it, or feed as a roughage? We haven't enough of other roughage without this. Can you feed ensilage entirely and no other roughage without harmful results? I get better results from feeding corn that has been shocked and then run into silo, and dampened, than I do from corn put in when it has lain out three to four days.

Emmet Co. H. L.

If you put the cornstalks into the silo and wet them sufficiently so that they pack down there isn't any question but what you will get better results from them than you will if you keep them dry, because they will practically all be consumed if they are made into silage. If you feed them dry not over half of them will be consumed anyway, and probably not over one-third. It is possible that some of these stalks that are made into ensilage when they are all consumed are indigestible and act largely as a filler, but the cows will get all of the nutriment in them they possibly can; whereas, when they are fed dry only a certain per cent of them are consumed at all. If you have got the silage room I am positive it will pay you to make ensilage out of the corn stalks if you are short on roughage.

I don't like to cut up the corn and leave it on the ground two or three days. I think it is a very bad practice. The corn absorbs odors from the ground. It is liable to must on the lower side of the bundles, which will impair its feeding qualities. This is especially true if there happens to come a rain while the corn lies on the ground. I remember one year when we had a considerable amount of silage corn cut, and the machine broke down, causing us to wait several days for

repairs. In the meantime there came a rain and the weather was warm. The corn on the bottom of the bundles began to get musty and to absorb odors from the ground which made the silage distasteful to the cows. We could tell when we fed this ensilage. The cows didn't like it. So I believe it would be better to have the corn shocked than it would to leave it on the ground.

But why shock it or why leave it on the ground. Why not cut it up when it contains the largest per cent of digestible matter and put it into the silo. That time is when it has just reached maturity and contains its natural juice. Then it makes choice ensilage.

If perchance, we can't handle the corn then and it gets too dry then the next best thing is to add water to it. But the finest ensilage is made from mature corn containing a sufficient amount of its natural sap so that you don't have to use any moisture. That's prime ensilage. The cows know it, too.

Where one hasn't the dry roughage he can get along with the ensilage alone as a roughage, although it is not advisable if other roughage is available, because ensilage gives better results if some dry food is fed in connection with it. However, people have fed this as an only roughage, just simply grain and ensilage and get good results, but I wouldn't want to recommend it. If I couldn't get hay I would buy straw, or some fodder.

GRAIN TO FEED WITH SILAGE, CLOVER HAY AND FODDER.

I am milking 36 cows, and I have to buy my grain feed. I have corn silage and clover hay and corn fodder. What is the best and cheapest grain feed to buy to make a balanced ration?

Berrien Co. A. N. B.

Corn fodder is supposed to be the entire corn plant without being husked, grown thick probably so that the ears are mere nubbins and some stalks having no ears at all, but it is the entire corn plant. This being the case I do not believe that I would figure on buying any corn meal for the grain ration, but I would confine myself entirely to those foods which are comparatively rich in protein, like cottonseed meal, oil meal, and gluten feed, pea meal, and cull beans. Undoubtedly the food in which you can buy a pound of digestible protein for the least money is cottonseed meal, because this is exceedingly rich in protein. Most practical dairymen would make this the basis for the grain ration. However, I would not care to feed over two pounds of cottonseed meal a day and then I would feed some other grain in connection with it to make as heavy a grain ration as I wanted to feed. And I would buy any other grain ration in which I could buy a pound of digestible protein the cheapest.

NEW RECRUITS ADDED DAILY.

The army of progressive farmers who are taking advantage of our free milk and cream testing service, is growing. Every day there are new names added to the roll and even now the number enlisted in the campaign to secure a "square deal" is significant. It may not be known to the reader that every subscriber to this journal is by virtue of that fact entitled to this service; and that he can have it free; but it is so.

Here is the simple method of getting into the campaign and securing the service: Mix the milk or cream thoroughly and immediately fill a 4-oz. wide-mouthed bottle, enclose bottle in mailing case and send by parcel post to Michigan Farmer Laboratories, 674 Woodward avenue, Detroit. We do the rest. Should you not have a bottle and mailing case you will be furnished by addressing a request for same to the Michigan Farmer, Detroit, Mich., and enclosing 10c in stamps, or a mailing case alone will be furnished for 5c. Remember to send sample of milk or cream to Michigan Farmer Laboratories, 674 Woodward avenue, Detroit, but to order bottles and cases of the Michigan Farmer, Detroit.

Note.—If those sending in samples for testing will enclose 5c in stamps their bottle and mailing case will be returned.

A VALUABLE REFERENCE.

In connection with the veterinary advice giver in the Michigan Farmer, every reader can use to excellent advantage one of the Michigan Farmer Anatomical Charts. This chart illustrates the horse, cow, sheep, hog and fowl, the perfect animal, the bones, the muscles, the blood system and the internal organs, also giving the name and location of each bone, muscle, and vital organ. Dr. Fair, our veterinarian, recommends the use of this chart and believes it will help you greatly to make your questions better understood and also enable you to better understand the answers.

This chart is only one of the features of our six-page collection of charts which also contain maps of Michigan, the United States and the world, and many other valuable features. The entire collection will be sent postpaid, for only 30c. The Michigan Farmer Detroit, Mich.—Adv.

Practical Science.

CHANGES DURING THE ROTTING OF MANURES.

(Continued from last week).

Waste of Manures Through Weathering.

In connection with this it is interesting to note some very decisive experiments conducted by this same station bearing on the waste of farm manures, due to exposure to weather generally. At the same time the effect in a preserving way of the various so-called absorptives that have been used from time to time is noted.

One ton of fresh manure treated with 40 pounds of floats compared with one ton of weathered manure treated with 40 pounds of floats showed a loss, due to weathering, of 18.66 per cent of the total mineral matter which was distributed as far as fertilizing constituents were concerned, as follows: 4.47 per cent of the phosphorus was lost during the action; 32.96 per cent potassium likewise; and 33.61 per cent of the nitrogen was lost during the weathering, in spite of the floats that were used as a preservative. The value of this loss, as determined by crop production, per ton, was \$21.58. In the case of fresh manure to which acid phosphate had been added there was a loss, due to weathering, of 16.13 per cent total mineral matter containing 17 per cent phosphorus, 38.2 per cent potassium and 31.56 per cent nitrogen, with a total crop production loss of \$14.97 per ton. With kainit as a preservative, there was 27.1 per cent loss of mineral matter, due to weathering; 16.67 per cent loss of phosphorus, 43.85 per cent loss of potassium, 31.51 per cent loss of nitrogen, and a loss of crop production of \$21.21 per ton. In the case of gypsum, the weathered manures showed a loss of 28.67 per cent mineral matter; 9.73 per cent phosphorus; 54.37 per cent potassium and 29.65 per cent of the nitrogen, with a loss in crop production of \$14.70 per ton. In the untreated manure, that is, manure having no preservative added, the mineral loss due to weathering was 22.15 per cent; the phosphorus loss was 42.5 per cent, potassium loss was 51.2 per cent, and the nitrogen loss was 35.63 per cent, with a crop production loss of \$21.45 per ton.

The average loss or waste due to weathering of the manure, in spite of any preservatives added, was 22.54 per cent of mineral matter; 14.7 per cent phosphorus, 44.5 per cent potassium, 32.19 per cent nitrogen, with a loss of crop production of \$18.66 per ton.

Absorptives do not Prevent Loss in the Barnyard.

The loss due to weathering in these instances should not be confounded with the losses due to the escape of ammonia such as occurs in the stable when any of these various materials are used as absorptives, but it may be considered that practically mostly all of these losses here recorded are due to the actual dissolving of the soluble constituents in the manures, by rain or other weathering agents, and it is interesting to note that farmers when throwing manures into the yard, which have been removed from the stables where it was treated with the various absorbing agents such as floats, acid phosphate, kainit, gypsum, etc., cannot rely on these agents to prevent waste in the farmyard, for it is evident from the records herein presented that it becomes just as essential to remove speedily that manure to the field where absorbing agents are mixed with it as when untreated.

LABORATORY REPORT.

The Over-run Problem.

As we are shipping our cream and would like to know how much butter a pound of butter-fat makes, several persons have asked me and I told them I didn't know but would write and ask someone that knows. I see by our farm papers that you test milk and cream free so hope you can tell me.

Emmett Co.

F. S.

The question arises frequently as above, as to the manner of figuring the amount of butter to be obtained from one pound of butter-fat. Of course, if it were not for the fact that other materials are incorporated during the process of manufacture of the butter, then one pound of butter-fat would make one pound of butter, but during the process of manufacture a certain amount of water is incorporated with the butter-fat, together with a small amount of curd from the milk or cream, likewise salt in other than

fresh butter. These products, that is, the water, the curd and the salt, constitute the ingredients which make the overrun, as it is called, in butter. Overrun in butter means the amount of materials over and above the fat present. For instance, one pound of butter will make from 1.12 to 1.20 pounds of butter. It is plain to see that if one pound of butter-fat makes 1.12 pounds of butter, the overrun in that butter is 12 per cent. If one pound of butter-fat makes 1.20 pounds of butter, then the overrun in that butter is 20 per cent.

One may easily see how, therefore, it becomes possible for a creamery to pay the full butter prices for butter-fat and still have a sufficient margin under certain conditions to make a fair profit. We will suppose, for example, that the Elgin market for butter is 40 cents per pound, and the creamery will pay the farmer for his butter-fat the same price that the Elgin market quotes for butter. In other words, 40 cents per pound for the butter-fat. One hundred pounds of butter-fat would, therefore, yield the dairyman \$40. This same 100 pounds of butter-fat can, by the process of manufacture, be made into 120 pounds of butter, 120 pounds of butter at 40 cents per pound yields \$48. The creameryman then gets for the manufacture in that case the difference between \$48, his total income, and \$40, which he pays the dairyman. For the manufacture, therefore, of 120 pounds of butter the gross profits of the creameryman is \$8.00 and from this must be deducted the cost of labor, and the cost of the several operations incident to the manufacture, shipment and selling of the butter.

Keeping Cider Sweet.

Can you tell me of some way to keep cider sweet?

Osceola Co.

W. J. R.

There are two or three ways of preserving cider. The one most ordinarily used is to pasteurize. This may be done by drawing off the cider into glass bottles or fruit jars and placing same in a pan or boiler surrounded by water and gradually raising the temperature as is done in the canning of fruit, until the water just begins to boil on the outside. The corks and can covers should be immersed for about 20 minutes in boiling water. They are then taken out and after the cider has stood in the jars for about one-half hour the corks and stoppers are inserted, the can covers sealed down and the water allowed to cool gradually.

The objection to this method of preserving cider is that it usually gives the cider a slightly cooked taste which is not relished by some people but if care is used in pasteurizing the same it makes a very delicious beverage indeed.

There is another method followed. This is the use of chemical preservatives. We will describe this method, although we wish it to be understood that we do not approve of the use of chemical preservatives in beverages. Benzoate of soda to the amount of 0.2 per cent may be used which will preserve the cider for a considerable period of time. If the cider is to be used for other purposes than drinking it possibly might not be objectionable to use benzoate of soda, and there are people who contend that benzoate of soda is harmless when used in these amounts. The writer, however, has not been one to acknowledge the harmlessness of benzoate of soda and we have, therefore, strenuously advised against its use.

In experiments comparing barley meal and corn meal as a feed for pigs, two lots of 37 three-month old pigs were fed 92 days. The difference in gains made and the cost of gains was slight, although it was concluded that "maize is worth approximately \$1.25 per ton more than barley meal for pig feeding." As regards the quality of the pork, barley meal seems to be slightly superior to maize meal.

In a test with 120 calves, comparing the relative value of oat meal and of wheat meal as a two-part ingredient in a calf meal consisting of one part flaxseed meal and two parts corn meal, it was concluded that these two meal mixtures are of practically equal value. In cattle feeding trials, comparing home-grown and imported feeding stuffs, no material difference was realized either in gains made or in cost of gain.



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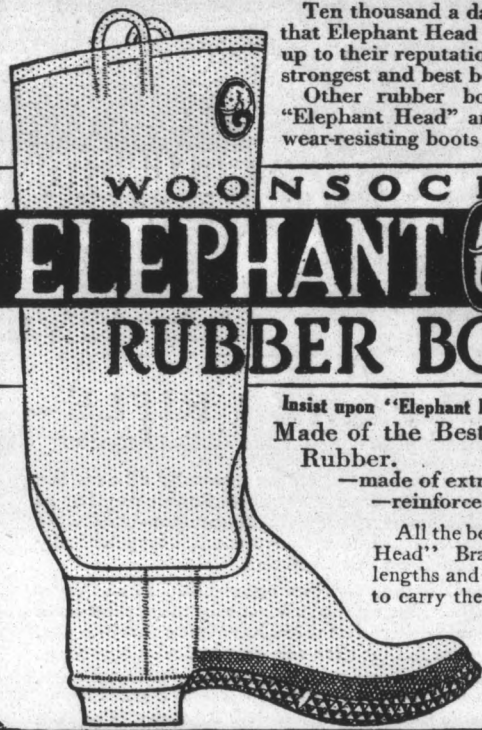
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FEEDERS' PROBLEMS.

Feeding an Orphan Colt.

Kindly advise how to feed an orphan colt two months of age. Hillsdale Co. SUBSCRIBER.

A colt only two months of age should be fed milk as well as grain. At first cows' milk should be modified to make it more nearly like the mother's milk in consistency. Cows' milk is richer in fat but contains less sugar than mare's milk, consequently some water should be fed with it and also some sugar added. About a dessert spoonful of granulated sugar should be added to each feed of milk, and about half as much water as cow's milk. It is also well to add two or three table-spoonfuls of lime water as an aid to digestion. This is made by placing a lump of lime in a bucket of water, then pouring off the first water and re-filling the bucket. Only small feeds of milk should be given, and the sugar may be eliminated gradually as the colt becomes accustomed to the cow's milk. The milk should always be fed from a clean pail, and if any signs of "scouring" appear, the ration should be reduced. If the colt becomes constipated, give a three or four ounce dose of castor oil. When the colt reaches an age of three months, it can safely be fed skim-milk and a liberal grain ration. A colt two months old needs grain feed, but should not have corn. Ground oats and bran make the ideal ration for colts of this age, and while only a small feed may be given at first, this may be gradually increased with profit until the colt is getting all it will eat up clean twice a day.

afford ventilation. Too close confinement is as dangerous as over-exposure and both should be guarded against.

As winter closes in the flock must be confined to dry feeding. Now is the time when precautionary measures should be exercised. The change from pasture to dry feed is a very radical and abrupt one and likely, unless made gradually, to produce digestive trouble. Some measure should be taken as soon as the flock is permanently removed from pasture to substitute some form of succulency to take the place of that provided in the pasture. Ordinary dry roughages are deficient in succulent matter and can not be depended upon to take the place of green forage. So long as the ewes can have access to a meadow pasture, even though it may be late in the fall, they will secure enough succulent food to carry them along, but when this fails some other provision must be made. Ensilage of course, is excellent if at hand and will answer all purposes. Roots are unequalled for supplying succulency in the ration if plenty are in store. Potatoes, cabbages, etc., may be fed with splendid results. With the wide resource of supply no flock owner should neglect to feed plenty of this kind of food to his ewes following the mating season.

"The best that the farm can afford is none too good for the flock," is an old English adage and very applicable wherever sheep are maintained. Ewes, succeeding mating, should be fed a highly palatable roughage and grain ration. No one kind of roughage possesses all the essential elements vital in a ration for pregnant ewes. A wide range of roughage should be supplied, not only to insure perfect nutrition, but also to encourage healthy assimilation and promote strong appetites. Never under any condition, feed musty or moldy roughage to pregnant ewes as serious results are likely to follow. If the roughage is fed in racks in the yard do not fail to keep the racks well cleaned out. Wet or soggy food is equally as injurious to pregnant animals, especially if compelled to eat it on account of the lack of better food. Supply the ewes with good wholesome food and plenty of it in proper proportion and good results are sure to follow.

Shilawasee Co. LEO C. REYNOLDS.

SILAGE FOR HORSES.

Under this head, George M. Roumel, Chief of the Animal Husbandry Division, Bureau of Animal Industry, comments on the value of silage for horses, in a recently published bulletin. Silage has not been generally fed to horses, he states, partly on account of a certain amount of danger which attends its use for this purpose, but still more, perhaps, on account of prejudice. In many cases horses have been killed by eating moldy silage, and the careless person who fed it at once blamed the silage itself, rather than his own carelessness and the mold which really was the cause of the trouble. Horses are peculiarly susceptible to the effects of molds, and under certain conditions certain molds grow on silage which are deadly poisons to both horses and mules. Molds must have air to grow and therefore silage which is packed air-tight and fed out rapidly will not become moldy. If the feeder watches the silage carefully as the weather warms up he can soon detect the presence of mold. When mold appears, feeding to horses or mules should stop immediately.

It is also unsafe to feed horses frozen silage on account of the danger of colic. This is practically impossible to avoid in very cold weather, especially in solid-wall silos. By taking the day's feed from the unfrozen center of the silo and chopping away the frozen silage from the edges and piling the frozen pieces in the center the mass will usually thaw out in time for the next feed. When silage is properly stored and is not allowed to mold, no feed exceeds it as a cheap winter ration. It is most valuable for horses and mules which are not at heavy work, such as brood mares and work horses during the slack season. With plenty of grain on the cornstalks, horses will keep in good condition on a ration of 20 pounds of silage and 10 pounds of hay for each 1,000 pounds of live weight.

Washington, D. C. G. E. M.

THE INTERNATIONAL.

The character and extent of the International Live Stock Exposition is too well known and too generally appreciated by the stock breeders and feeders of Michigan to make any extended comment regarding the show for 1913 which will be staged at the Union Stock Yards, Chicago, from November 29 to December 6, inclusive. Suffice it to say that the entries for this show vastly exceed those of any previous event in the history of the show. This means that the patron of this great show will have the advantage of seeing more animals of all breeds, in both breeding and fat classes compete in the show ring than have ever before been gotten together in one place, and see the best types in each class picked by judges of international reputation. In addition the spectacular and entertainment features of the show are in themselves well worth a trip to Chicago. Besides all those attractions practically all of the national breed associations will meet during the exposition, which is an additional incentive for every breeder of pure-bred stock to attend. A list of these meetings and the places where they will be held follows:

Location of Halls.

- Convention hall No. 1, second floor of International Amphitheater.
- Convention hall No. 2, third floor Live Stock Record Building. Entrance through Saddle and Sirloin Club.
- Convention hall No. 3, second floor Live Stock Record Building. Formerly designated as Wool Office.
- Convention hall No. 4, second floor Live Stock Record Building, (corner room).
- Convention hall No. 5, second floor Live Stock Record Building. Second door to left, near head of stairway.
- Convention hall No. 6, second floor Swine Department, (above harness shop).
- Convention hall No. 7, second floor Swine Department, (above harness shop).
- Convention hall No. 8, second floor, Live Stock Record Building, Aberdeen-Angus Office.

Monday, December 1.

Percheron Society of America, Congress Hotel, 8:00 p. m.

Tuesday, December 2.

- American Shire Horse Assn., Hall No. 3, 7:00 p. m.
- American Polled Hereford Breeders' Assn., Hall No. 4, 7:30 p. m.
- National Ass'n of Stallion Registration Boards, Hall No. 2, 7:30 p. m.
- Continental Dorset Club, Hall No. 5, 7:30 p. m.
- American Berkshire Assn., Stock Yard Inn, 7:00 p. m.
- American Aberdeen-Angus Breeders Association, Grand Pacific Hotel, 8:00 p. m.
- American Cotswold Registry Assn., Hall No. 7, 7:30 p. m.
- American Society of Animal Production, Hall No. 6, 8:00 p. m.
- International Live Stock Exposition Assn., Saddle and Sirloin Club, 8:00 p. m.

Wednesday, December 3.

- National Duroc Jersey Record Assn., Hall No. 5, 1:30 p. m.
- American Poland-China Record Assn., Hall No. 3, 2:00 p. m.
- Red Polled Cattle Club of America, Hall No. 4, 2:00 p. m.
- American Ass'n Importers and Breeders of Belgian Horses, Hall No. 2, 7:30 p. m.
- American Galloway Breeders' Assn., Hall No. 5, 8:00 p. m.
- American Shropshire Registry Assn., Hall No. 3, 8:00 p. m.
- American Hampshire Sheep Breeders' Assn., Hall No. 4, 8:00 p. m.
- National Lincoln Sheep Breeders Assn., Hall No. 6, 8:00 p. m.
- American Cheviot Society, Hall No. 7, 8:00 p. m.
- American Duroc-Jersey Swine Breeders' Assn., La Salle Hotel, 8:00 p. m.
- Chester White Congress, La Salle Hotel, 8:00 p. m.
- American Shorthorn Breeders' Assn., Congress Hotel, 8:00 p. m.
- O. I. C. Swine Breeders' Assn., La Salle Hotel, 8:00 p. m.
- American Rambouillet Sheep Breeders' Assn., Hall No. 8, 8:00 p. m.

Thursday, December 4.

- American Yorkshire Club, Stock Yard Inn, 7:00 p. m.
- American Southdown Breeders' Assn., Hall No. 3, 7:00 p. m.
- American Oxford Down Record Assn., Hall No. 4, 8:00 p. m.
- American Tamworth Swine Breeders' Assn., Hall No. 5, 8:00 p. m.
- American Suffolk Horse Assn., Breeders' Bldg., 8:00 p. m.
- Polled Durham Breeders' Assn., Grand Pacific Hotel, 7:30 p. m.

Friday, December 5.

- American Shetland Pony Club, Stock Yard Inn, 4:30 p. m.

LIVE STOCK NEWS.

The long continued extensive marketing of pigs and underweight hogs in the Chicago stock yards causes general comment among stockmen and yard dealers, as well as in packing circles, and everyone admits that it will cut heavily into the future supply of matured hogs, which means much higher prices ultimately. Provisions have shared in the extremely large decline in hog values, but both hogs and products have undergone recent rallies. Pork is still selling much higher than a year ago, and so are lard and short ribs. Stocks of lard in Chicago are understood to be controlled by wealthy dealers, and there is increased speculative trading. Hogs have been marked up in German markets recently 1/4 cents a pound, and reports from Denmark are that hog killing is running 20 per cent less than last year, all of which will work to develop a larger foreign demand for American hog products.

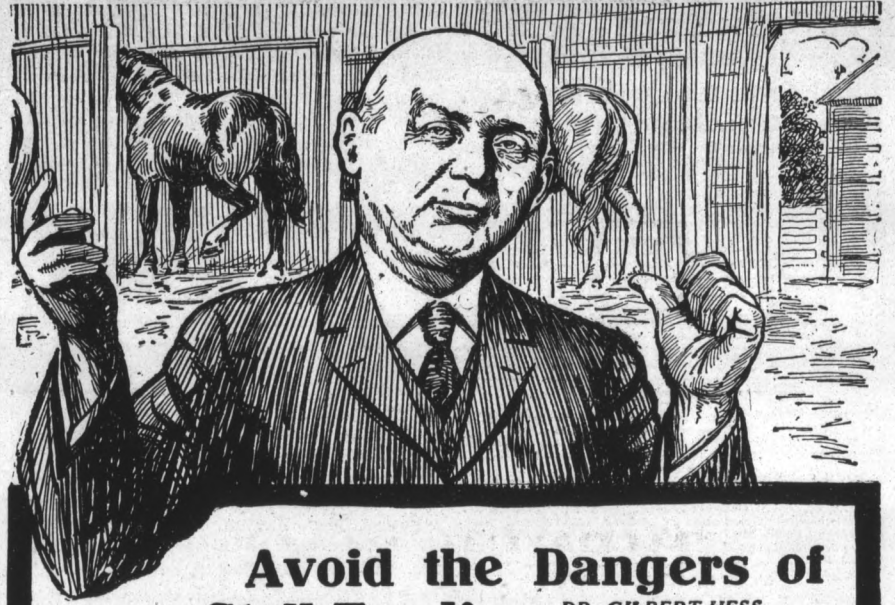
Thus far since the new tariff went into operation the importations of Canadian beef cattle have been of comparatively moderate proportions, partly because Canada has no large supplies to spare for outside markets, and partly because the Canadian railroads find the longer haul from the northwestern provinces to eastern Canada more profitable. A short time ago the first shipment of beef cattle of the season from Alberta showed up in the Chicago market, comprising steers that brought \$8.15 per 100 lbs. and heifers that sold at \$7.40. A great many shipments of Canadian stock cattle have reached American markets and have gone a long way to fill vacant feed lots. Many such consignments have gone to eastern markets, and this has materially lessened the demand in the Chicago market for stocker and feeder cattle for shipment to various eastern feeding districts.

Regarding cattle paper, W. A. Heath, president of the Chicago Live Stock National Bank, says there is no discrimination made against cattle paper, beyond the caution exercised in making any kind of loans. He adds: "The demand for cattle paper is very heavy on account of the depletion of herds and the general rural tendency to feed and breed for the future. Cattle paper is the equal of any other, involving fewer losses than any other collateral banks accept, although it was very different in range days. There has been some disposition to withhold loans on range sheep, but even in Chicago that tendency is not marked. The effects of the tariff were discounted some time ago, and the manner in which the country has been, buying feeding lambs, almost without a deviation in prices during the past month, indicates little apprehension. The faith that banks and loan companies have in cattle paper under ordinary conditions may be shown by the statement that such loans are made up to the full extent of the purchase price of feeding cattle. Loans are now made largely on that basis."

Where are hogs going to land? This is a question constantly heard, the recent slump in prices having left them at the lowest values seen at any time since last February. The Chicago packing fraternity appears to have complete control of the situation, and hundreds of farmers owning young hogs and pigs are becoming alarmed and are hastening to market their holdings for fear that further large declines will take place later on. Leading packers are being interviewed on the prospects for the hog trade, and they are extremely bearish as a matter of course, and some of the market reporters are evidently hypnotized by this talk, having veered around to the rankest pessimism, thereby endeavoring to intensify the depression. Here, for instance, comes Patrick Cudahy, the well-known packer, who makes the boldest predictions as to the future, his opinion, as expressed, being that "there should be plenty of hogs in the country to market for the next twelve months, for we have had very high prices and plenty of feed for more than a year past." Possibly there should be plenty of pigs and hogs left in the country after the long continued enormous marketing of mere pigs and young hogs prematurely from cholera-stricken districts of the corn belt, especially from Iowa, but from all accounts, there has been a tremendous decimation of everything in the swine line, and it is impossible to avoid the conclusion that later on there is bound to be a corresponding falling off in the country's supply of matured hogs. This packer ventures the opinion that "this cholera talk is more sensational than real," and he believes the reason so many young pigs are being sent to market is because there are too many of them in the country. He takes the ground that the inducement to breed has been great, and farmers have overdone it. Then, as if all this was not enough, the packer winds up by stating that the industrial situation is unsatisfactory and a great many shops are reducing their working forces.

In a short time the season for marketing sheep and lambs from the Montana and other distant ranges will be over, and then sheepmen engaged in feeding flocks in the middle west and farther east will have the field to themselves. The closing range shipments are running very largely to an inferior class of lambs, mostly of the thin feeder kind, and farmers who are not fastidious as to quality and weight are picking these up on very low terms. Fewer brood sows are being marketed in Chicago than in recent years at this season, while great numbers of pigs weighing from 60 to 80 lbs. are arriving and selling at big discounts from prices for matured hogs.

There has been a large marketing of pasture and stalk field common cattle for several weeks past, and eastern markets have received great numbers from several states along the northern line of southern states, including Virginia, Kentucky and Tennessee, as well as liberal numbers of Canadian stockers. A great deal has been said about the great numbers of Canadian beef cattle that are going to be brought into the United States under the new tariff law, but the truth is that Canada, as well as this country, is very short of beefs and really cannot spare many. In fact, the demand from this side of the international boundary line has resulted in stiff advances of prices for beef cattle, and this is sure to check the movement to a serious extent. Canada can spare stockers and thin old canners, perhaps, although even of these the limit is likely to be reached before long. Thus far large numbers of stockers have reached our markets, most of them going to eastern feeding sections, although the Chicago market has received some long trains. The Chicago packers have received some trains of thin, old canning cows of late, these bringing around \$4 per 100 lbs.



Avoid the Dangers of Stall Feeding

DR. GILBERT HESS, Doctor of Veterinary Science, Doctor of Medicine

I want to warn you in time that stock taken off pasture and put on dry feed are pretty apt to get out of fix, because corn, grain, hay and fodder do not contain the laxatives so abundantly supplied in grass.

Some of your animals are sure to become constipated, others off feed, rough in the hair, with paleness of the eyes, lips and nostrils, or the legs may stock or dropsical swellings of the abdomen appear, or the urine may become yellow and thick; but the common ailment of all, especially among hogs, is worms, worms.

Dr. Hess Stock Tonic Makes Stock Healthy. Expels Worms.

Being both a doctor of medicine and a veterinary scientist, I formulated Dr Hess Stock Tonic to correct these evils. It contains a laxative substitute for grass, diuretics to remove dropsical swellings, tonics to improve the appetite and increase digestion and vermifuges to expel worms.

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, the ailing ones healthy and expel the worms, that I have authorized your nearest dealer to supply you with enough for your stock, and if it does not do what I claim, return the empty packages and get your money back.

Right now is the time to feed Dr. Hess Stock Tonic, because it's the cow in the pink of condition that fills the milk pail, the steer with an appetite that lays on fat, the horse that digests its dinner that pulls on the bit, the hog that is well and worm-free that gets to be a 200-pounder in six months.

Dr. Hess Stock Tonic is never sold by peddlers—only reliable dealers; I see you peddler's salary and expenses, as these prices prove: 25-lb. pail \$1.60; 100-lb. sack \$5.00. Smaller packages as low as 50c (except in Canada, the far West and the South).

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

A splendid poultry tonic that shortens the moulting period. It gives the moulting hen vitality to force out the old quills, grow new feathers and get back on the job laying eggs all winter. It tones up the dormant egg organs and makes hens lay. Also helps chicks grow. Economical to use—a penny's worth is enough for 30 fowl per day. 1 1/2 lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills Lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks or keep it in the dust baths, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

NOW, THESE PRICES IN EFFECT!

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- 4 H.P. \$75.50
- 6 H.P. \$99.35
- 8 H.P. \$149.90
- 11 H.P. \$218.90

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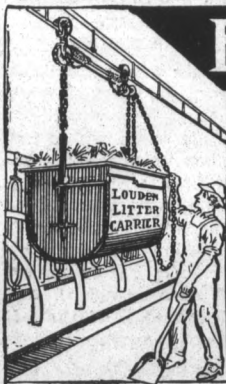
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WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

DETROIT, NOV. 22, 1913.

CURRENT COMMENT.

With the return of the Thanksgiving. Thanksgiving holiday each and every one of us will find many reasons for thankfulness for the blessings which have accrued to us during the year. The Governor's proclamation, in which he joins the President in setting apart Thursday, November 27, as a day for Thanksgiving, is unique, both in its brevity and in the prominence given to an important but little considered application of the Thanksgiving spirit. For the latter reason every reader will find it profitable to read and reflect on this proclamation, the text of which follows:

Just a "thank you" thrills the heart of the receiver and reveals the kindness of the giver. Gratitude is contagious, gratitude enriches the home and the state, gratitude makes life worth living. During the past year Michigan has shared with the Nation in peace and prosperity, in civic and religious progress, in an appreciation of health and sanity. The firesides of Michigan have had the courage and faith that conquers. To God, the source of all power, it is fitting that we devote one day to praise and thanksgiving in the spirit that shall brighten and beautify all the days of all the years to come.

Therefore, I, Woodbridge N. Ferris, Governor of the State of Michigan, do hereby join the President of the United States in designating Thursday, the 27th of November, as a day for all of the people of this Commonwealth to celebrate in thanksgiving and prayer.

In addition to the social and civic causes for thankfulness to which attention is called in the Governor's proclamation, we should not forget the more purely material causes for thankfulness, in token of which this day has ever been made an occasion for the feast of the year. Our first page illustration was designed to emphasize this feature of the Thanksgiving occasion. The photograph which furnished the foundation of the design was taken on a central Michigan farm, (the J. Jensen farm, of Montcalm county), is not only emblematic of the bountiful products of the autumn's harvest, but as well of that choicer product of the farm home which, collectively considered, is an earnest of the nation's future progress and thus a cause for general as well as individual thankfulness.

Let us then be thankful not only for both civic and material blessings, but as well for the promise for the future in the choicer products of the farms of this country, not forgetting to make those about us thankful by broadening the Thanksgiving spirit, as suggested in the Governor's proclamation.

The maintenance of the Mexican Monroe doctrine, which is in effect the assumption by the United States of police power over the international affairs of the Western Hemisphere, is an official duty which certainly does not tend to simplify the otherwise arduous task of the President in the administration of the executive department of our national government. The problems which arise in connection with that policy, are always diffi-

cult of solution, and this appears to be especially true with the Mexican one that is now pending. It is needless to say that if the administration in its effort to wisely solve this problem becomes involved in complications which require a united expression of patriotic loyalty on the part of the whole people, that patriotism and loyalty will be forthcoming. But such complications should be avoided if possible, and the administration should not be permitted to harbor mistaken ideas as to the sentiment of thinking people on this point through their default in the expression of that sentiment. In this connection Michigan Farmer readers will be interested in such an expression by Mr. M. J. Lawrence, President of the Lawrence Publishing Company, in a recent letter addressed to President Wilson. Mr. Lawrence's views on this question are the more illuminating from the fact that he is a student of other countries and other peoples, having traveled extensively in many foreign countries, including Mexico. His letter follows:

November 10, 1913.

My Dear Mr. President:

If a just cause should arise for a war with any other government, I think I would be as courageous in sentiment as anyone, but in sincere patriotism and with a foreknowledge of probable results, I view with absolute horror and alarm the possible armed intervention by us with the purely internal troubles of Mexico. From my insight of the matter there is positively no justification for this action on our part. The only plea is protection of United States citizens and their investments, which are not at all seriously threatened and if so, we should hesitate over the knowledge that if we march an armed force over the Mexican border it will cost an hundred lives of United States citizens and an hundred United States dollars to one citizen and one dollar that there is any possibility of loss under present or probable future conditions. We have everything to lose and nothing to gain. The days of reward by conquest and indemnity are past. From a philanthropic viewpoint the subject is in no way worthy of the cost. With the low pedigree and grossly immoral character of the great mass of the Mexican people, a peaceful settlement or any material progress in civilization by our government system is a hopeless task. I have very much admired and approved of your firm stand so far, in repelling the "Jingoisms" of politicians and some over-enthusiasts. May I hope that you will continue? I absolutely know that the great mass of the intelligent people and the important business interests of our country look with much alarm and for no satisfactory results from an armed interference with Mexico. The life and health of a citizen soldier is just as precious a care of yours as that of any other citizen. With much respect, I am,

Very truly yours,

M. J. LAWRENCE.

In the issue of November 8th Mr. N. A. Clapp of Wayne Co., described the operations of a solicitor for subscriptions to the capital stock of the "Michigan Farmers' Co-operative Association," and indicated that those who had subscribed were anxious for more definite information regarding the status of the organization toward the financing of which they had contributed. The Michigan Farmer at once started an investigation in their behalf. An inquiry addressed to the clerk of Wayne county brought the information that there was no record of such a corporation in his office, but a similar inquiry addressed to the Secretary of State led to the information that articles of incorporation under the above name were filed in his office last spring. Acting on this information, a member of the Michigan Farmer staff visited the Secretary of State's office at Lansing and secured a list of the original stockholders in, and officers of, the Association. All of these men, ten in number, gave Detroit as their residence, but they were apparently not of sufficient prominence in a business way to be telephone subscribers, and none of them were known to prominent men in the produce trade of whom inquiry was made.

Following up the only clues available from the city directory, one of the "original stockholders" was finally located. He is a clerk in a local shoe store, where two others interested in the "Farmers" association were also employed at the time of its incorporation, one of whom is named as secretary. This one original stockholder thus far located states that he supposed he signed the incorporation papers as a witness instead of a principal, and denies any present knowledge of the affairs of the concern, or the whereabouts of its promoters.

The Farmer has been unable to locate the principals in the promotion of this "Association," but hastens to warn its readers against investing in its stock on the unsupported claims of a solicitor who

was apparently the "brains" of the organization, but who seems to have failed to impart any definite information regarding the personnel of its officers or even the location of its "main office," to those from whom he has been successful in securing \$10 stock subscriptions.

In fact, it is quite as important that farmers act collectively in the organization of co-operative marketing associations, as in supporting them after they have been organized, and it is always well to show the door or the road to the "gum shoe" solicitor for, or promoter of, such enterprises.

One of the county agriculturists who has been engaged during the past year

in the new county agricultural work, was recently heard to make the statement that he had learned a great deal about farming in the past year, and that the management of his own farm would be greatly modified to conform to the new ideas he had gained in this study of farm management in one of the better agricultural counties of the state. In this connection he also advanced the idea that any farmer could well afford to spend a year traveling around over his county and state inspecting different farms and talking over agricultural problems with their owners, his idea being that this would ultimately prove a good investment in the greater success which would later come to any man who made a systematic study of farm management in this way.

This would, of course, be impracticable for the average farmer, but the average farmer could make much more of a study of farm management without any particular investment of time, if he would only direct his attention to that end. Such a study could be begun in his own neighborhood, and with the establishment of the habit of directing his thought and observation in that channel, such study could be systematically carried on during the necessary business trips which called him to other parts of the state. Once interested in this line of investigation the average man will begin to make a special study of farm management problems which will undoubtedly prove most profitable as well as a source of great satisfaction. There is much worthy of our careful attention in the idea advanced by the county agriculturist above mentioned.

HAPPENINGS OF THE WEEK.

National.

The fifth gun attack on trains in the copper district of upper Michigan occurred Sunday. An attempt to import strike breakers aroused the strikers to attack the train in which the foreigners were being brought to the mines. One of the striker breakers was injured during the battle. This incident was the chief excitement of the past week. On Tuesday attorneys of both the Western Federation of Miners and the mining companies will appear before the Supreme Court at Lansing in the matter of the injunction against strike violence issued and later revoked by Judge O'Brien.

A federal grand jury has returned indictments against 11 men who are in control of approximately \$20,000,000 of assets at Los Angeles, Cal. The charge against the men is that they have sent falsifying statements through the mails.

The loss of life and vessels on the great lakes during the storm one week ago is still undetermined. At present it is known that 19 vessels were either wrecked or

Foreign.

The situation in Mexico is very difficult to diagnose. It appears, however, that the rebels have taken courage from the attitude of the United States government, and are now showing strength in the campaign to wrestle northeastern Mexico from the hands of Huerta. The strategic point upon which the rebels are now concentrating their forces is Monterrey. Already a number of railroads are reported to have fallen into the hands of the rebels, and they, of course, hope to completely cut off communication with the outside world, and ultimately force the federal troops to surrender. The rebels have also captured Juarez under the leadership of Gen. Villa. An advance is also being planned on Chihuahua. That Gen. Huerta purposes to stand firm against the demands of the United States, is shown by his requesting Minister Aldape of the Interior, to resign, and appointing Foreign Minister Moheno, who is bitterly anti-American, as his general adviser.

Michigan and United States Crop Report.

Crop estimates and forecasts as of November 1, 1913, with comparisons for Michigan and for the United States, as made by the United States Department of Agriculture, are given below; condition estimates are given in percentages of a normal:

	Michigan.		United States.	
	1913.	1912.	1913.	1912.
Corn—Yield per acre	33.5	34.0	29.2	29.2
Production, (thousand bu.).....	54,974	55,250	2,463,017	3,124,746
Old, on farms Nov. 1, (thousand bu.)..	1,934	1,673	137,972	64,764
Quality, 1913 crop, per cent.....	86	79	88.2	85.5
Potatoes—Yield per acre.....	96	105	89.2	113.4
Production, (thousand bu.).....	33,600	36,750	328,550	520,647
Quality, per cent.....	90	88	87.8	90.5
Buckwheat—Yield per acre.....	15.0	17.0	17.2	22.9
Production, (thousand bu.).....	960	1,088	14,455	19,249
Quality, per cent	90	91	86.5	91.1
Sugar Beets—Condition, per cent.....	91	88	89.0	92.9
Apples—Production, per cent.....	42	82	44.6	69.9
Quality, per cent.....	74	85	70.2	83.0
Pears—Production, per cent.....	69	54	58.7	78.5
Quality, per cent	86	85	82.0	88.2
Grapes—Production, per cent.....	63	88	72.3	87.8
Quality, per cent	87	85	86.0	90.0
Clover Seed—Yield per acre.....	1.8	1.5	2.0	2.0
Production, per cent.....	92	73	80.5	74.5
Prices to Producers Nov. 1—Wheat.....	87	101	77.0	83.8
Corn	70	63	70.7	58.4
Oats	39	34	37.9	33.6
Potatoes	55	35	69.6	45.5
Butter	28	27	28.2	26.9
Eggs	27	26	27.4	25.9
Hay	13.20	13.00	12.26	11.80
Prices to Producers Oct. 15—Hogs.....	8.00	7.80	7.60	7.70
Beef cattle	6.10	5.30	6.05	5.36
Clover Seed	6.90	9.90	7.00	9.37
Apples	60	43	85.6	61.3

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION



The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper every week. Every article is written especially for it, and does not appear elsewhere

Elizabeth's Introduction to Thanksgiving.

By EDITH G. HAWKES.

As the train neared San Lorenzo, a tired white face pressed against the glass, and two eager eyes watched the figures on the approaching platform. The eagerness faded as close scanning failed to discover the one face that should be familiar among all these strange ones; bewilderment succeeded, and then discouragement. Elizabeth gathered up her belongings slowly and followed her fellow-passengers, with a sense of dismay that became active unhappiness as she stood on the station platform with her bags beside her, waiting and hoping at first, then waiting and fearing.

"You'd best go inside, Miss, and sit down, if your friends ain't here yet," said the station agent at last, passing her in the discharge of some duty. "That's where they'd look for you if they got here late."

"Thank you," said the girl, with an English accent and a sweet, tired voice. She took his advice, however, and sat down to think out some solution to this difficult problem. Here she was, a stranger in a strange land indeed—Elizabeth Walker, twenty years old, just from her aunt's little book-shop in a far-away English city, come here to meet her lover, to whom she had been betrothed these two years past, and whom she expected to meet and to marry this very day, here in this little California town whither he had drifted on his arrival a year before.

Bob had agreed to meet her, had indeed told her that he would drive in from the ranch with the horse and buggy he had recently purchased with the girl's coming in view. Elizabeth had written, naming the day she would arrive and the time the train would get in as nearly as she could figure it out. And now, oh, what should she do?

After she had sat there for half an hour, patiently enough, but growing more and more worried with each passing moment, the station agent, seeing her still there, approached her again.

"Don't you want to go to a hotel, Miss, or a rooming house?" he asked kindly. He was a middle-aged man, with laughers of his own, and the girl's trouble was plainly written on her face. "I can't leave here very well to take you anywhere until my assistant comes back, and that won't be till late, because, this being Thanksgiving, and him being young, I let him have a couple of hours extra. Would you mind telling me who you was expecting? I've lived here a good many years, and maybe I might know your friends."

Thus encouraged, Elizabeth told the friendly agent that she was expecting Mr. Robert Denton, and that she much feared something had happened to him to make him forget his agreement.

"Denton—no, I don't know anyone of that name. Has he been here long? Do you know where he lives?"

"He has been here a little over a year," answered Elizabeth. "I always address his letters to San Lorenzo, R. F. D. 2, whatever that means."

"It means rural free delivery—where did you come from that you don't know that?" asked the agent, amused at her ignorance. But when he learned her story, he said, "Well, poor thing, that's pretty tough, now, it is. I'd send you to my home, quick enough, but the folks have gone to spend Thanksgiving out in the country, at my married daughter's. I could get a taxi and send you to a hotel if you like, and then watch for your friend myself, and send him to you when he comes."

But at that moment fate intervened. Around the corner there drove rapidly a trig little woman in a trap, who drew up so suddenly as almost to throw herself out.

"Oh, Mr. Brown," she called, "didn't Matilda Jenkins come on this train? She

promised sure to get back this morning, and here it is Thanksgiving, and a big crowd coming to dinner, and I simply can't do everything myself. I meant to get there on time, but I stopped at the post office, and there was a line there a block long." She stopped at last, out of breath, and waited for an answer.

Mr. Brown shook his head. "I didn't see her, Mrs. Marvin. Of course she might have come in the crowd and gone off, but she generally stops to speak to me when she goes through."

"Well, I suppose I shall have to do the best I can without her, but it is certainly queer, when she promised so positively."

Elizabeth, who had been listening intently, now stepped up. "I expected to be met, and my friend isn't here," she explained. "I don't know what to do

"What is Thanksgiving?" now asked Elizabeth, having heard the expression for the third or fourth time.

"Well, I declare, and you don't know that." Mrs. Marvin turned to look at this phenomenon—a girl who did not know Thanksgiving. "There, there," she added kindly, "it's natural enough, of course. I forgot that it is only an American holiday, and of course an English girl wouldn't be familiar with it." So she explained the reasons for our national day of feasting, and the part played in it by turkey and cranberry sauce and pumpkin pie for loyal, old-fashioned folks, whether east or west. "We haven't any children," she finished, "so Mr. Marvin and I always invite some other folks that are far away from their own people, and it makes it nice and cheerful for all of us, and makes

their outlines. It was all very pretty, and she thought she could be very happy there, if only—and there her troubles came back upon her with a rush. Had she been foolish to leave the station? What should she do if she never found Bob? What could have become of him? Why had he not met her, as he had promised to do? She could not doubt him, knowing too well his staunch and sterling honesty, but something had happened, and she could but fear it was some accident that would leave her abandoned in this new land, so far away from home and all her friends. Then she remembered Mrs. Marvin, and with a grateful warmth, as she recalled her kind words and actions, set herself to render all the help she could with so cheerful an air that sometimes she deceived even herself into thinking that all was right, after all.

Soon the guests arrived, and a gay tableful sat down to enjoy the feast of good things spread before them. Elizabeth had shyly refused to take a place with the others, but, having eaten a good dinner before their arrival, at Mrs. Marvin's earnest solicitation, she now served so deftly and quietly as waitress, as one course succeeded another, that when the dessert had been placed upon the table and the door closed upon her for the last time one of the guests said to her hostess, "What a treasure of a maid you have! Wherever did you get her?"

"I believe she is a treasure," replied Mrs. Marvin, "but she is not a treasure of a maid, Mrs. Talbot." She then related the story of Elizabeth as she had heard it that morning, and announced her intention of making the round of the hotels later to see if they could find any trace of the missing man. "And if we don't," she added, "Miss Walker shall stay with me, and welcome, until she has written to Mr. Denton, and had some response."

"What a shame," exclaimed Mrs. Talbot, "it isn't fair that she should stay out there and work all alone while we are enjoying ourselves in here. The first day in her new home, too. Let's all go out and help her!"

She sprang up, and the other women followed suit, leaving the men to finish their cigars while they trooped out to the kitchen. Mrs. Marvin explained to the surprised girl, and introduced her to her friends. It was a case of many hands making light work, and soon the kitchen was restored to its accustomed order.

The next move was to array Elizabeth in the simple wedding gown she had brought in one of her bags, wrap her in an automobile cloak, and make a place for her in one of the automobiles that was drawn up outside.

"For," said young Mrs. Jaquith, "I feel it in my bones that we are going to find Mr. Denton before long, and we'll have that wedding tonight, see if we don't."

Elizabeth was not so sure, but she could not find it in her heart to resist these kind friends, who were taking so warm an interest in her affairs, and who seemed to find this way of keeping a holiday a better one than sitting around a fire and gossiping. So she was sweetly acquiescent, and not knowing the town at all, nor the customs of the country, she abandoned herself to their plans with an interest that served to make her forget her troubles in the effort to remove them.

To one hotel went the merry party, then to another until they had made the rounds of all the places Robert would be likely to visit in search of his betrothed. At only one did they find any trace of him. The clerk of the Maynard House said that about three hours before a young man, who said his name was Denton, came there inquiring for a young lady named Walker, but as he was apparently too distraught to leave his address or to say whether he would come back, this clue helped only in so far as it

THANKSGIVING TIME.

By CHAS. H. MEIERS.

Years ago—I still remember—
In the last week of November
Was the time we farmers used to try to finish husking corn.
And when the long task was ended
It was generally intended,
On Thanksgiving Day, to banquet in the house where I was born.

Then our best friends were invited,
And close relatives indicted,
To appear in time for dinner under penalty severe.
And the last one done with dinner
Was declared a trophy winner—
I could show you many trophies, for I captured one each year.

Mother used to do the cooking,
And I've found there's no use looking,
For no other in creation can make victuals taste so fine.
If I ever find another
Who can cook as could my mother
I shall never rest a moment till the day that she is mine.

I can scent the turkey roasting,
And I hear the huskers boasting
As I journey back in fancy to the days that have gone by;
For 't is late now in November
And, as clearly I remember,
Just about the time for giving thanks and eating pumpkin pie.

with myself until he comes, so perhaps I could help you out, if you care to have me. This gentleman would keep a lookout for Robert, perhaps."

Mr. Brown said heartily, "Sure, Miss. And Mrs. Marvin's would be a fine place for you to go to wait. Only you need rest more than you do work, I'm thinking," he added frankly.

Mrs. Marvin had answered hastily, "Oh, if you would, it would be such a relief." Recalling Mr. Brown's last remark, she looked for the first time closely at the girl's tired face, and said, "You do look fagged out, to be sure. Well, you come with me anyhow, and I'll see that you get some rest. Perhaps we can help each other. You can tell me all about it as we go along."

So Mr. Brown put the girl's bag into the trap, and off they went, while Mr. Brown called after them, "Why don't you stop at the post office? Perhaps there's a letter for her there. At any rate, they could tell her the direction of R. F. D. 2 from town."

"Post office is closed for the day now," answered Mrs. Marvin over her shoulder. "Now, my dear, let's hear your story." Kindness and pity filled her motherly face by the time Elizabeth finished her recital, and she said decidedly, "You shall stay with me until that rascal appears, and after this Thanksgiving dinner is out of the way we'll go around to the different hotels and see if he has been there."

us forget our homesickness, which otherwise might be pretty bad on a family holiday. Here we are at home now." She drove in beside a pretty bungalow, sprang out and tied the horse at the stable door, and, before Elizabeth knew what was happening, she and her bags were deposited in a snug little room at the side of the house, while her brisk little hostess was bringing her a cup of tea and a plate of cookies.

She was aroused from her doze by a gentle tap at her door and the voice of her hostess saying, "If you would be so kind as to sit downstairs and watch things while I run and dress, I should be so grateful. We can fix the table after I come down."

Elizabeth hastily bathed her face, borrowed an apron from Mrs. Marvin, and then followed that lady to her kitchen, where preparations for dinner were almost complete. There seemed little to do, save to see that nothing burned or boiled over, and Elizabeth looked around her with interest, noting the little differences from the arrangements she was used to. She gazed out of the windows into a roomy drying yard and garden, where chrysanthemums flaunted themselves in gorgeous rows along the sides, where shade trees sheltered comfortable seats, and where some late roses still lifted their bright heads. Further off she could see the brown hills dotted with trees and veiled with a blue haze that softened



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gave Elizabeth the comfort of knowing that Bob was evidently alive, unhurt, and searching for her. This was such a vast relief that thereafter she, hitherto only patient and passive, became as gay as the rest of them, in her own gentle way, and the reaction so brightened her eyes and flushed her cheeks that her new friends discovered suddenly that she was really a very pretty girl, with the perfect English complexion, enhanced by the burnished gold hair and the deep blue of her eyes. The tired look had vanished, and she soon looked, as Mrs. Marvin expressed it, "more as a bride ought to look."

The next call was at the railroad station, but this, too, was in vain, for the friendly Mr. Brown had departed for his own Thanksgiving dinner when his assistant arrived, and in the rush of other business had completely forgotten to pass on the word about Miss Elizabeth Walker and the man who was presumably hunting for her. Then to the other railroad the party made their way, with no better luck. The search was about to be given up in despair, when, as the machines were passing down Main street, in the glow from an arc light overhead, Elizabeth spied a face that made her exclaim excitedly. "Oh, stop, stop, please! Bob, Bob, Robert!"

Mrs. Marvin, beside whom she sat, could hardly hold her in the seat, but the driver, after a glance in the direction in which the girl had stretched her arms, turned his machine to follow a buggy in which sat a dejected and somewhat disheveled young man.

As they drew up beside him, and Elizabeth once more cried out, "Bob, Bob, don't you know me?" the young man looked up, dropped the lines, and sprang from the buggy, while Elizabeth jumped into his arms with an abandon that was totally unlike her usual quiet English self, but that was an only too natural result of her exciting day. She shed a few tears of relief, then turned to her sympathetic friends with the simple introduction, "This is Mr. Robert Denton. Robert, this is Mrs. Marvin, who has been a most kind friend to me today. This is her husband, and the others are friends, too, who have helped me to forget my troubles and to find you." Then, still smiling, she brought out the critical question, "Why were you not at the train this morning?"

"It won't take long to tell," responded Robert. "My horse went lame on the road this morning and I lost a good hour going back for another. Then I went to the wrong station, and by the time I got to the right one I found nothing but your box to tell me you had been there. I've spent the day traveling from one hotel and rooming house to another, and was just trying to decide whether I had better go home for the night, or go back and spend the night at the station where I saw your box."

"Have you had any dinner?" asked Mr. Talbot, who had been observing him keenly.

"No, I don't believe I have," replied Robert, smiling.

"Oh, and on Thanksgiving Day, too," exclaimed Mrs. Jaquith.

"I wish he had had mine," sighed Mr. Marvin, patting his vest.

There was a laugh at this, but Robert said decidedly, in response to a general invitation to have dinner at once, "No, thank you, I don't care for any dinner until I have made this young lady my wife, nor do I need any, now she is here."

"Well said," retorted Mr. Marvin. "Well, the ladies had made up their minds to celebrate the wedding tonight, and to play chaperons or witnesses, or whatever is necessary, so if you've no objections, and if you have a license, we'll hunt up a minister at once, before the reverend gentlemen are all in bed. There won't be any justices about on a holiday."

"We shouldn't care for a justice under any circumstances. Elizabeth would prefer a clergyman, I am sure. In fact, I had already spoken to the Rev. Mr. Black about it, and he expected us earlier in the day."

"Then take in your bride and move along. The rectory is only a block away."

In a few moments more, Elizabeth Walker, her present troubles over at last, became Elizabeth Denton in the presence of more wedding guests than she had any cause to anticipate when she rode into the town that morning. The ceremony over, and congratulations received, with a warm kiss from Mrs. Marvin as she slipped a chain and pendant around the girl's neck, the men had their innings.

"We'll go to the hotel," they said, "and have a wedding supper, the best they can give us on short notice." So back they

went, only to find that the telephone had been busy to such purpose that the supper was already prepared, with flowers and favors complete. Nor was it so late when they broke up but that they were able to gather up Elizabeth's belongings and escort her and her newly-made hus-

band to their home. Elizabeth herself, weary but smiling, said her gentle farewells, and saw them off with the words, "All's well that ends well, and I am glad to have made so many new friends. I shall never, never forget to celebrate your Thanksgiving Day."

Moving Pictures—(A Colonial Living Room)

By MRS. M. B. RANDOLPH.

My fancy's moving pictures show
An ancient room, with ceiling low;
Pale tallow tapers light the gloom,
And waxen ones whose wild perfume
The senses thrill; how fine and rare,
How faintly green, how smooth and fair,
Those sweet bayberry candles were!

The scenes entrance me; pass them on—
Those moving pictures—one by one:

Now 'tis the backlog's glow I see
With fire-dogs shining brilliantly;
Across their brightly burnished brass
The fitful flames meandering pass,
And on the mantelpiece o'erhead
Again their light the candles shed;
The tallow dip, the waxen shaft—
How plain their polished columns tell,
How true their flick'ring signals spell
Our Yankee mothers' handicraft!

Now comes the low wainscoted wall
Whereon the wavering shadows fall;
Traced o'er it see the silhouette
Of noggin, cup, and possette
That on the near-by cupboard stand,
Left there, perchance, by hurried hand;
Plebeians are they, cheek-by-jowl,
With lordly tank and high-born bowl,
Yet bright their polished pewter burns
As silver of patrician urns.

In farther corner of the room
Stands out the form of clumsy loom
Against the graceful spinning wheel
And natty figure of the reel;
All, all, with silent tongue proclaim
The busy hands of Yankee dame.

And now behold, though last not least,
Yon board that held the annual feast—
The banquet of Thanksgiving day;
Divested now of its array
Unclothed it stands, save for the sweep
Of ample, homespun napery.
Whereon, erstwhile, stood trenchers cheap
With some choice bits of Holland clay;
The two-tined fork, the rich old spoon,
(Bestowed, perchance, as parting boon
On Mayflower friend) lay side by side
On linen that was housewife's pride;
To us, indeed, an odd surprise,
And yet no source of wonderment
Nor any cause for discontent
In our forbears' grateful eyes.
From turkey up to pumpkin pie
How all the viands seemed to vie
Each with the other, that no guest
Might find another's flavor best;
And yet some seeds of corn must lie
Beside each trencher or each plate
That other day to celebrate
When naught was had the Lord to praise
Save kernels few of Indian maize.

The guests are gone; the rising moon
Begilds one lone ancestral spoon
Which on the board its place still holds
Above the linen's snowy folds;
The fire-light dies, and in their turn
The candles low in sockets burn;
Hushed now the sounds of festal mirth,
The old cat sleeps upon the hearth,
The latch-string's in, barred is the door,
Prayers are o'er for all that's been
Thought, said, or done, with trace of sin;
Silence reigns from vault to floor,
All is still without, within,
Save our Yankee father's snore.

Auld Lang Syne.

By CHARLOTTE BIRD.

HOW many years has it been, Mary, since we were last out at the old place?" asked Nolan Taft, the well-seasoned president of the Yarmouth Commercial Bank, of his gray-haired companion.

"La, Brother," replied she whom for a generation her world had called Mrs. Sabin, "we moved off the farm the next spring after mother died. Yes, it is forty-one years ago this summer."

Mr. Taft ruminated: "Mary, you and I are getting along in life to be what some might call old people. Yet I mind the time when I thought a person of sixty was about ready to shrivel up with old age."

"And now the shoe is on the other foot," laughed Mrs. Sabin in her jolly way.

"Yes," he chuckled in sympathy. "Why, sixty isn't old; I feel as young today as I ever did in my life."

"So do I—only, that once in a while the rheumatism catches me so that I have about all I want to do to get up and down stairs."

"But you are two whole years older than I am," he joked slyly. "Get up, Polly, or whatever your name is, or we shall not get there in time for dinner," and he shook the reins over the plodding livery horse.

For awhile, in reminiscent silence, the two drove along the country road, he handling the reins awkwardly like one unaccustomed to driving.

"The old Fritz place, isn't it," as with his whip he pointed down the road.

"Yes, the same old place. La, Nolan, the house is gone."

"And the spot is now a corn field," he finished. They slackened the pace of their willing horse and leaned far forward to see.

"Remember Joe Fritz, Mary, that gawky, long-legged chap that we always teased you about? Always had a little yellow dog at his heels."

Mrs. Sabin laughed again till her ample frame shook. "I am not likely ever to forget that fellow," she replied.

"Do you recollect the time that with his foot he pushed the stove over at school?" and again they both laughed.

"La," she said, "I don't know when I have thought of him before. He is dead, poor fellow, isn't he?"

"Yes, died before we left the country. I wonder whether they still have a cup down at the old spring," and the bank

president peered down the well-remembered ridge on the other side of the road from where the house had once stood. "Whoa, Polly! I'll go down and see."

As a measure of safety Mrs. Sabin laid her gloved hand on the reins of the steady horse and watched her brother as he cautiously descended the stony path to the old covered spring. He took a drink and then lingered on the spot, evidently dreaming.

Presently he recalled himself, refilled the cup with the sparkling water and turned back up the path to give his sister her share of the pleasure.

"We don't get such water as that in the city," she remarked gratefully, as she handed back the empty cup.

"That we don't. Shall I bring you some more?"

"No, no; thank you," and he returned with the cup.

At the same slow, even pace the drive was resumed. Pretty soon they turned to the right, drove through a quiet bit of woods rich in autumnal tints, and then mounted a long but gradual incline.

"We youngsters never appreciated how beautiful it all is, did we?" he remarked.

"No, we did not know enough," she answered feelingly.

They neared a white schoolhouse at the edge of a bare, hard-beaten playground. "Ah, the old brick is gone, isn't it?" he sighed regretfully. "I wanted to see the old desk once more where I carved my name with Maggie Oliver's under it."

"You were always sweet on Maggie, weren't you?"

"Yes," he smiled and his eyes wore a reminiscent light. "I mind one day when I was clubbing oak balls off a tree for her. The club came down and struck her on the head. She keeled over and I thought that I had killed her. How I felt at that moment words can never describe."

"There is still a rail fence," she reminded. "If there was a pig or a sheep about—and in those days people let their stock run—I would sit on that fence and cail till the teacher came to my help. I was only five, you know, that first year and had to come nearly a mile to school alone because you were still too little. Old Mrs. Snyder, how kind she always was! 'Poor leetle t'ing!' she pified me regularly, whenever she saw me. 'She's too leetle to go to school alone.'"

"She was a good-hearted old body, old
(Continued on page 472).

A Composition That Was New.

By L. D. STEARNS.

"Oh, dear," sighed Donna Larkin, seating herself on the floor, Turk-fashion, and rumpling her pretty brown curls with two plump hands. "Whatever shall I do, Mother? Teacher says she's tired of stories of dogs and cats and birds, and wants compositions this week about something new. I've thought and thought, and I don't know a thing that's new."

Mrs. Larkin smiled. "Well, daughter," she responded, "there isn't very much under the sun that's really new, so don't look so distressed. I expect Miss Lee meant something different."

Donna nodded. "Yes," she agreed, "that's what she said—and interesting." "Everything is interesting, if you see it in the right way," her mother replied. "Take your hand, for instance. That is not very new, but it is certainly interesting."

The frown on Donna's face deepened. "Interesting! My hand!" she fairly exploded. Then, scornfully, "I'm sure, Mother, there's nothing interesting about that. It's just simply a hand. That's all there is to it."

"Don't be so sure, little lass," her mother warned gently. "How many bones do you suppose it took to make that same hand?"

Donna tilted her head thoughtfully to one side. "One for each finger and thumb," she mused, "would be five."

Her mother smiled quietly. "I'm afraid," she announced, "it would be a pretty stiff hand if there were only five bones there, for, child it took thirty-two bones, besides many muscles, cords and tendons to make it strong, and quick, and graceful. And even that is not all, for before it was able to do its work countless little fibres had to be sent branching out from thousands of nerves into these muscles, by means of which, when the mind issues its commands for the hand to work, or rest, or play, the whole machinery is set in motion."

The scowl had disappeared as Donna leaned a little forward, clasping her hands about her knees. "Then," she said wonderingly, opening a pink palm and slowly closing it again, "it needs all those just to do that."

Mrs. Larkin nodded. "Besides," she continued, "the skin of the hand is full of tiny nerves, all connected with the brain, like some vast telegraph system, in order to give the sense of touch which is so highly developed in the hand, especial-

ly, through its sense of touch; used to lift burdens, but never to fashion them." With a quick little breath Donna sprang to her feet. "And now," she laughed, "it's going to write a composition about its very own self."

Her mother smiled. "But don't forget, little lass," she cautioned, "that first and last the brain must give commands which it is right that the hand obey."

LITTLE FARM FABLES.

BY AUNT QUILLIA.

Thank You.

Once upon a time an old farmer, having accumulated a comfortable fortune, retired, with his dog, to a nearby village, there to pass his declining days.

Being without kindred he began planning how best to dispose of his hard-earned money. Having decided that he would like to see it doing some good while he still lived, he began bestowing it on those whom he considered less fortunate than himself.

With more kindness than wisdom he proceeded to give so bountifully and cheerfully that soon all who had either real or fancied troubles flocked to his door, expecting and receiving the aid for which they asked.

Profuse and constant were the thanks which he received, and often the more emotional of his beneficiaries, in devout tones and with tears in their eyes, implored Heaven's choicest blessings upon him.

Although neither expecting nor desiring any recompense, he was clever enough to make note of the fact that he seldom or never received anything for his gifts but thanks and prayers. However, being of an all-around charitable nature he attributed this to a weakness of human nature and, smothering all unkindly feelings, he went on with his favors.

Day after day, week after week, month after month, he continued to lend his assistance until his once fat pocketbook began to grow thin. Fewer and smaller became his crisp bills and shining coins, until, at last, his dear old dog ceased to wag his tail when he saw his master approach the cupboard, or to lick his chops at sight of the empty frying pan.

Without giving any thought as to his own condition, sadly did the master note Fido's weakness and emaciation, and one



Warm Sunshine is Doubly Precious in the Last Bright Days of Autumn.

ly at the finger tips. A single square inch of the true skin—or cutis, as it is called—of the palm contains twenty thousand tiny nerve filaments, or papillae, which carry impressions from and to the great central station, or brain, while the outer skin shields and protects them."

Leaning forward, she took Donna's hand in her own. "Tell me," said she, "what's it really for, this hand that is so wonderful and complex?"

Donna smiled. "To feel, and work and play with," she replied thoughtfully, "and I suppose, to help people."

"Yes," agreed Mrs. Larkin, "but it should give pleasure, as well as help, and to do so must be well kept, dainty and clean. By practice it comes to act as eyes and ears for those who are blind, deaf and dumb; for you know how they learn to read and write by means of raised letters. It should be graceful, as well as useful and dainty, which it will become through exercise and care; educa-

tion, with the tears coursing down his withered cheeks, he laid the lifeless body upon the wheelbarrow and proceeded to give it a tender burial.

Hearing his lament, a passer-by paused at the garden gate to learn the trouble. This man, who had been his most constant beneficiary, expressed unbounded sympathy, declaring that no companion could compare with a faithful dog, and that there was nothing in all the world so heart-breaking as an aged man with neither friends nor funds.

Notwithstanding, this fellow, in spite of his loud condolences, vouchsafed no assistance, not even to the casting of a shovelful of dirt over poor Fido's body.

On leaving, he extended a well-groomed hand, declaring for the hundredth time that he should never forget the favors received in the past. "Thank you," he exclaimed, "thank you a thousand times for all you have been to me."

Exasperated beyond endurance, and

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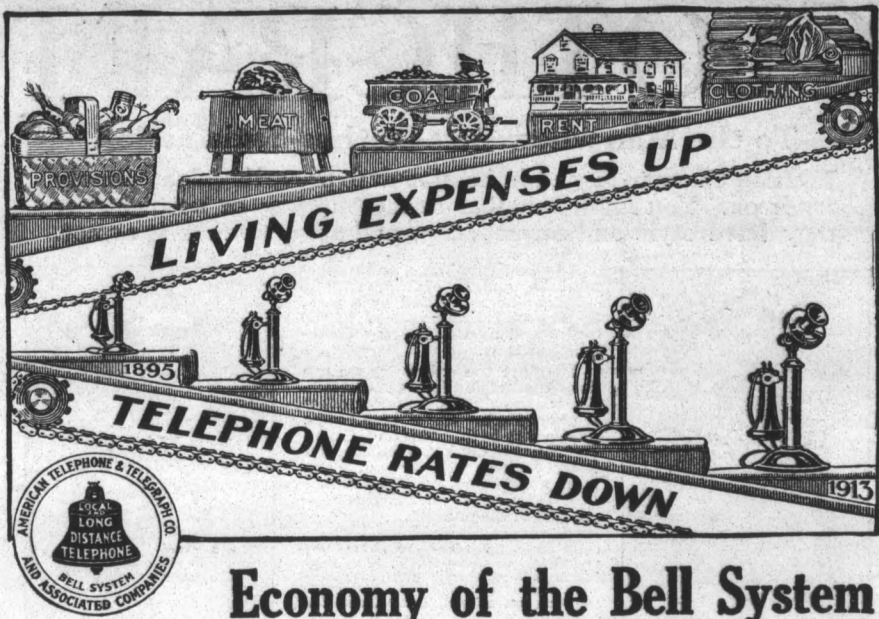
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worn out with like professions which had been his lot to hear for years, the patient old man vehemently reiterated: "Thank you, thank you, thank you! All tommy-rot! Reminds me of an apt but crude saying I heard in boyhood: 'Thank you starved my dog.' And, sir, it seems likely to starve me, too."

Our Thanks Today—By L. D. STEARNS

THANKSGIVING—day of feasting and of joy—we give you hail! We reach out our arms gladly at your festive call—clasp hands and smile! We wander back among the years with you. We're children for today.

Once more, out in the dear old home, we stand with quickening breath and wide, round eyes, seeing again the cakes and pies, and goodies; the great dish of apples, smooth and red, flanked round about with candy, nuts and raisins; the cider, clear and sparkling; the proud old turkey, fat and savory, and brown!

We sit before the fire and watch the flames go curling up, and up; and as we throw on fresher logs we wander in and out among the flower-strewn paths of other days, when father's hair was brown, his shoulders straight and broad, and mother's steps were quick, instead of faltering and slow. Or, are they treading now the broader paths in God's fair land?

Life, with your passing round of joys and cares, of tears and smiles, we clasp your hand today in courage and in faith. Out of thy cycles have come precious things—white lilies of endeavor, pure and

true; red roses, sweet with victory and love! The guiding star of hope has flickered on our way. There have been failures since those early days, as well; aye! worse than failures, it may be! That, only God and one's own soul can tell! But for this fact we give thee praise: that every day that comes is new, and, for each failure, Life holds out another chance to be, and do!

And so we pause in silent thought on this Thanksgiving day; and then, oh Life—oh, Giver of all life—we raise our eyes to thy vast love; and for thy mercies, and thy beauties of the earth, and sea, and sky, alike—for health, for sight and hearing—all the things that be—we offer thanks in grave humility.

Help us, oh God, to pray! Help us to see the wonders of the boundless universe, and of our own small, bounded plot of life! Help us to prize anew the human love that touches us today, of family and friends; to hold it sacred—true! And as the Past and Present clasp their hands we whisper low: To Thee, oh God, be praise! Accept our love and thanks, most humbly given, on this Thanksgiving Day!

AULD LANG SYNE.

(Continued from page 470).

Mrs. Snyder. That is the roof of her old barn over there." Suddenly his eyes brightened. "And there is the old tulip tree in the middle of the field."

Mrs. Sabin's recollections were resumed: "One morning she gave me a bunch of bright red and yellow tulips. Dear me! I have loved tulips ever since and have looked in vain for any as lovely as those were. The teacher took them away from me and stuck them into a glass jar; she thought I had brought them from home as a gift to her."

"Ah, there is a new farm house on the place where the old Snyder log house stood."

"So there is," and her eyes grew misty. "Of course, she must have been gone these years and years."

"Yes, Mary, we are living in a new generation, you and I, the second at that from yours and my childhood," he ruminated. "There are some things about which we can talk with nobody else but each other."

"Yes, and tomorrow the young of today will be where we are now."

Thus realizing the facts of life, the two aging people became still and even more reminiscent; they were now approaching the scene of their earliest childhood. And in this significant hour each felt the other as the most acceptable companion in the world.

They drove past the new barn on the old homestead—at least, it could not have been more than twenty-five or thirty years old. But there stood the same old story-and-a-half house, now weather beaten instead of a clean white with neat green shutters.

"Oh," he exclaimed with a note of sorrow in his voice, "the old ox-heart cherry tree is gone. In the cherry season, as a little cub, I all but lived in that tree."

"And they had potatoes where the old rawsberry patch used to be," she quickly added. "Shall we stop?"

"To be sure. Let's go over the old place once more. I want to go up into the orchard where old Watch's grave is."

"Poor old Watch!" she murmured tenderly. "Father thought that he was going mad or he never would have made you have the old family dog killed."

"A black day that for me!" he sighed. "I loved the old dog almost as if he had been a human member of the family. To me it was simply awful when Josh Ames took my loyal old friend up into the orchard to shoot him. I never have really gotten over it."

In the frank presence of several wondering witnesses the two visitors to the neighborhood descended to the ground. When Mr. Taft had tied the horse to the deeply gnawed hitching post they passed up the ancient brick walk and entered the house where they introduced themselves and stated their relations to the place. They were bustlingly conducted into the old parlor and, sitting stiffly on the upholstered company chairs for a minute with their hostess, they discussed such commonplaces as the weather.

But time was too precious to be frittered away on empty civilities. "Sure!" the wide-eyed woman met the man's strange request, "you may go up into the little bedroom." Evidently, though, she had her mental reservations, for she added: "Please excuse the looks of things up there; I have not got around yet today to making the boys' bed."

"No matter whatever," belittled Mr. Taft sincerely, and he and his sister climbed the narrow stairs. Once to them all had looked so fine, but now to their more experienced eyes everything came as plain and humble. Thus the two went together over the old place. But changes took away the sense of familiarity. Then in the presence of the strangers incumbent, the recalling of old times lost much in realism.

At the expense of some puffing, side by side, they mounted the old path up to the orchard and found the place where, Mr. Taft judged, old Watch's dust lay. But nothing remained to identify the spot. The old headstone had either been covered with soil or carried away.

For awhile they stood and gazed and dreamed and yearned over the neighborhood, where they had been born and been young together, where they had gone to school, to church, to parties, to spelling school, to debating society together—where they had swung in the barn and ridden the old family horse to water.

The intervening years ceased to exist and again they were children. Again their parents were living and going about their affairs on the farm and in the little house down there at the foot of the hill. Before their aging eyes floated a mist of which, even in each other's presence, they were half ashamed.

But this mood was too delicious and yet too painful to endure long. "Now, Mary, let's go down to Maggie Oliver's." He spoke in the language of his boyhood and, as if once again to run down the hill in the old way, he grasped her hand.

"Yes," she agreed, "let's go down and see Maggie."

But a certain stiffness of muscles called them back to the facts of their present life. She spoke first and in present-day language: "Maggie and Solon, you remember, bought the old Oliver place, when her father died."

"Yes," he replied after a pause, "I remember that she married Solon Crites."

Again, guided by the unaccustomed driver, the horse crept down the long, clay-colored hill road towards what had long been distinguished in the neighborhood as the Crites place.

"Queer, how things turn out in life!" and very gently with the whiplash Mr. Taft flicked the horse's side. "At one time I took quite a shine to Maggie. I—!" and he laughed.

"She was a good girl, Maggie was, but Nolan, never quite—of your stripe."

"She might have grown to be of my stripe," he spoke wistfully.

Again the pair alighted and approached a house, a newish house built on the spot where, in the older one of their day, they had spent so many delightful hours. They

THANKSGIVING COURTSHIP.

BY IRMA T. SOPER.

My, dis air am gittin' chill!
Most froze comin' o'er de hill.
What's that? Co'n pone, smokin' hot!
"Would I like some?" Like as not;
Ain't no niggah, Mandy Lee,
Beats yo' cookin', seems ter me.

Noticed Squire Green's drawed his co'n;
Gittin' wintry, shore's yo' bo'n.
Leaves am drappin' off de trees,
Bet ternaight it's gwine ter freeze.
Wild grapes jest am gittin' prime—
Ain't no good till frosty time.

Hoe cakes good? I've tuk some twice;
Guess I'll take another slice.
Mandy, listen, do yo' hear?
Nex' week Thanksgivin' time is here!

Big folks up thar on de hill,
Bakin', fussin', fit ter kill.
Cranb'ry sauce an' raisin pie,
Stuff ter bile an' stuff ter fry.
Makes me hungry jest ter go
Near de house, they's cookin' so.

Somethin' I can't understan'
Why dat turkey rules de lan'.
Come along Thanksgivin' day,
Hain't no other got no say!

Mandy, las' year here wif you
Member we had chicken stew?
Chicken stew, an' fresh baked ham,
An' a heapin' dish o' sweet boiled yam?
Yum! I most kin taste 'em yit—
Them wuz things yo' don't fo'git.

Now I'se two dandy chickens, thar,
What's had de bes' ob co'n an' care.
Would yo' cook 'em Thanksgivin' day?
Yo' would? Miss Lee, what's dat yo' say?
Yo' think dat chicken shore am fine?
Miss Mandy Lee, will yo' be mine?
To Johnsing change yo' name from Lee?
Miss Mandy, come along wif me!

rang the bell and then eagerly stood face
to face with a rare pleasure.

A fumbling and turning of a key inside,
a pull and the door fronting them stood
open. A stout, flabby old woman with a
browned and wrinkled face and neglected
iron-gray hair stood before them. A
flash of recognition on both sides and
then the blood left the face of Maggie
Oliver and she clung to the door for support.

At this totally unexpected greeting a
strained silence of embarrassment held
the three. Then the girlish prattle of
Mary Taft broke the stillness. "Maggie,
do you think that my brother has changed
much?"

As if out of a dream, Maggie Oliver
spoke: "For over forty years my natural
eyes have not seen him, but he is as dear
to me today as he ever was."

This cleared the atmosphere, for all un-
derstood that it was the youthful Nolan
Taft who had called out all this loyalty,
and that the speaker did not even know
the man. In the next breath it was Mrs
Crites who extended the hand of wel-
come and hospitably urged, "Now do come
in and let's make a day of it. I'll ring
the bell and have Solon come right in
from the field and we'll talk over old
times together."

"That is what we have come for,"
laughed Mr. Taft, "to talk over the good
old times."

"This is Nolan's first vacation for ten
years," chirped Mrs. Sabin in her cheer-
ful way, "and we are visiting the old
neighborhood."

Presently the three were talking as if
for a wager. Mrs. Crites, for one of her
age and figure, darted in and out of the
room at a surprising speed, for had she
not become a girl again? And didn't she
know how to cook a good dinner and en-
joy a delightful visit at the same time?
Besides, there was her daughter, the cap-
able Martha, to help.

Narrowly Mr. Taft stud'ed the favorite
of his boyhood days and decided that
she looked ten full years older than
she really was. He compared her with
his own well-dressed wife, the happy,
young-looking mistress of a beautiful
home. He divined that the tenderness
toward himself into which the surprise
had betrayed her, had sprung from a to-
tally platonic heart-hunger for finer things
than Solon Crites had been able to offer
her. "If I could only help her," he re-
flected pityingly.

Then the white-shirted Solon was led
in by his wife and greetings renewed.
With this new note the pleasure of the
visit went on unchecked. At the loaded
dinner table the guests met the two still
unmarried children. "Harry, our son,"
announced Mrs. Crites proudly, "and
Martha, our baby. We have four married
sons besides. Paw, will you pass the
bread?—and seven grandchildren, Martha,
pass the butter, will you?"

"You are ahead of me," remarked Mr.
Taft. "I have only three daughters and

five grandchildren. Yes, I lost my first
wife; I have been married to my present
one for thirty-two years."

"We are to lose Martha in the fall,"
and Mrs. Crites glanced proudly at her
crimson-faced daughter.

"So!" and Mr. Taft looked at the girl
with a new interest.

For about two minutes after dinner the
guests were left alone in the sitting-room.
"Sister Mary," spoke the man, "w-would
it be proper for me to—to give Maggie
something—for old times' sake? I would
never miss it, you know."

Mrs. Sabin looked thoughtful and then
expressed herself. "It is a pretty delicate
situation, Nolan; you could hardly give
money to another man's wife. But—why
not give the daughter a wedding present?
Maggie would be even better pleased than
with a present to herself."

A moment he considered and then
granted, "I think Mary, that you have the
right view of the matter." Presently he
took from his pocket his pen and cheque
book and hastily wrote and tore off a
cheque, and then stuck it into his pocket
till the time should be ripe. "I have made
it a fifty," he added.

"Now that will be a real pleasure to
Maggie and a help to Martha," pronoun-
ced the pleased Mrs. Sabin.

At length, the hours brought the time
of parting. "Mary," asked Mrs. Crites,
as she returned to the room with a large
package, "have you room in your rig for
this—just a couple of chickens for yours
and Nolan's dinner tomorrow."

"We can make room for such an at-
tractive gift," declared Mr. Taft with all
heartiness.

"Now, do come again some day," urged
the hostess as the guests were ready to
depart.

"We have certainly had a delightful
visit," spoke Mrs. Sabin, and this state-
ment was echoed by her brother.

"And Martha," spoke her mother's old
lover, "as a tribute of friendship and good
wishes I add my mite to your wedding
presents." With this he slipped the
cheque into her hand and then got into
the buggy beside his waiting sister.

The mother detected the act and her
eyes sparkled with gratification. Nolan
always had understood the finest ways of
doing beautiful things. Possibly his pres-
ent amounted to as much as ten dollars.

At length, leaving good will behind
them and also bearing it in their train,
the aging brother and sister went up the
hill on their way back to town.

"Well," spoke Nolan Taft with a satis-
fied air, "we have had a great day of
courtship and one thing and another,
haven't we?"

"I don't know when I have had such a
good time," she agreed with fervor. "It
was almost as if the dead had come back
to life."

"Wasn't it, though! And Maggie—poor
Maggie!"

"Who is just as well satisfied with her
niche in life as you are in yours, you
egotistic man. And, Nolan, I am just as
glad as I can be that you married Lois
and Edith."

"So am I, Mary, and so is Maggie."

THE DAY BEFORE THANKSGIVING.

Adown the street,
With feathers neat,
Comes a fat old turkey gobbler.

Looks at the signs,
One at a time,
From the merchant to the cobbler.

Says to a friend,
"No shoes to mend,
Nor have I shopping to do, dear."

"But here's a sign
That strikes me fine,
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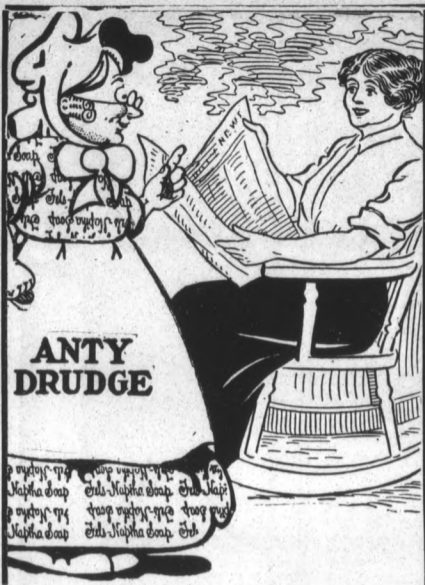
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Individualism Gone Mad.

WE are living in an age of individualism. Never in the history of the world have the needs of the individual been so carefully considered, has each special soul been placed upon the slide and so carefully analyzed, as it were. No longer are we lumped as classes, we are singled out and encouraged to develop our own idiosyncracies. In the family the children are no longer looked upon as subjects to be brought alike under the one rule. They are allowed to develop their own personality with a liberty and latitude undreamed of by our own parents.

It is an age of individualism, but is it not individualism gone mad? Is not the liberty we demand for ourselves and our children license rather than freedom? In our eager desire to allow our children self-expression are we not going a step too far and denying them that wise oversight and training which we give to our animals and choice plants?

It is all well enough to consider the child as an individual whose soul must develop along its own natural lines, but how many parents are forgetting the absolute ignorance of childhood, in spite of its assurance. How many stop to think of their own immaturity and lack of judgment at 15 or 16, the age when the child of today in the majority of homes is not only directing his own life, but governing father and mother? No one wants to go back to the age of parental despotism, but is there not a happy medium which American parents can reach? A mode of government where the child, while given freedom of choice in most things, is still controlled in matters in which his inexperience and ignorance of the world prevent his making the right decision, and is counselled and guided even in the unimportant?

Take the matter of dress. It is all very well for the young girl to be consulted in the selection of her frocks. But should she be allowed to decide on the styles and textures if her decision favors the slit skirt, immodest transparent waist and rich velvets and silks entirely unsuited to a young girl? If she has not been wisely taught and does not know that velvets and satins which are all right for her mother are entirely out of place on a school girl, should not the mother have firmness of character enough to insist that the girl be suitably clad? Yet the average mother weakly gives in and lets the daughter have her way, rather than have a scene.

A case has just been called to my attention where the choice of a dress for a 15-year-old girl has brought about a family quarrel and resulted in the girl finally being sent to a convent. The girl selected a dress which was not only of a texture far beyond her years, but of a style which no one but a woman of the streets would affect. Her mother remonstrated without effect and finally appealed to the father. He patiently explained to the girl the reasons why she should not have the dress, but in vain. Finding reasoning would not work he told her positively she could not have it. The girl refused her meals. The father was adamant, the mother wavering. The girl starved for one day, then flew to her paternal grandmother for sympathy. Grandmother, instead of wisely refusing to be drawn into the quarrel, backed the girl, and told her father he was a brute and was killing the poor, frail child. Father replied he intended to be master in his own house, and politely but firmly requested his mother to go home and stay there. Next mother's mother joined in, and one grand squabble ensued. Mother joined in the chorus, anything to get peace, and the four female members of the family bombarded father. Praise be to masculinity, father was game. He defied the invincible quartette, vowed his daughter should never dress immodestly so long as he paid the bills, and finally packed her off to a convent where she will have to wear a regulation school suit,

and says she shall stay there until she acquires some sense.

Privately, I think she will have to spend her life there, but I admire father for his stand. I can't help thinking the whole thing might have been averted if the girl had been trained right from the start. The whole trouble came from an undisciplined babyhood and girlhood, and we can look about and see thousands of families preparing for similar scenes. The mother who jumps and runs every time her baby cries, who, as the child grows older, gives up rather than have any fuss, who admits she can do nothing with the child of six, can look forward to nothing but trouble when her girl has reached the age of 16.

The whole modern tendency of making things easy and pleasant for children is wrong. We have had too much of tasteless castor oil at home and denatured arithmetic in school. We are raising a generation of spineless youth, of boys and girls without moral courage, ideals or convictions. Our young people of today have but one notion, to have a good time. And it is the fault of the parents. We parents have read and heard so much about allowing our children to develop naturally that we have come to believe we must not cross them, must not even direct them. It is time the pendulum swung back again and we began to inject into our children a little of the respect for law and order which our wiser fathers and mothers taught us.

DEBORAH.

THE HOUSEWIFE'S DRESS.

BY MRS. F. NISEWANGER.

WE housekeepers hardly want a working uniform like a nurse or a deaconess, neither can we always be daintily dressed, like a lady of leisure, but it is possible to have our work dresses neat and attractive as well as suited to our varied occupation.

The custom of wearing out partly worn and out-of-style dresses in the kitchen is not very general, fortunately, and should never be adopted as a practice. Cooking, house-tidying, meal-serving and baby-tending are certainly of sufficient importance to call for the dignity of a dress purposely made to wear while performing those duties. One is not confined to one material or style in the making, but there are three requirements—washableness, neatness, and attractiveness.

Fashion is indicating the return of long sleeves, but I think I shall never follow her lead for my work dresses, for I dislike the feeling of sleeves about my wrists when at work, even though they are protected by rubber sleeves or their very satisfactory substitutes, the legs of black cotton hose. Some use sleeves with buttoned cuffs that can easily be turned back and others have a slightly full sleeve with a rubber band in the hem so that it can be slipped up out of the way; but I like best the three-quarter length, finished in any desired way and up out of the way at all times.

As for the dress itself, it should be one of the numerous and pretty one-piece styles. There is nothing else so comfortable and hygienic (all the weight from the shoulders), nothing so easily made—if you do your own sewing—and laundered and put on, while one may be sure of a neat waistline even though reaching to a high shelf, stooping to the oven or handling a mop.

My aprons, however, do not follow one style. They are numerous in number and variety, and of different materials. There are the one-piece calico aprons that cover me from shoulder to hem, except for the square cut out neck, front and back. These are used principally to cover the daintier afternoon dress while getting supper, or to slip on over the "church" dress while I start dinner, or over the "company" dress while I finish a meal when entertaining, if I feel the need of something more protective than the bib aprons made of pretty gingham and trim-

med with novelty braid. These are made to slip over my head, with the bib in front and a sort of fancy collar in the back. Then there are always several of the short, "waist tie" aprons of gingham, calico or percale. These come in handy here, there and everywhere, sometimes to protect one of the larger aprons while doing some "spattery" or dirty little piece of work. It is nothing to wash and iron them. Besides these, I have my white work aprons for bed making and baking. The baking aprons are simple bib affairs, but the others merely tie at the waist. I have never bought new cloth for these, but make them of partly worn sheets or bleached sugar sacks.

System in dress as well as in work and pretty nearly everything else is a real satisfaction.

TABLE LINEN.

BY FANNIE V. WILSON.

When purchasing table cloths and napkins a woman always wants the very finest and whitest linen she can afford. However, in this day of clever inventions, one can get mercerized cotton fabric which does very well for everyday use. The mercerizing process improves the looks of cotton material and increases its strength.

Table-cloths of linen may be bought for the same price as good mercerized ones but they do not wear as well. Cheap linen cloths are finished with a very stiff, glossy dressing, but after the dressing is washed out they look coarse and thin. Sometimes one can get the unbleached linen very reasonably, and it will give good service, but as the general thing, if buying linen it is better to get the best. Of course, we all like to have good linen cloths for nice, but I would rather use the mercerized table-cloth for every day than the colored ones. They make a little more washing but they look ever so much better.

There are several kinds of padding one may use under the table-cloth, to save the table and deaden the sound of moving dishes. The best is asbestos cloth and it will last forever but it is quite costly and the common cloth padding does very well.

"ENJOYING POOR HEALTH."

BY MARY CLARK.

"Josiah Allen's Wife," in her inimitable way, speaks of one of her characters as "enjoying poor health," and if we give the subject a moment's thought we will realize that we are all acquainted with one or more persons whom the expression aptly fits, and the more we think about it the more we become convinced that a great majority of the ailments "enjoyed" by human beings exist only in the imagination.

One of the characters in "Three Men in a Boat" tells how (having nothing else to do), he picked up a medical work, and was amazed and horrified to find that he had pronounced symptoms of every disease described in the book, excepting "Housemaid's Knee," and couldn't understand why he didn't have that, too.

The claim is made that women "enjoy" poor health, more than men.

As a neighbor remarked: "The women do the grunting but the men do the dying." Be that as it may, I have personally known both men and women, whose whole minds seemed filled with themselves, and their varied ailments, and were unable to converse on any other subject for any length of time.

I have also observed that these same people can, if so minded, do a heavier day's work, can endure more heat or cold, or eat a heartier meal, than most folks who never mention their health. I believe that almost anyone can become sick, if she will but allow her mind to dwell on the state of her health, and will talk about it on every possible occasion. If you doubt all this, the next time you are in the company of such a person, just put in an hour or so telling her how bad she looks, and recall, or manufacture cases of people you have known, who were afflicted "the very same way" and

either had "an awful sick spell" or even "died in a short time."

Then, take a different course with the next one, and remark on how well she is looking, "so much better than when you last saw her." Tell your funniest jokes, and nine times out of ten you will find that the "ailment" has ceased to exist.

There is plenty of real sickness, broken bones, etc., to keep the doctors busy, so let us all resolve to not "enjoy poor health" ourselves, or help anyone else to, either.

"Say you are well, or all goes well with you, and God will hear your words and make them true."

Vegetable Dishes.

STUFFED cabbage is a meal in itself, and is worthy to be seen on more tables than it is. The Savoy cabbage is better for this purpose but the ordinary vegetable will be found tasty. Strip off the outer leaves; cook the cabbage half an hour; drain and cool; then unfold the loose leaves, and lay them back carefully so as not to break off from the stub. Have ready any kind of meat—ham, veal, or sausage, minced very fine and seasoned with salt, pepper and herbs; then add one-quarter of the amount of meat with stale breadcrumbs made very fine. Place a layer of this mixture, being careful not to have it too thick, on the loose leaves. Then as the leaves are spread press them back into shape, and when the last layer is in shape tie them securely in cheesecloth and cook until the heart of the cabbage is tender. Only just enough water should be used to cook the cabbage in and then the liquor should be used as a foundation for a sauce to serve with the cabbage. Thicken the liquor with flour, and add butter to suit the taste. The sauce is poured over the cabbage after it is dished.

Another way to stuff cabbage. Take apart with care one head of cabbage, wash and place on ice for an hour. Grind fine one and a half pounds of pork loin, and add two eggs, one cupful of cracker crumbs, half of an onion minced fine, one teaspoonful of salt, and one-half teaspoonful of white pepper. Mold in a round ball cover with the cabbage leaves to resemble a head, wrap in cheesecloth, and boil until the cabbage is tender. Carefully remove the cheesecloth, place the head on a flat dish and surround with mashed potatoes, carrots cut into dice, and small boiled onions.

Turnip Croquettes.

Wash, pare and cut into thin slices six medium-sized turnips; then boil tender, adding a teaspoonful of sugar to the water; drain when tender, mash and wring out the surplus water by placing the mashed vegetable in cheesecloth. To each half-pint of turnip add the beaten yolk of an egg, season with salt and pepper, then mix in half a cupful of mashed potato, put through a sieve; form into croquettes and proceed with the crumbing, eggings, and frying as with other croquettes.

Scalloped Onions.

Boil six large onions until tender, drain, cut into small pieces and add to a white sauce made of one tablespoonful of butter, one of flour, and one pint of milk. Pour the mixture into a baking dish, cover with bread crumbs, and bake 20 minutes.

Onion Soup.

Cook four large onions in a quarter of a pound of butter until tender, being careful not to brown, then place them in a kettle with one quart of white stock, a scant teaspoonful of salt and a dash of cayenne, and cook slowly for one hour. Stir into this one and one-half cupfuls of milk and let simmer for a few minutes. Warm a soup tureen, put into it the well-beaten yolks of four eggs, and slowly pour the hot soup over the eggs, beating constantly. Have ready slices of French bread which have been spread with cheese and toasted, put one slice into each plate and serve the soup. Grated cheese may be sprinkled over the top if desired.

Carrot Soup.

This soup is very nutritious, and has a delicate color. Old carrots take longer to cook than young ones, but otherwise they are just as good. Cut the carrots in very thin slices, and cook until soft enough to press through a fine sieve. Cook a slice of onion with them. This may be removed before putting through the sieve. Put about a tablespoonful of butter in a saucepan with two tablespoonfuls of flour and cook a few minutes without browning the flour. Then add one pint of milk and cook until smooth. Put in the carrot pulp and heat well; season with salt, pepper a little nutmeg or mace. A few slices

of green pepper add to the flavor, but should be taken out before mashing the carrots.

Stuffed Cucumbers.

Take cucumbers as nearly of a size as possible, cut off one end, dig out the seeds. Throw into salted water for an hour or more, or sprinkle with salt inside and drain. Fill with a stuffing made of minced veal, chicken, or ham, or a mixture of the three, a small quantity of bread crumbs and one egg. Season with salt, pepper and a bit of grated lemon peel. Put into a sauce pan with a few chopped onions, minced green pepper and a bit of mace. Cover with good rich broth and cook until tender.

Green Peas with Fresh Pork.

Cut a round of trimmed pork into dices and slightly brown, sprinkle over it two full teaspoonfuls of flour; add half a pint of water, two pints of peas, two small onions, and some parsley, or celery tied in a bunch; cook until the peas are done; season with pepper and salt. When ready to serve remove the onions and parsley and serve very hot.

Peas with Bacon.

Fry six strips of bacon to a light brown and remove from the saucepan. Pour out of the pan all of the fat except two tablespoonfuls, and in this brown one minced onion; now add one can of peas which have been drained, cook until heated through, salt and pepper to taste, and just before taking from the fire stir in three tablespoonfuls of cream. Pile in a dish and place the bacon around the sides.

Fried Squash.

Take the small green and yellow summer squash, peel and cut into half-inch slices. Dip in egg and flour, or crumbs and fry in plenty of fat until an appetizing brown.

Corn Puffs.

Press out the pulp from six ears of sweet corn. This will be about one and one-half cupfuls. Add to this one cupful of milk, the yolks of two eggs, one-half teaspoonful of salt, and one and one-half cupfuls of pastry flour sifted with one teaspoonful of baking powder. Add the well-beaten whites of the eggs and bake in a moderate oven for 20 minutes.

Iron rust may be removed from anything easily, quickly and lastingly, by applying peroxide of hydrogen. Pour on affected parts in small quantity and let stand a few minutes.—Mrs. J. J. O'C.

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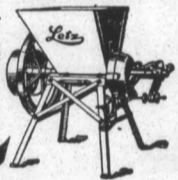
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Farm Commerce.

Preparing Poultry for the Consumer.

DRESSING poultry is accomplished in quite as many ways as is the mixing of cake. Because of the variety of methods in vogue, the novice is often confused, and many producers do not even attempt to benefit by the better prices offered by private customers in towns and cities, even when urged by consumers to do so, but continue to take whatever price the country buyer offers. It is the purpose of this article to give a method of performing this work, particularly as related to supplying private buyers. There are other ways to do it, but the following method will give general satisfaction:

Preparing the Birds.

Fowls should be fasted for 24 hours or more before being killed. This will empty the crop and entrails of food, thus adding to the appearance of the birds when dressed and to the keeping qualities by removing from the body practically all fermenting foods. It is the practice of some dishonest or ignorant men to feed heavily up to the time of killing in order to increase the weight, but the reduced prices obtained for fowls so handled usually more than overbalance the added weight and besides, it is almost impossible to keep a market when employing such methods, especially where one is selling direct to consumers.

Killing.

There are several modes of killing the birds. The usual method is to cut off the head with a hatchet, or ax, and ordinarily this method is satisfactory to customers. Wringing off the head is another way of killing that is not so much practiced, but when skillfully done is quite as humane. It will not work so well with old birds as younger ones. In regular killing pens the customary method is sticking. This is done on the outside of the neck by cutting through the skin and severing the jugular vein, or if one does not wish the wound to show, by piercing the brain through the mouth with a short sharp knife. These last two methods require some skill and practice to perform with any great accuracy. The man who sells direct can sometimes ascertain if his customers have any preference as to the manner of killing, and then follow their wish.

Removing the Feathers.

There are two ways of removing the feathers, by scalding and by dry picking. While both methods are used for ordinary purposes the scalding method, if done with care, will fill all requirements. To scald have water just below the boiling point in a vessel sufficiently large to immerse the bird. Hold the bird by the feet and head, if it has not been removed, and submerge him in the water about four times, or until the feathers are easily plucked. Some birds will require more scalding than will others, the density of the feathers making the difference. The water should not get down to the skin in such quantities that the latter will be scalded but the action of the steam generated by the water should penetrate the pores and loosen the flesh of the bird. The fowl may be allowed to cool for a moment if too warm to handle with comfort. The large feathers must be pulled by force.

Should dry picking be the method then the work should begin immediately after the brain has been pierced. It has been found most satisfactory to remove the feathers in the following order: First, large feathers, then those of the breast, base of the wings, the neck, the legs and finally those from the back. Avoid, if possible, the killing of chickens when pin feathers are too plentiful.

Turkeys are usually dry picked, because the birds then present a better appearance than where they are scalded. The work should be done when the body is still warm to avoid tearing the skin. Here is a hint on removing the large tail feathers: If they are pulled straight the tissue about the quills "sets" and makes the task difficult, but if they be given a twist as they are pulled then they come off quite readily. If one chooses to pick the turkeys by scalding the work should be done the same as for chickens.

Ducks and geese are more difficult to pick than chickens. Because of this, steaming is more effectual than scalding

with water. Put a little water, three or four inches, in the bottom of a caldron or ordinary wash boiler, and bring to a boil. Arrange a rack of some form inside to hold the fowl above the water, but low enough to permit a cover to be placed over the receptacle when the fowl is on the rack. Steam for from one to two minutes, then turn the bird on the other side and steam again for the same length of time. This will loosen the feathers when ordinary scalding fails entirely. If such an arrangement is impossible scald as for chickens and then wrap in some burlaps for a few minutes, causing the steam to penetrate the feathers.

Drawing the Birds.

When the fowls are to be sold to a commission house they should not be drawn but in direct dealing drawing the birds is frequently required. City people are accustomed to having their butcher draw what poultry they secure from him, and consequently they are not familiar with the duty and usually prefer not to do it—so when poultry is ordered the request will often be made to draw. Where fowls are held long, as by the regular marketing system, experience shows it to be the best policy not to open the bodies until they go to the consumer, but in direct marketing the fowls will be kept only a few days at the most, so that drawing by the producer is practicable. This is a feature, however, that should be understood when the order is given, for if nothing is said about it then it is reasonable to suppose that delivery is to be made without the removal of the entrails.

A few suggestions on drawing may be helpful to the novice. Make the incision for the removal of the bowels as small as possible. Do not remove heart and lungs unless requested to do so. Replace the gizzard inside the fowl. A higher price per pound is necessary to cover the amount dressed away and the expense of doing the work. Keep the birds neat and attractive; one man got into the good graces of his customers and rapidly enlarged his trade by having his offerings not only clean but also by placing a sprig of parsley in the incision of each fowl and wrapping them separately in clean parchment paper.

Cooling Before Shipping.

The keeping quality of poultry depends upon cooling immediately after killing. It is more important to do this properly than it is to hasten the shipment to its destination. During cold weather the dressed fowls can be cooled out of doors. When the days are warm and nights cool, as at present, the end is accomplished by putting out of doors at night after they have been held in cold water up to that time. In the warmest weather best results follow the use of cold water. The practice of plunging a warm fowl into ice water does not work as satisfactorily as it would seem. The better way is to first put the fowl into well water to remain a few hours, after which it is thoroughly cooled in ice water. Fowls to be consumed without delay do not require to be cooled to the extent of those being shipped a long distance. By killing one evening, cooling during the night and delivering the next day, satisfactory conditions can usually be maintained.

Packing.

The season, quantity of birds sent, and the distance to be shipped determine the manner of packing. Poultry can be dry-shipped in the winter season, whereas in the summer time they must be iced if going any distance, and this condition usually limits the amount of business in the warm months. However, when supplying a church society, or club, or other organization with a quantity of poultry for a banquet, or supper, a barrel may be employed which makes an excellent package, and when used icing is done easily as follows: First, put in a layer of broken ice, then one of chickens, another layer of broken ice, then the second layer of chickens, and so on, alternating until the barrel is filled or the supply of chickens exhausted. Place the fowls so the feet will all come to the center of the barrel. Put ice on top and over this and the end of the barrel fasten burlap, which can be held in place by removing

the top hoop, pulling the burlap down around the barrel and then replacing the hoop so as to hold the burlap between it and the staves.

Where only a few chickens are to be shipped then a box of convenient size is used. It is probable that with the average person few occasions will offer themselves where the barrel will be needed and that most of the shipments will go forward in boxes. Where dry-shipped in boxes it is time well spent to wrap each fowl in paper and should the consignment be for more than one family, it is well to write on a tag fastened to each fowl, or the paper wrapping, the weight and the person to whom each is intended if the producer knows the quantity wanted by the several parties. By knowing the weights but little trouble is required of the party who receives the shipment to parcel the birds out to his friends, or fellow employees.

The receptacle should be securely fastened and the addresses of both the sender and consignee plainly written thereon.

STUDENTS CO-OPERATE IN BUYING.

Definite plans have been formed by more than 2,000 students of the Ohio State University to co-operate in the purchase of their groceries, meats, coal and household furnishings, in an effort to reduce the cost of student living. Twenty-five organizations are represented in the new combination in which all the work of buying and distributing will be done by students. Officers have been elected to direct the work and a storeroom will be rented to be used as a distributing point to the various boarding houses. Already one carload of potatoes and three carloads of coal have been purchased. Carload lots will be delivered on the University railroad spur, which is near enough to the student resident district to minimize the amount of hauling. Some of the estimates of the amount of goods such an organization will use during the year are: Bread, \$4,000; groceries, \$30,000; meat, \$25,000; coal, \$5,000. It is estimated that from 20 to 50 per cent will be saved on the goods purchased. Later many more commodities will be handled by the co-operative concern. It is said that this is the only organization of its kind among the larger colleges and universities in the United States which plans to do its buying on such an extensive scale.

ousting THE MIDDLEMAN.

Possessing 20 Jersey cows that were each producing an average of 352 pounds of butter a year, Mr. Potter, a dairyman living nine miles from Athens, Ohio, built up a good business on somewhat original lines. He was not satisfied to market his product in the ordinary way. Although his farm was one of only 90 acres, he installed a complete and up-to-date equipment in order to insure sufficient power and water to make high-class butter at all times. He furnished a tenant house for living quarters for a hired man and his family, thus solving the labor problem by guaranteeing employment throughout the year. With such a plant in working order, Mr. Potter decided to become his own salesman and market his product direct to the consumer in the town of Athens. The butter is packed in crocks holding from one to ten pounds and deliveries are made weekly. So great has become the demand for this butter that there is a long waiting list of persons desirous of becoming regular patrons. By making a superior product and by insuring prompt delivery, Mr. Potter has been able to secure a price that keeps from three to four cents above the retail price of creamery butter in the same market.

COMING NEXT WEEK.

The readers of this journal are to be congratulated upon having the opportunity to read in next week's issue a real sane and practical article from the pen of Mr. Kelley, on the suggestive topic, "Your Crops and your Markets." It will appear in this department.

Reports come from the south and southwest, from the latter particularly, that because of the poor supply of corn, large numbers of healthy hogs are being shipped out prematurely. Many sellers are renters unable to borrow money to buy corn, although there are also numerous men owning and working the farms who refuse to invest in more grain for feeding purposes. It is unfortunate that the country lacks a system for facilitating the distribution of stock hogs from the drought-stricken sections to other more favored regions with sufficient supplies of corn and other feed.

Crop and Market Notes.

Michigan.

Livingston Co., Nov. 11.—This section is in the throes of a terrific blizzard, one that would do credit to the month of February. Farming operations are at a standstill. There is probably not more than 40 per cent of the corn crop husked and farmers will not be ready for winter for two or three weeks. Wheat and rye are looking fine. New seeding has come on fairly well where it was not entirely killed, but next year's hay crop will probably be light, owing to the dry weather earlier in the season. Farmers are disposing of their beans at about \$1.75 per bu. Beans are only a fair crop but the quality is above the average. An unusually large number of light hogs are going on the market this fall from this section. Not much fall plowing has been done. Potato crop about 80 per cent of a normal one. There may be some timothy hay for sale but it will be little.

Washtenaw Co., Nov. 6.—The weather at this date is fine, allowing the farmer much needed time to complete the potato harvest. Farmers are devoting more land to this crop than formerly, finding that one year with another, more profit can be made from it than any other crop. And this year while the yield is low, around 100 bushels per acre, the price makes it the money maker of the year. Dairying fruit and potatoes are making farmers of this section prosperous. Although all crops are making a low average yield the better prices resulting from this condition bids fair to make this an average year financially. Eggs 30c; butter 35c; potatoes 75c; oats 50c; hay \$14; cows \$50 @75 and in some instances \$100. While taxes and the various expenses of the farm are all high farmers have the money to pay them and credits and collections are good.

Emmet Co., Nov. 6.—Meadows, new seeding, wheat and rye, are in excellent condition. A good supply of feed on hand for consumption, and some hay and straw for sale. Not much grain for sale. A few beeves and hogs being fed. A good average crop of potatoes grown, selling at 50c; wheat 80c; corn 72c; oats 42c; rye 55c; beans \$1.25; hay \$14@15; straw \$7@8; apples 35@75c; eggs 30c; butter 28c; beef 9@10c; pork 10@10½c.

S. Hillsdale Co., Nov. 5.—Not enough potatoes to supply the place; new seeding not more than half a catch but has improved some of late. Not much wheat sown as last year; it looks fine. No rye sown. Feed plentiful; a good deal of hay for sale. More corn uncut than usual; quite a large quantity of grain yet to market. No cattle feeding; some lambs; hogs not as many as usual, price \$7.50; eggs 30c; butter 25@30c; but few calves raised.

Northern Isabella and Southern Clare Co.'s, Nov. 6.—Potatoes 75 per cent of a crop, selling at 50c. Meadows, new seeding, wheat and rye all good. Lots of rough feed and but little hay being sold. Beans \$1.65 per bu.

Monroe Co., Nov. 4.—Potatoes were not a good crop this year, the average yield being around 70 bushels and the quality inferior. At Toledo the market pays 85c @ \$1 per bushel, according to quality. Meadows are fair, new seeding is good. Wheat and rye made a good growth. Corn crop was small and of rather poor quality. This section keeps comparatively little stock aside from dairy cows. Toledo prices are: Milk \$1.80 per cwt; wheat 93c per bu; corn, old, 90c shelled; oats 41 @43c; loose timothy hay \$14@15 per ton; baled do. \$13@15; Keifer pears 75c; milch cows \$70@100 per head; dressed hogs light 11c; heavy 10c; live hogs \$8.10@8.25 per cwt; calves, dressed 13@14c; beef \$6.25 @8.50; fowls 13@14c.

Delta Co., Nov. 3.—This has been a fairly satisfactory season for producing farm crops. Potatoes are yielding from 75 bu. up. Farmers are holding tubers for better prices. Many old meadows are being allowed to run too long. New seeding is good. Rains improving meadows. Oats an excellent crop here, yield reaching 80 bushels per acre. Not much wheat is raised. Rye is good. Cattle scarce but hogs are quite plentiful. Good cows are selling at \$60@75; draft horses \$600@750 per pair; hay \$12@14 per ton; straw \$6@7; potatoes 45@50c per bu; eggs 25c; butter 30@35c; wheat 85@90c; oats 52c. Some silos are being built.

New Jersey.

Morris Co., Nov. 4.—Corn husking is progressing slowly on account of scarcity of labor. Winter wheat, rye and meadows never looked better. No stock is being fed except a few hogs. About the usual amount of grains remain in the farmers' hands. Very little grain is being marketed as most farmers feed it up to milch cows. Potatoes are a fair crop. New hay \$14 per ton; potatoes \$1; wheat 95c; eggs 45c.

New York.

Columbia Co., Nov. 10.—Weather fine. Corn pretty well housed, but light crop. Potatoes not more than half a crop and are held for higher prices. But few apples in this county, owing to spring frosts. Meadows not promising owing to drouth, though they have revived some since recent rains. Pastures short and cows failing. But little grain in farmers' hands. Very little stock except milch cows on hand. Corn \$1.10; rye 85c; potatoes \$1.50; butter 40c; eggs 50c and very hard to find.

Pennsylvania.

Erle Co., Nov. 10.—We had a snow storm on the night of the 8th, about four inches falling. Crops are practically all harvested. Apples were a very light crop. Prices for all farm products and live stock are high. Potatoes 90c; apples \$1; hay \$10 per ton; straw \$5; cows \$75@100 per

head; heavy horses \$200@300 each and very scarce. The grape crop along the lake shore is now all harvested, the yield was very light but the price is good.

Chester Co., Nov. 6.—Potatoes were not more than half a crop, and sell readily at 80c per bu., wholesale, and retail at \$1. Meadows and pasture land have made a good growth of grass, which is unusually green for this time of the year. Fall seeding which is principally wheat, is up sufficiently to completely cover the ground. The color of the wheat is good and the plant is in fine shape for going into winter. Alfalfa fields are becoming more numerous throughout the county, and some of the older fields where the soil has become well inoculated, are turning off heavy yields of hay.

Montgomery Co., Nov. 5.—The weather is fine; had plenty of fall rains; meadows and new seeding all look good. The farmers mostly depend on dairying and poultry raising. Chickens, ducks and geese are raised extensively but no turkeys, as no one seems to make a success of it. Cattle scarce and high; not many cattle raised; most farmers buy fresh cows and milk them off and fatten them for beef; also some young cattle being fattened since labor is scarce and feed is high. Hay was a heavy crop. Potatoes failed; quite a few farmers did not get enough for their own use. Hay sells from 45@80c per cwt. Eggs 40c; chickens, live, 16c; dressed, 20c; home-made butter 35c; creamery 40c; milk at creamery 160 per cwt; veal calves \$10.50; hogs, dressed \$12.

Ohio.

Warren Co., Nov. 12.—It is cold and wintry with two inches of snow on the ground. Corn husking and shredding are in progress. The crop was about 50 per cent of a normal one. Potatoes yielded poor, and farmers are buying for their own use. Fall pastures are good, but many of the fields of new seeding were killed during the summer by the drought. Wheat and rye are in fine condition but there are a few reports of fly in the earlier seedings. Farmers have plenty of roughage but the short corn and oat crops will reduce their grain supply. This condition has stimulated the early marketing of hogs, and the purchasing of mill feeds for cattle. Wheat is the only grain we have for sale. The usual number of cattle are being fed. Dairying is increasing here. Local prices are: Alfalfa hay \$20 per ton; clover \$13; wheat 90c; hogs \$7.60 per cwt; eggs 35c; butter 30c.

Carroll Co., Nov. 11.—We had an unusual snow storm on Sunday, Nov. 9, and the roads are drifted nearly full so that they are practically impassable at many points. This storm came so unexpectedly that many people have their sheep and cattle out in the pasture lots, and were not prepared to stable them as yet. Grazing has been excellent right up to the time of this snow storm. It looks like real winter now.

Fairfield Co., Nov. 11.—On Sunday and Monday we had a regular blizzard and the snow drifted high along the fences. The temperature was down to 29 degrees F. Wheat is looking fine. Our hay crop was about two-thirds of a normal yield. Timothy is now selling at \$14 per ton loose, and \$15 for baled. Potatoes were a light crop, and are now retailing at \$1 per bu. for home-grown and 85@90c for imported stock. The farmers seem to be holding more of their wheat than usual, the crop being a good one in this section. Apples yielded light and are selling at \$1@1.25 per bu. Hogs are scarce and there is reported a number of cases of cholera. But few cattle are being fed. Milch cows are eagerly sought and high prices are being paid, ranging from \$50@85 per head. There is a small demand for horses. Hogs sell at \$7.50@8; fat cattle \$5.50@7.50; wheat 85c per bu; rye 65c; oats 45c; eggs 35@40c; butter 30@35c; corn 60c; coal 12c per bu. at yards.

Logan Co., Nov. 10.—October was cloudy and wet, which delayed the ripening of corn. Before the recent freezes, the crop had gotten in good condition for cribbing. Wheat and rye are looking fine, although a little late, but with a few more growing days the growth will fully cover the ground. Old meadows are looking well, but new seeding is thin and the plants small for this season of the year. Farmers are well supplied with rough feed and also grain. Some hay is being sold at \$14 per ton. Oats are going at 40c, and occasionally a load of corn at 65c per bu. Feeding operations seem to be rather quiet this fall outside of hogs and a few lambs. Many lambs went to market direct from pasture lots at from 5@6¼c per lb. Hogs selling at 7¼c, and calves at 9¼c. There will be scarcely enough apples for home consumption. Michigan potatoes are being sold here at 95c per bushel on car; eggs 28c; dairy butter 30c; creamery butter 36c; standard milk \$1.60 per cwt.

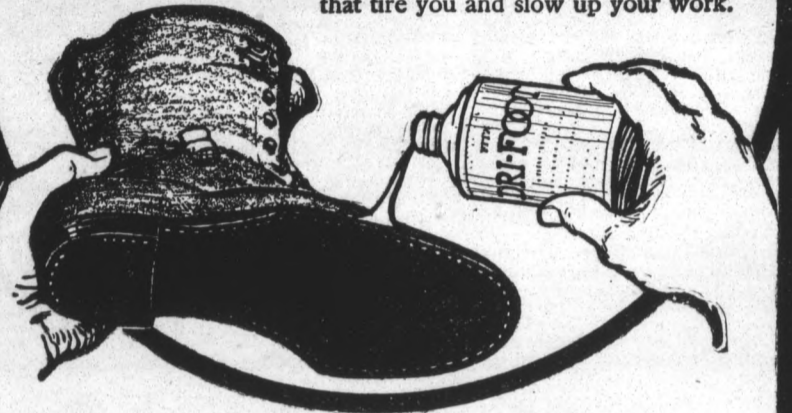
Harrison Co., Nov. 4.—Wheat is looking fine, in fact never saw it look better at this season. Meadows are getting a good start. There will be plenty of feed for home consumption in this section but practically none for sale except a small amount of wheat. A considerable number of cattle is being fed. Horses are not very plentiful at present. The general reduction in the price of wool has cut down the size of our flocks of sheep. Potatoes were not more than 25 per cent of a crop. Turkeys are very scarce and so far none have been sold. Quotations: Eggs 30c; butter 30c; wheat \$1; potatoes \$1; wool 23c; horses \$175@200; cows \$50@100; hogs \$7.50; chickens 13c; sheep are selling at sales from \$2.50@4 per head. Corn was 75 per cent of a normal yield.

Columbiana Co., Nov. 5.—The month has started in with some fine weather and the farmers are having a good chance to finish their fall work. A good portion of the corn is husked and some have hauled their fodder. There are a good many

(Continued on page 478).

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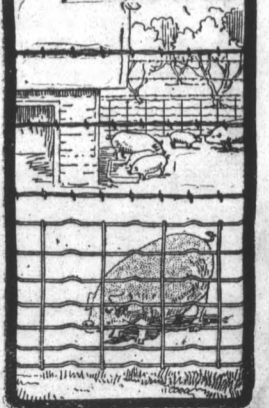
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THIS IS THE FIRST EDITION.

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.

DETROIT LIVE STOCK MARKETS.

Thursday's Market. November 13, 1913.

Cattle.

Receipts, 1350. Market steady. We quote: Best steers and heifers, \$7.50@8; steers and heifers, 1000 to 1200, \$7@7.25; do 800 to 1000, \$6.50@7; do that are fat, 500 to 700, \$5.50@6.25; choice fat cows, \$5.75@6; good do, \$5@5.50; common cows, \$4.25@4.75; canners, \$3@3.85; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@6; stock bulls, \$5@5.50; choice feeding steers, 800 to 1000, \$6.75@7; fair do, 800 to 1000, \$6.25@6.50; choice stockers, 500 to 700, \$6.50@6.75; fair stockers, 500 to 700, \$5.75@6.25; stock heifers, \$5@6; milkers, large, young, medium age, \$7@9; common milkers, \$4@5.

Roe Com. Co. sold Newton B. Co. 23 steers av 1039 at \$7.25, 12 do av 742 at \$6.10; to Morse 11 stockers av 510 at \$6; to Kamman B. Co. 8 cows av 1022 at \$5.25; to Rattkowsky 6 do av 953 at \$4.50, 2 do av 1085 at \$4.50; to Hammond, S. & Co. 1 ox weighing 1500 at \$4; to Mich. B. Co. 7 butchers av 636 at \$6, 1 bull weighing 1040 at \$6.25, 15 butchers av 630 at \$5.90, 5 do av 707 at \$5, 8 cows av 1085 at \$4.50; to Hammond, S. & Co. 7 butchers av 786 at \$3.85; to Parker, W. & Co. 1 ox weighing 1930 at \$6; to Newton B. Co. 1 heifer weighing 960 at \$6.75, 5 cows av 820 at \$3.85, 1 do weighing 610 at \$3.50.

Haley & M. sold Mason B. Co. 3 butchers av 791 at \$6, 6 cows av 970 at \$6, 4 heifers av 705 at \$5.25, 7 do av 704 at \$6.25; to Fenton 12 stockers av 620 at \$6.50; to Mason B. Co. 3 heifers av 779 at \$6.35; to Newton B. Co. 4 cows av 1030 at \$5.75, 12 butchers av 810 at \$6.50, 13 do av 1195 at \$7.25, 3 steers av 1000 at \$6.75, 4 do av 942 at \$6.75, 8 do av 530 at \$5.75, 3 do av 837 at \$6.50; to Sullivan P. Co. 6 cows av 1086 at \$5, 4 do av 937 at \$4, 8 do av 1041 at \$4.75; to Parker, W. & Co. 10 butchers av 836 at \$6.50, 5 do av 810 at \$5.75, 9 do av 733 at \$6, 19 do av 800 at \$6; to Robinson 17 feeders av 740 at \$6.60, 4 do av 880 at \$6.90; to Bresnahan 8 heifers av 610 at \$5.80; to Mich. B. Co. 2 bulls av 770 at \$5.50, 3 do av 1173 at \$6; to Applebaum 3 cows av 893 at \$4.25; to Breitenbeck 13 cows av 1024 at \$4.75; to Mich. B. Co. 5 butchers av 604 at \$5.75, 1 heifer weighing 620 at \$4.50, 1 bull weighing 1030 at \$5.75, 3 heifers av 556 at \$5.50, 1 do weighing 500 at \$5, 2 bulls av 1480 at \$6.25; to Fry 5 butchers av 592 at \$5.65; to Goose 3 cows av 1023 at \$4.25.

Bishop, B. & H. sold Mich. B. Co. 2 heifers av 745 at \$6.25, 1 bull weighing 1340 at \$6, 1 cow weighing 1330 at \$5.50, 4 steers av 925 at \$6.25; to Denton 2 cows av 930 at \$4.60, 2 do av 1060 at \$4.85, 5 do av 926 at \$5; to Parker, W. & Co. 14 butchers av 770 at \$6.25, 2 do av 875 at \$6.50, 6 do av 657 at \$6, 20 do av 658 at \$6, 4 do av 890 at \$6.10; to Goose 2 cows av 1080 at \$5.10; to Hammond, S. & Co. 4 steers av 642 at \$5; to Sullivan P. Co. 4 cows av 900 at \$3.75, 1 do weighing 770 at \$3.10, 12 butchers av 644 at \$6, 2 steers av 970 at \$7.25; to Parker, W. & Co. 1 bull weighing 1550 at \$6, 2 do av 860 at \$5.50, 13 butchers av 788 at \$6; to Newton B. Co. 6 cows av 1116 at \$5, 5 do av 1070 at \$5.65, 1 do weighing 980 at \$7.75, 2 bulls av 845 at \$5.50, 2 heifers av 730 at \$6.50; to Sullivan P. Co. 2 cows av 1060 at \$5, 5 butchers av 894 at \$6.35, 2 do av 830 at \$5, 2 cows av 855 at \$3.75, 4 do av 1010 at \$5.50; to Goose 11 do av 952 at \$4.75; to Mich. B. Co. 3 do av 937 at \$6; to Hammond, S. & Co. 12 butchers av 638 at \$5.90, 3 heifers av 323 at \$4.50; to Newton B. Co. 29 steers av 874 at \$6.30.

Veal Calves.

Receipts, 398. Market steady. Best \$11; others, \$8@10.50. Haley & M. sold Parker, W. & Co. 3 av 130 at \$10, 14 av 150 at \$11, 14 av 140 at \$10.50, 5 av 150 at \$11. Spicer & R. sold Parker, W. & Co. 4 av 185 at \$10.50, 5 av 150 at \$11, 21 av 130 at \$10, 5 av 150 at \$10.75, 3 av 150 at \$11, 2 av 150 at \$10.50.

Bishop, B. & H. sold Parker, W. & Co. 6 av 150 at \$11, 5 av 160 at \$11, 18 av 170 at \$11, 2 av 170 at \$9; to Ratner 3 av 145 at \$10.50, 5 av 145 at \$10; to Applebaum 2 av 410 at \$5.50; to Sullivan P. Co. 3 av 160 at \$11, 16 av 165 at \$10.50; to McGuire 8 av 175 at \$10.75, 8 av 150 at \$10.50, 9 av 155 at \$10.75; to Burnstine 5 av 150 at \$10.25, 2 av 200 at \$11, 5 av 155 at \$10; to Hammond, S. & Co. 4 av 145 at \$11, 7 av 135 at \$10.75, 2 av 145 at \$10, 5 av 150 at \$10.

Sheep and Lambs.

Receipts, 8749; market steady. Best lambs, \$7.25; fair to good lambs, \$6.25@7; light to common lambs, \$5@6; fair to good sheep, \$4@4.25; culls and common, \$2.75@3.25.

Roe Com. Co. sold Mich. B. Co. 53 lambs av 78 at \$7, 39 do av 50 at \$6.75, 92 do av 65 at \$6.75; to Newton B. Co. 5 sheep av 120 at \$4, 10 lambs av 73 at \$7; to Sullivan P. Co. 103 lambs av 70 at \$7; to Thompson Bros. 9 do av 85 at \$4, 15 do av 80 at \$6.75.

Spicer & R. sold Parker, W. & Co. 57 lambs av 75 at \$7.25; to Young 112 do av 85 at \$7.10, 59 do av 75 at \$7.10, 78 do av 66 at \$6.80, 65 do av 65 at \$6.65, 66 do av 75 at \$7.

Haley & M. sold Mich. B. Co. 15 sheep av 80 at \$3.50, 11 do av 100 at \$3.75, 104

lambs av 65 at \$7, 45 do av 88 at \$7, 6 do av 75 at \$6, 61 do av 75 at \$7.25, 11 do av 58 at \$6.25, 21 do av 50 at \$6.25, 52 sheep av 110 at \$4.25; to Nagle P. Co. 154 lambs av 80 at \$7.25, 45 do av 60 at \$6.50, 8 sheep av 110 at \$4.50; to Parker, W. & Co. 86 lambs av 90 at \$7; to Nagle P. Co. 18 sheep av 120 at \$4.25.

Bishop, B. & H. sold Nagle P. Co. 39 lambs av 90 at \$3.50, 125 lambs av 75 at \$6.85, 18 do av 67 at \$6.50, 63 sheep av 110 at \$3.85, 40 lambs av 68 at \$6.90, 117 do av 75 at \$6.85, 37 do av 72 at \$7, 63 do av 75 at \$7.25, 115 do av 83 at \$7.10; to Ratner 26 sheep av 90 at \$3.25; to Young 17 lambs av 55 at \$6.25, 43 do av 55 at \$6; to Kull 25 do av 75 at \$7; to Swift & Co. 221 do av 80 at \$7.50, 122 do av 83 at \$7.50, 236 do av 80 at \$7.25, 41 do av 75 at \$7.35, 40 do av 70 at \$7.35; to Sullivan P. Co. 31 do av 60 at \$6.25, 74 do av 60 at \$6.35; to Nagle P. Co. 133 do av 75 at \$6.85, 18 do av 100 at \$7; to Mich. B. Co. 85 do av 52 at \$5.60; to Parker, W. & Co. 64 do av 70 at \$7.15; to Thompson Bros. 26 do av 60 at \$6.50; to Davis 162 do av 60 at \$6.25, 16 do av 65 at \$6.50, 17 do av 55 at \$6.25, 55 do av 55 at \$6.20; to Sullivan P. Co. 83 sheep av 95 at \$3.85, 37 do av 90 at \$3.75, 26 lambs av 55 at \$3.50, 16 sheep av 110 at \$4.25, 10 lambs av 63 at \$6, 33 sheep av 90 at \$3.75, 40 do av 130 at \$4.25, 19 lambs av 50 at \$6; to Thompson Bros. 11 sheep av 105 at \$3.50, 30 do av 95 at \$4.

Hogs.

Receipts, 5690. Market 5@10c higher. Range of prices: Light to good butchers, \$8.05@8.10; pigs, \$7.85; light yorkers, \$8.05@8.10; heavy, \$8.05@8.10.

Bishop, B. & H. sold Bay City Sausage Co. 81 av 190 at \$8.10.

Same sold Newton B. Co. 182 av 190 at \$8.10.

Same sold Sullivan P. Co. 234 av 180 at \$8.05.

Sundry shippers sold same 144 av 190 at \$8.10.

Roe Com. Co. sold same 350 av 190 at \$8.05, 150 av 200 at \$8.10.

Spicer & R. sold Hammond, S. & Co. 1215 av 190 at \$8.

Haley & M. sold same 760 av 190 at \$8.

Bishop, B. & H. sold Parker, W. & Co. 2500 av 190 at \$8.05, 2560 av 180 at \$8.

Friday's Market.

November 14, 1913.

Cattle.

Receipts this week, 1921; last week, 1923; market steady.

We quote: Best steers and heifers, \$7.50@8; steers and heifers, 1000 to 1200, \$7@7.25; do 800 to 1000, \$6.50@7; do that are fat, 500 to 700, \$5.50@6.25; choice fat cows, \$5.75@6; good do, \$5@5.50; common cows, \$4.25@4.75; canners, \$3@3.85; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@6; stock bulls, \$5@5.50; choice feeding steers, 800 to 1000, \$6.75@7; fair do, 800 to 1000, \$6.25@6.50; fair stockers, 500 to 700, \$5.75@6; stock heifers, \$5@5.75; milkers, large, young, medium age, \$7@9; common milkers, \$4@5.

Veal Calves.

Receipts this week, 717; last week 676; market steady. Best, \$11; others, \$7@10.50.

Sheep and Lambs.

Receipts this week, 13,986; last week, 12,721; market 10@15c lower than on Thursday. Best lambs, \$7@7.10; fair to good lambs, \$6.65@6.85; light to common lambs, \$5.75@6.25; yearlings, \$5@5.50; fair to good sheep, \$4@4.25; culls and common \$2.75@3.25.

Hogs.

Receipts this week, 12,687; last week, 13,475; market 5c lower. Range of prices: Light to good butchers, \$8; pigs, \$7.75; light yorkers, \$8; heavy \$8.

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. We tan and finish them right; make them into coats (for men and women), robes, rugs or gloves when ordered. Your fur goods will cost you less than to buy them, and be worth more. Our illustrated catalog gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request. It tells how to take off and care for hides; how and when to weigh the freight; both ways; about our safe dyeing process which is a tremendous advantage to the customer, especially on horse hides and self skins; about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

The Crosby Frisian Fur Company, 571 Lyell Ave., Rochester, N. Y.



FOR SALE-Rebuilt Machinery

22 H. Pitts traction engine; 22 H. O & G. Cooper; 18 H. Gar Scott; 18 H. Pitts; 18 H. Lobe; 18 H. Pt. Huron; 16 H. Leader; 16 H. Reeves; 13 H. Russell; 13 H. Nichols & Shepard; 12 roll Advance husker; 10 roll Plano; 8 roll McCormick; 30x50 Pitts thresher; 32x54 Huber; 8 H. Bulldog portable gas engine; 9 H. Alamo; 12 H. Badger and many others. Write for description and price.

THE BANTING MACHINE CO.

114-124 Superior St., Toledo, Ohio.

WANTED-A Granite Field Bolder, 7 ft. high by 5 ft. thick and 6 ft. wide, within 200 miles of Detroit. Cartwright Bros. Granite Co., Detroit, Mich.

We Want HAY & STRAW

We get the top price on consignments, make liberal advancements and prompt remittances.

Daniel McCaffrey's Sons Co. PITTSBURG, PA.

Reference, Washington Trust Company, or any bank in city.

HAY Potatoes, Apples. We pay highest market price for car loads. The E. L. Richmond Co., Detroit, Mich. Responsible representatives wanted.

Advertisement for James Manufacturing Co. 2-in-1 Carrier. Features include: 'For ANY Barn', 'A New Carrier For Both Rigid and Rod Track', 'Rigid and Rod Track Combined'. Text describes the combination of rigid and rod track, advantages for use inside and outside the barn, and ease of erection. Includes contact information for James Manufacturing Co. at AV31 Cane St., Ft. Atkinson, Wis.

FARMERS-We are paying 5 cents above the Official Detroit Market for new-laid eggs shipped direct to us by express. Write us for information. It will pay you. American Butcher & Cheese Co., 31-33 Griswold St., Detroit, Mich.

Maple Sugar Makers NOW IS THE TIME. Advertisement for Warren Evaporator Wks., Warren, O. Includes an illustration of a sugar evaporator and text describing the product's benefits for sugar makers.

GET READY FOR THE RAW FUR SEASON. Advertisement for A. SUSKIND & CO., 159 West 24th St., N. Y. City. Includes text about fur season preparation and contact information.

Drain Tile for Sale. Advertisement for J. A. ANSPACH & SON, Edgerton, Ind. Includes text about mixed sizes and specialty tiles.

Farms and Farm Lands For Sale. Advertisement for New Jersey Farms, Central Michigan Farms, and Wanted Farm Lands. Includes details about various farm properties for sale.

NEW YORK FARMS. Advertisement for McBurney & Co., Fisher Bldg., Chicago, Ill. Includes text about farm locations and prices.

98 cents Railroad Watch. Advertisement for R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO. Includes an illustration of a watch and text about the watch's features and price.

MICHIGAN FARMING LANDS. Advertisement for Staffeld Brothers, 15 Merrill Building, Saginaw, Mich. Includes text about fertile farms and farm lands for sale.

MICHIGAN FARMS and FARM LANDS. Advertisement for J. D. BUTTERFIELD, 521 Hammond Bldg., Detroit. Includes text about reliable information for farm buyers.

McClure - Stevens Land Co. Advertisement for McClure - Stevens Land Co., established 1888. Includes text about farm and stock lands.

115 Acres - 90 in cultivation, 25 in timber, dark red soil, about 250,000 feet of hemlock, ash, maple and basswood. Advertisement for Hall's Farm Agency, Owego, Tioga Co., N. Y.

142 Acres - 125 cleared, good farm, 10-room house, painted and papered. Advertisement for Hall's Farm Agency, Owego, Tioga Co., N. Y.

116 Acres, \$6200 Part Cash Stock, Crops, Machinery. Advertisement for Big money-making New York State farm, well drained, fertile fields, brook watered-pasture, lots of fruit and wood.

Three Crops a Year. Advertisement for F. H. LaBaume, Agricultural Agt., Norfolk & Western Railway, Room 221, N & W Ry. Bldg., Roanoke, Virginia. Includes an illustration of a person working in a field.

Markets.

GRAINS AND SEEDS.

Wheat.—The advance of last week has been maintained. It is the prevailing opinion of students of the trade that the present basis of values is none too low.

Table with columns: No. 2, No. 1, Red, White, Dec., May. Rows: Wednesday, Thursday, Friday, Saturday, Monday, Tuesday.

Chicago, (Nov. 18).—No. 2 red wheat 86 1/2c; Dec. 85 3/4c; May 90 3/4c per bu.

Corn.—As winter approaches corn values become firmer and move to higher levels. Farmers are not selling the grain freely even though tempted by the prevailing high quotations.

Table with columns: No. 2, No. 2 Mixed, No. 2 Yellow. Rows: Wednesday, Thursday, Friday, Saturday, Monday, Tuesday.

Chicago, (Nov. 18).—December corn 70 3/4c per bu; May 70 3/4c; July 41 3/4c.

Oats.—Tone of this market is firmer with demand good, especially from the southern states. Values rule higher.

Table with columns: Standard, No. 3 White. Rows: Wednesday, Thursday, Friday, Saturday, Monday, Tuesday.

Chicago, (Nov. 18).—December oats, 38 3/4c per bu; May 42 1/2c; July 41 3/4c.

Rye.—This cereal is steady and quiet. No. 2 is quoted at 67c per bu.

Barley.—At Chicago barley is quoted at 53@81c per bu, while Milwaukee quotes the malting grades at from 60@80c.

Cloverseed.—Excepting alsike, all values are higher with sentiment changing from day to day. Prime spot is quoted at Detroit at \$8.50 per bu; December \$8.55; March \$8.65.

Alfalfa Seed.—Market is steady, with prime spot quoted at \$7.25 per bu.

Timothy Seed.—Market steady at \$2.50 per bu. for prime spot.

FLOUR AND FEEDS.

Flour.—Jobbing lots in 1/2 paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$3.30; second, \$4.90; straight, \$4.50; spring patent, \$5.10; rye flour, \$4.60 per bbl.

Feed.—In 100-lb. sacks, jobbing lots: Bran, \$25; coarse middlings, \$27; fine middlings, \$27; cracked corn, \$31; coarse corn meal \$30; corn and oat chop, \$25.50 per ton.

Hay.—Market unchanged. Carlots on the track at Detroit are: No. 1 timothy \$16.50@17; standard \$15.50@16; No. 2, \$14.50@15; light mixed \$15.50@16; No. 1 mixed \$13.50@14.

Chicago.—Offerings light and demand good with prices steady. Choice timothy quoted at \$18@19 per ton; No. 1, \$16.50@17.50; No. 2, \$15@16.

Straw.—Detroit.—Steady. Rye, \$8@9; wheat and oat straw, \$7@7.50 per ton.

Chicago.—Quotable as follows: Rye \$8.50@9; oat \$6.50@7; wheat \$6@6.50.

Beans.—Demand increasing and prices show a 10c advance. Immediate and November shipments are quoted at \$1.90; January at \$1.95 per bushel at country points.

DAIRY AND POULTRY PRODUCTS.

Butter.—The rise in values at Elgin and in most other markets seems due to a scarcity of butter of the better grades and is entirely confined to such grades.

Elgin.—Market firm at 32c per lb., an advance of 1c over last week.

Chicago.—Strictly fancy goods firm at quotations; other grades dull. Quotations are: Extra creamery 32c; extra firsts 30 1/2@31c; firsts 25@28c; seconds 22 1/2@23c; lardles 22@22 1/2c; packing stock 20 1/2@21c per lb.

New York.—Market steady with the better grades of both creamery and dairy showing a further advance. Quotations rule as follows: Creamery extras 34@35c; firsts 28@32c; seconds 25 1/2@27 1/2c; state dairy, finest 31@32c; good to prime 27@30c; common to fair 23@26c; packing 20@22c as to quality.

Eggs.—Supplies show no improvement and the demand for fresh stock of good quality, considering values, is holding up remarkably well.

Chicago.—Receipts here are running ahead of those at the corresponding date a year ago and yet values are 7@8c above those ruling at that time.

New York.—The almost prohibitive prices in this market are affecting consumption to some extent, but strictly high-grade stock continues very firm.

Poultry.—Although shipments for the holiday trade are beginning a little early, activity in the local market is sufficient to give it a healthy tone.

Chicago.—Liberal receipts at this point are being cared for without a break in values. Trade good but chiefly local.

Cheese.—Market rather quiet, values unchanged. Wholesale lots, Michigan flats 15@15 1/2c; New York flats, 17@17 1/2c; brick cream, 17@17 1/2c; Limburger, 14 1/2@15c.

Chicago.—Trade quiet; receipts light and demand only moderate. Quoted as follows: Good to choice 90@110 lbs., 14@14 1/2c; fair to good 60@90 lbs., 12@13 1/2c.

FRUITS AND VEGETABLES.

Apples.—Trade is fair at steady prices. Quotations: Snow \$4@4.50; Spy \$3.50@3.75; Greening \$3.50@3.75; King \$3.50@4; Twenty-ounce \$3.50@3.75 per bbl; No. 2, \$1.75@2.25 per bbl; bulk \$1.25@1.50 per cwt.

Potatoes.—Trade rules steady under fair receipts and active demand. Quotations are as follows: In bulk 60@65c per bu; in sacks 65@75c per bu.

Cabbage.—Steady at last week's figures. Good quality quoted at \$2@2.25 per bbl. The demand is fair at Chicago with offerings fairly liberal.

Onions.—Fair demand and trade with prices for native stock at \$2.40 per 100-lb. sack. The Chicago market is well supplied and somewhat slow with values

GRAND RAPIDS.

The potato market is showing weakness. Prices in Grand Rapids have held up well but are lower, sliding from 70c to 60c this week, with demand slow.

THE LIVE STOCK MARKETS.

November 18, 1913.

Buffalo.

(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York.)

Cattle.—Receipts, 800; steady. Veals—Receipts, 125; unchanged. Hogs—Receipts 9,600; heavy, \$8.10@8.15; mixed, \$8.05@8.10; Yorkers, \$7.85@8.10; pigs, \$7.75@7.85 1/4; roughs, \$7.25@7.40; stags, \$6.50@7; dairies, \$7.85@8.10. Sheep—Receipts, 5,000; sheep, steady; lambs, \$5.25@7.30.

Chicago.

November 17, 1913.

Cattle. Hogs. Sheep.

Receipts today 25,000 50,000 50,000 Same day last year 27,159 37,135 49,752 Receipts last week 58,224 163,328 183,527 Same week last year 58,042 144,915 190,809

Cattle receipts today look excessive to most buyers, and while a few sales of desirable lots are at about former prices, the general market is a dime or more lower, with prospects of a bad break before the close.

Cattle feeders throughout the territory tributary to Chicago have got into the habit recently of reversing the usual custom of having the principal run of the

week on Monday, and the big receipts have been on Wednesday, thereby making the first day a day of higher prices and the latter one of slow trade and declining values.

Hogs sold most of last week within a very narrow range of prices, the market failing to show the highly sensational downward movement of the preceding week.

Sheep and lambs advanced early last week to the highest prices paid for fat stock in a long time, prime native lambs soaring to \$8.25 on a short supply of such offerings.

CROP AND MARKET NOTES.

(Continued from page 477).

acres of potatoes to dig yet and the yield so far has been poor. The meadows all look promising and the good results from lime sowing can easily be seen on the new meadows.

Indiana.

Laporte Co., Nov. 10.—A cold storm struck this section Saturday and Sunday and turned into a blizzard and the snow continued blowing and drifting until this morning.

Tippicanoe Co., Nov. 9.—The weather is cool and damp this week. Potatoes are very scarce and can hardly be bought at any price here.

rye look fine, the cool weather of late has kept the fly from doing any damage. The fall pastures are still in good shape although the late frost has affected them slightly.

Allen Co., Nov. 8.—Not enough hay is arriving at the local market to supply the demand. Good grade hay is in heavy demand and sells at \$16.

LaSalle Co., Nov. 11.—A long expected and predicted cold snap has arrived. It followed on the "heels" of an Indian summer of about four days' duration.

Marion Co., Nov. 4.—Most farmers are buying potatoes for their own use, which retail at the stores at \$1.25 per bu. Meadows are in fine condition and new seeding is good.

Wisconsin.

Pierce Co., Nov. 10.—The weather has been bad for fall work. Corn is being shredded. Several were late in building silos and the corn has been frosted.

Missouri.

Lafayette Co., Nov. 3.—The potato crop was a failure here and northern stock is selling to farmers at \$1 per bu. Meadows are in good shape.

St Genevieve Co., Nov. 3.—Wheat seeding was considerably delayed here because of late rains, hence much has been sown during the past few days.

FOR SALE—2 Imported Percheron Stallions, One dark brown, one gray.

One Imported Belgian Stallion, bay. The above horses are all first-class sires—good disposition. Good in every way.

Geo. D. Conner, 40 Water St., Battle Creek, Mich.

PERCHERON STALLION FOR SALE. Prize winner, two years old, black, in ton class, Reg. P. S. A. JUNE ELLIOTT, Onondaga, Michigan.

FERRETS—For driving rats, rabbits, mink and locating skunks. Price list free. BERT EWELL, Wellington, Ohio.

FOR SALE—4 yr. old Clyde mare and yearling filly, both registered. Write R. S. HUDSON, Michigan Agr'l College, East Lansing, Michigan.

SPANISH JACK—4 years old, guaranteed sure foal getter, for sale or exchange. G. H. SHUTTLEWORTH, Essex, Ont.

\$2,275 From 100 Acres

Three Forks, Mont., March, 1912.

Dear Sir:

Your letter of recent date regarding my experience as a dry land homesteader in Montana received, and in reply will say: That I located 160 acres three miles south of Three Forks, Mont., on February 1, 1910, and commenced improving in the spring of that year. I built a two-room house, a rough shed for a barn, and broke 85 acres of the land, which I seeded with Turkey Red winter wheat the following fall.

During the winter of 1910-1911, I cut fence posts and commenced fencing the land, which I completed in the spring.

With practically no experience as a farmer I harvested from about 100 acres 2,540 bushels of wheat, which I marketed for \$2,275.

My first year's crop considerably more than paid for the improvements, although I cannot give you the exact figures, as I am sorry to say that I did not keep a close record of the cost.

If I had this same crop to handle over again, with the experience I have gained from last season, I am satisfied that I could easily have gotten an increase of 25 per cent by better cultivation.

Hope this will give you the information desired; however, I shall be glad to give you any further data I may have if this does not cover what you wanted.

Yours truly,

WM. L. IRVINE

What This Man Did You Can Do

Secure a Government Homestead in Montana—where farming pays. In Dawson County and Musselshell Valley are thousands of acres of land open to settlement under the Homestead Act. These homesteads, some of which are 160 acres and others 320 acres each, are extremely fertile, producing large crops of all grains, potatoes and small fruits. The period of residence on homestead land is now only three years, and a five month leave of absence is permitted each year.

Low Round Trip Fares to Montana points are in effect on the first and third Tuesdays of each month, via the

Chicago, Milwaukee & St. Paul Ry.

Send for literature on how to secure a government homestead, etc.

H. W. STEINHOFF, D. P. A.

212 Majestic Bldg. Detroit, Mich.

O. E. SHANER, Immigration Agt. Chicago

GEO. B. HAYNES Gen'l Passenger Agent

ALBERTA

The Price of Beef

is High and so is the Price of Cattle.

For years the Province of ALBERTA, (Western Canada), was the Big Ranching Country. Many of these ranches today are immense grain fields, and the cattle have given place to the cultivation of wheat, oats, barley and flax, the change has made many thousands of Americans, settled on these plains, wealthy, but has increased the price of live stock. There is splendid opportunity now to get a

FREE HOMESTEAD OF 160 ACRES (and another as a pre-emption) in the newer districts and produce either cattle or grain. The crops are always good, the climate is excellent, schools and churches are convenient and markets splendid in Manitoba, Saskatchewan or Alberta. Send at once for literature, the latest information, railway rates, etc., to

M. V. McInnes
176 Jefferson Ave.
Detroit, Mich.

or write Superintendent of Immigration, Ottawa, Canada.



FLORIDA

The Land of All-the-Year Out Door Life—

Write and tell us what you would like to do if you come to Florida. Fruit growing, trucking, poultry, bee keeping, stock raising, dairying a winter home or business or professional openings, as well as some lines of manufacturing, and we try to assist you to get the right location. Your success means our success and the success of the community in which you live. Illustrated booklets and "Facts About Florida" sent free on application.

FLORIDA EAST COAST RY.

J. E. INGRAHAM, V. Pres., or LOUIS LARSON, Northwestern Room 119 City Bldg., St. Augustine, Fla. Agents, Room 119 109 West Adams Street, Chicago, Ill.

MAPLE SYRUP MAKERS!

The Grimm Evaporator

used by principal maple syrup makers everywhere. Saving of time and fuel alone will pay for the outfit. Write for catalogue and state number of trees you tap.



GRIMM MANUFACTURING CO.
619-621 Champlain Ave., N.W., Cleveland, Ohio.

Cutaway

Ask your dealer to show you CUTAWAY (CLARK) disk harrows and plows. Write us for free book, "The Soil and Intensive Tillage."

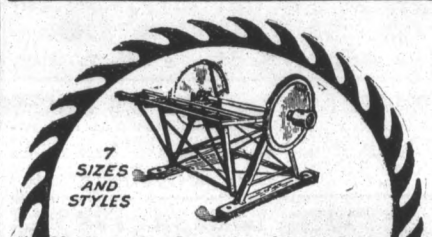
The Cutaway Harrow Company
992 Main Street Higganum, Conn.

(CLARK)

Pulverized Lime Rock

We can ship in carload lots in two days after order is received from Muskegon and Benton Harbor. Write for prices direct to you.

LAKE SHORE STONE CO., Milwaukee, Wis.



7 SIZES AND STYLES

Shall we send you free book about **APPLETON WOOD SAWS**

It shows pictures of all our buzz, drag, circular log saws and portable wood sawing rigs, with or without Appleton Gasoline Engines. Tells you straight facts which we guarantee our saws to back up. Opens a way for you to make money this Winter sawing your own and your neighbors' wood. You want a saw to last—made strong—boxes that never heat—don't experiment with cheap saws then, buy an Appleton, 40 years the standard. Send for booklet to-day.

Batavia, Ill., U.S.A.
APPLETON MFG. CO. 620 Fargo St.

Horticulture.

FALL WORK IN THE ORCHARD.

The fruit grower's year ends when the apple crop has been harvested and sold. He can rest with a feeling of relief when he knows that he has sent his share of the world's food supply on its way to waiting mouths. He should not rest long. When one season ends, another starts, and immediately preparations should be made for the next crop. Fall work in the orchard is not always given the consideration it ought to have. It is of considerable importance, and will relieve the grower of much work during the spring rush.

The first thing to be given consideration after the apples are off, is the putting into winter quarters of all the tools and apparatuses used in harvesting. It is a common fault to leave such work undone; it is an uneconomical fault, as ladders and baskets will warp, and the picking bags and the canvas of the sorting table will rot.

Much can be done to help in the control of the insect pests of the next season's crop. The codling moth, the chief apple pest, passes through the winter in the cocoon stage under old bark, under rubbish in the orchard, in old apple barrels, and in places where apples are stored. Much can be done to kill off these moths, if the loose bark on the trunks and larger limbs is scraped off, and the rubbish places in the orchard and cellars cleaned up. Every moth killed by this process will get rid of the source of 60 to 70 months in the spring. The fall canker worm is also one of the insects which can be controlled by this method of cleaning up. "Orchard sanitation" is a suitable name for this work, and it will be found an excellent supplement to spraying in the control of insect and fungus troubles. Birds are great assistants in this work, as they are eager for the opportunity to take care of all the cocoons exposed by this cleaning up.

Autumn is an excellent time for cutting out blighted limbs which have been neglected during the growing season. If left until the spring pruning, they will often be missed, as they do not have the tell-tale leaves to show them up. Limbs which have been broken by the weight of the crop should also be attended to at this time. If the limb is a large one, it can be saved by drawing it up in place, and holding it by a bolt or bracing it by wires from other limbs, if the break is not too ragged. It pays to save large broken limbs of trees, as in one season they will often more than pay for the trouble by the fruit they will bear. Limbs beyond repair should be cut off and the wounds painted over with a paint of pure white lead and raw linseed oil.

The protection of trees from mice and rabbits during the winter is also very important work to be given consideration at this time of the year. These winter orchard pests often do more damage in one night than can be repaired in several years. The mice harbor in brush or grass, and will not venture very far in the open. Therefore, if the ground at the base of the tree is kept clean of these things, there will not be much danger from this source except when the snow becomes deep. Then they will burrow under the snow and in comfort feast upon the bark. Mounding the trees with soil or cinders to the height of eight or twelve inches will serve to keep the base of the tree free from snow. If the mounding has not been done, occasional tramping of the snow around the base of the tree will also act as a means of checking the mice.

Damage from rabbits can best be prevented by protecting the trunk of the tree with thin veneer, closely woven wire, or any of the manufactured tree protectors. A heavy spraying of the trunk of the tree with lime-sulphur, the commercial article diluted to about eight to one, has proven successful to many for protection against both rabbits and mice. Various formulas of poisonous paints have been recommended. Strychnine placed in green fruit, or twigs dipped in a strychnine solution and placed in various parts of the orchard have proven effective. But there is always danger attending the use of poison, and it is advisable to try other means first. A shot gun could supplement the tree protectors, and would be a method of death dealing which would be much easier on the rabbit than poison.

If there is a bad infestation of scale in the orchard, or if an old, neglected orchard is to be renovated, a fall application of lime-sulphur would be of great value. In such cases this spraying should be in addition to the regular spring spraying for scale. Lime-sulphur is an excellent cleanser and renovator of old trees, and frequent applications on neglected trees will not come amiss.

There is something for the ambitious fruit grower to do at all seasons of the year. Above are just a few suggestions of what might be done at this time. In the house it is usual to have fall and spring cleanings. The orchard will be benefited if its manager follows this custom of the housewife.

THE STRAWBERRY MULCH.

Now is the time to mulch the strawberries, just as soon as the ground freezes hard, not before. There are several advantages derived from a good mulch. It prevents heaving which is sure to kill many of the plants and to leave all of them in poor condition for next year. It preserves fertility that might be lost in the leaching and erosion processes. It improves the physical condition of the soil, and supplies some fertility if allowed to decay and be harrowed into the soil next summer. It will keep the berries free of grit next summer, and hold moisture to take them through the drouth.

When should the mulch be applied, and how much is needed? We should wait until cold weather has come to stay, and until the ground is frozen sufficiently to stop the growth of plants completely, and to bear up team and wagon. Then we may drive out into the patch without injury to the ground. If the mulch is applied before the plants stop growing it will smother and kill them. Hauling the material onto the ground with a team reduces the labor very considerably. The latter part of November is usually early enough for this work in Michigan. We like to have a good, solid mulch at least three inches deep. There isn't much danger of getting too much unless you put it on too early or leave it on the plants too long in the spring, after the plants begin to grow.

It doesn't matter very much what kind of material is used so long as it makes a good snug covering and will not blow away. Cornstalks are sometimes used but they do not make a good mulch. They are excellent, however, when put on top of other light material, like straw or leaves. Coarse manure is also used but it makes too close a covering, and is too often full of grass and weed seeds. Anything containing such seeds should be avoided. The reason is obvious. Sawdust also makes a tight, close covering but does not benefit the soil or plants like straw, leaves or fodder.

Straw is the best of material for mulching strawberries, and has the advantage of being most easily obtained, and the cheapest. The cheapest, damaged straw is just as good for this purpose as better grades which cost more.

For the last few years we have used the waste part of shredded fodder for mulching the strawberries. All of the stalks and pith, tassels and such wastes, are carefully saved and mixed with the manure. If we get shredding done early in November as we did this year it is an easy matter to save enough of this material to cover the strawberry beds by the middle of December. When this is being saved for this purpose we do not feed roughage that contains seed. We want it to be perfectly free of all seeds.

This material is excellent. It contains manure and humus material enough to improve the ground. It is too heavy to blow away, and it lays close enough to make a good mulch. It costs almost nothing. The rain and snow of winter soak the manure into the ground so that nothing is left by spring but dry, clean, chaffy material which is just right to hold the big berries off the ground.

If the mulch is left until rather late in the spring it will hold the frost in the ground and keep the berries from coming out early enough to be killed by late frosts. After all danger is past the mulch should be raked off the plants and left between the rows, and close to the plants to protect berries, hold moisture and smother weeds. E. P. H. GREGORY.

Forkner Orchard Cultivator



Does more work with less draft and leaves a better surface mulch than any other cultivator made.

It Works Right Up To Your Trees

Cultivating the entire surface beneath low branches without disturbing boughs or fruit. Write for catalogue and free book "Modern Orchard Tillage."

LIGHT DRAFT HARROW CO., 606 Nevada Street, Marshalltown, Iowa

Poultry and Bees.

THE AVERAGE FARMER AND THE HEN.

The introductory paragraph of this article may well be made up of the following questions: Why is it that the majority of farmers are careless in regard to the kind of hens they keep, although careful in regard to the kind of sheep, hogs, and cattle? Why is it that many capable farmers, successful in other lines, feed their hens grudgingly and look upon them as a sort of necessary evil? Why is it that so many farmers believe that a mixed flock, crossed and recrossed beyond recognition, is more profitable than a pure strain.

In considering the first question, a simple statement of facts will be sufficient to show its pertinence. A great many farmers who would be ashamed to have a mongrel, scrawny drove of hogs or cattle on the place, are astoundingly indifferent when it comes to hens. Little or no attention is paid to improving the flock. Practically no effort is made to weed out undesirable and unprofitable fowls. Often hens are kept years beyond the stage of usefulness, finally to die of old age or be sorted out at last, after their unprofitableness has cut down materially the profits from the younger members of the flock. As to why this practice is indulged in, the reasons seem to be these:

Indifference and Inappreciation.

Regarding the hen as a minor asset, and forgetting that attention to these minor assets may spell the difference between success and failure, the farmer is apt to consider anything in the line of hens as good enough, and to think that the returns do not justify the expense and trouble requisite to the keeping of some good strain of laying stock. This is the explanation of the indifference of many. Some seem to think that the hen, unlike other things, ought to bring paying returns without the expenditure of time or money, and even without proper care, and give little attention to the kind kept for this reason. Negligence, and sometimes ignorance, fostered by a wrong idea as to the true importance of the hen, seem to explain, in most cases, this carelessness.

In taking up the second query, elements involved in the first question enter in. A misconception of the true worth of the hen, a reluctance to give her a fair show which is based on this misconception, and a sort of prejudicial feeling generally, seem to explain the situation. Let it be said, however, that the tendency to feed hens grudgingly and consider them of no account is less marked than formerly. The hen, like the old apple orchard, is gradually but surely coming into her own. In many instances the farmer's wife is fully awake to the situation, if her husband is not. She knows how much of the living expenses are paid from eggs and chickens sold, and how the problem of setting a table is simplified by the possession of a good flock of hens. Occasionally, when the husband is obliged to go down into his pocket and dig up money for these things, he, too, awakes to a realization of what the hens are capable of doing.

Crossbreds Considered Desirable by Some.

As to why so many farmers prefer a mixed flock, the writer has not been able to find any satisfactory explanation. A sort of general idea, to the effect that mixed fowls make better layers, seems to prevail. Granting that there is reason for this in the case of a single cross, there still remains the fact that many do not stop here. In the farming communities with which the writer is acquainted, it is difficult to get eggs for setting that are even reasonably pure, of any strain. Much inquiry is often necessary before a flock of Barred Plymouth Rocks, or Brown Leghorns, or other well known breeds can be found. Occasionally, some breed new to a locality, is introduced. Many buy eggs for setting, but the pure stock is seldom kept, and the new addition serves, mainly, to render the pedigree of the locality hen more complicated.

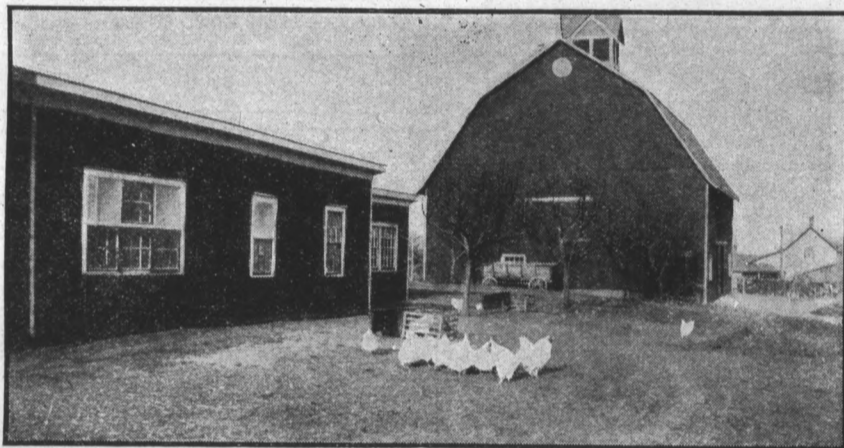
Some readers may consider this statement of conditions overdrawn. In all the farming communities with which the writer is acquainted, however, the questions in the introductory paragraph are pertinent. Of course there are many exceptions, some of them striking ones, of farmers who are awake to the possibilities of poultry raising in connection with

the farm and farm work. Every farmer keeps hens, as a matter of course, and why not make them a paying feature? The man who has a good flock is the man who would no sooner dispense with or neglect the hens than he would dispense with or neglect the other attributes of successful and varied farming. It is not necessary to follow the ways of the professional poultryman or fancier, but it is necessary to give the hen a fair show if she is to perform, for the average farmer, the work of which she is capable.

Hillsdale Co. J. A. KAISER.

OLD HENS UNPROFITABLE.

Many farmers fail to realize the highest returns from their poultry, simply because they keep hens long after their usefulness has passed. Unless the hen is especially valuable as a breeder, it will seldom pay to carry her longer than two years. Ordinarily, a hen lays 25 per cent fewer eggs in her second year than she does in her pullet year. Where market eggs alone is the object, the farmer will do well to dispose of all his old stock and fill his house with promising yearlings. It should be borne in mind, however, that a vigorous two-year-old hen will transmit



Barnyard and Poultry House upon Grand Traverse County Farm of Mr. Thomas Smith. It is evident that here Poultry is not Considered a Negligible Asset.

more vigor to her offspring than will a younger fowl. A wise practice, and one in common use among systematic poultry-keepers, is to dispose of all two-year-olds except the most vigorous, which are retained in the breeding pen.

Indiana. T. Z. RICHEY.

ESSENTIAL DETAILS OF INDOOR WINTERING OF BEES.

Probably the most convenient place in which to winter bees is in the cellar. The first step is to make sure that the temperature can be kept from going below the freezing point. A portion of the cellar should be partitioned off and provided with sufficient ventilation to allow the escape of foul air and also to regulate the temperature, should there be any danger of it rising too high, as this would cause the bees to become restless and crawl outside the hives. After a number of colonies are put into a cellar the temperature will be several degrees higher than it formerly was on account of the warmth of the bees.

The apartment should be so situated as not to be subject to constant invasion by individuals when going to the cellar proper for fruits, vegetables, etc. Where a great number of colonies are to be wintered indoors it would be an advantage to build a repository in a side-hill and have the doorway at the lower side level with the ground so that there would be no necessity for a stairway.

Some time in November the bees should be prepared for carrying in. The covers of the hives will, of course, all be sealed down tight and it will not be necessary to disturb them. But the hives should all be gone over and loosened from the bottom boards so that when you come to pick them up there will be no snap or jar. When cold weather comes and indications are for its continuance, the hives can be picked up and carried in very gently. Care should be exercised at this time not to arouse the bees; we do not want them to fill themselves with honey, as it will probably be five months or more before they will have a cleansing flight.

This work can best be performed by

two persons and I use a carrier so made that two hives, or even three, if they are not too heavy, can be carried at once by means of handles similar to those of a wheel-barrow. By this means the bees hardly seem to know that they are being moved.

Tiering up the Hives.

Lay on the floor two joists or wall strips, on edge, and place the hives on them six or eight inches apart. The next tier of hives is placed on top of the first, each hive resting upon two of the lower tier; the next tier is placed in the same way until they are as high as the cellar will permit. The reason for this manner of piling is to give the bees ample bottom ventilation and to allow dead bees to drop out of the way. This also permits the bee-keeper to inspect his bees at any time. By taking a dark lantern and holding a looking-glass under the hive he can see right up into the cluster. Have a thermometer in the cellar and try to keep the temperature between 40 and 50 degs. Visit the cellar occasionally to ascertain if the bees are quiet. If they seem a little uneasy at times a little more ventilation will probably quiet them. Have as little noise and as little light as possible.

Years of experience have taught me that if a strong colony becomes uneasy in the top tier, it may be quieted by putting it on the cellar bottom, and that a small colony, which is in a roar of disturbance, can be stilled by raising it from the bottom of the cellar to the top. Also closing most of the ventilation from the hive



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Farmers' Clubs

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

PROGRAM FOR TWENTY-FIRST ANNUAL MEETING.

Tuesday, December 2, 1913.
10:30 A. M.

Invocation—Rev. W. S. Steensma.
Payment of dues.
Presenting credentials.
Appointment of committees.
Presentation of resolutions.

1:30 P. M.

Music—School for the Blind.
Invocation—Rev. J. S. Williamson.
Report of Associational Secretary, Mrs. C. P. Johnson, Hadley and Elba Farmers' Club.

"As the City Man Views the Country Man," H. M. Nimmo, Editor of Detroit Saturday Night.

"As the Country Man Views the City Man," Hon. A. B. Cook, Maple River Farmers' Club.

Music—School for the Blind.
"Some Phases of Agricultural Improvement," Dr. Eben C. Mumford of the U. S. Agricultural Department.

7:00 P. M.

Music.
President's address—J. N. McBride, of Burton Farmers' Club.

"About the Telephone System"—Hon. Lawton E. Hemans, Mason.

Cornet Solo—Prof. A. J. Clark, M. A. C. "Side Lights on Farm Life"—Mrs. W. H. Taylor, Ingham County Farmers' Club.

Poem—C. K. Farley, Berlin and Almont Farmers' Club.
Cornet Solo—Prof. Clark, M. A. C., Lansing.

"Our State Charges who have Violated the Law"—Chaplain Jackson State Prison.

Wednesday, December 3.
8:00 A. M.

Conference of Local Club Workers, directed by H. C. Whiting, Ray Farmers' Club.

10:00 A. M.

Report of Committees—
Temperance.
Honorary members.
Club extension.
Good of the Order.
Credentials.
National affairs.
State affairs.
Miscellaneous business.

11:00 A. M.

Election of Officers.

1:00 P. M.

Music.
Invocation—Rev. O. J. Price.
"The School Teacher"—Miss Eureka Bannister, Grand Rapids.

"Junior Clubs"—Cary A. Rowland, of Charleston Township Farmers' Club.
Recitation—Mrs. Clyde Newcomb, Lincoln Township Farmers' Club.

Vocal Solo—Rev. W. H. Thompson, Lansing.
"The Country Church"—Rev. W. S. Steensma, East Lansing.

Discussion, Mrs. Nettie Todd, North Shade Farmers' Club.

Wednesday Evening.

Music—Industrial School.
Treasurer's report.

"The Building of a Virile Race"—Hon. H. C. Glasner, Nashville.

Recitation—Mrs. C. A. Matthews, Essex Farmers' Club.

Solo—R. C. Huston, M. A. C.
Paper—Miss Nora Braun, of Webster Farmers' Club.

Music—Industrial School.
"Courtesy and Politeness"—Mrs. C. S. Barber, Lansing, Mich.

Thursday.

Visiting Agricultural College, Industrial School and School for the Blind.

FARMERS' CLUBS IN MINNESOTA.

(Continued from last week).

If one will stop to think of the nature of these Club meetings and the programs, he can easily see their value from an educational viewpoint. The children and younger people usually furnish the entertainment features of these programs, which consist of recitations, readings, and music. Every parent is proud of his child when he does well on the program, and spends much time in training the child for his part. The readings, recitations, and music keep the younger people interested in the Club meetings and enliven the program which would be too heavy and dry if made up only of the discussions of farm topics. The opening of the main discussions on the program is usually assigned to some member who is especially well informed on the subject under discussion and can get the rest of the people in the meeting to think on it. Everyone knows that it is easier to follow a good speaker than it is to open the discussion himself, and many people will add good points who never could be persuaded to open an argument.

In every community there are farmers who seem to be making more of a success of some line of farming than their neigh-

bors and usually are backward in talking about their business. But if these men can be gotten on their feet during some Club meeting and plied with questions they will give a good talk and add much to the general knowledge of the community. If every community could make general the knowledge which each individual of the community has, it would not need any outside help whatever and would increase its efficiency a hundred per cent. Facts given by such men as these are of untold value to the community, as they are acquainted with local conditions, and what they have done was done in the community and can be repeated by any other man in the locality. And after a little practice some of these backward speakers become the best in the Club. Nothing but practice can make one a fluent speaker.

Another educational feature of these Clubs is their ability to bring in outside talent which will add to the general information of the community. A Club may be the means of bringing a farmers' institute to its locality, and this community will stand a far better chance of getting a good corps of workers than a community without a Club, as the institute secretary is sure of the Club's interest in the meetings and that the meetings will be well advertised and attended. Many Clubs have brought the first institute to their localities. The Club may decide to hold a short course for a few days during the winter. It can get a man and woman from the Agricultural Extension Division and invite the high school agriculturists from the high schools about them to help. This force, with the local men who are interested and can talk, will give an excellent short course which will last for several days and should be equal to or surpass a farmers' institute meeting.

(Continued next week).

Grange.

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

THE DECEMBER PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Song by Grange choir.
"Good will march" about the hall, with singing.

Roll call of officers, responded to by each naming one thing the Grange has accomplished during the past year.

Election of officers for 1914.
Roll call of newly elected officers, responded to by each with a word of greeting or word of promise for the coming year.

"Banquet march," led by officers, present and newly-elected masters together, etc.
Closing song.

HELPING ONE ANOTHER IN GRANGE ACTIVITIES.

There is a hint to those of us who are put in places of Grange responsibility in an incident related recently in The School Journal. The article tells how, at the opening of the fall term of a certain university, the president sent a personal letter to each member of his faculty asking his co-operation in solving the problems which arose in conducting the school. He wrote in part:

"The success of our university in the past has come as the result of the hearty co-operation of all members of the faculty. The efficiency of the future will be in direct proportion to the helpful contributions made by faculty members. I take this opportunity to invite you to make suggestions for improvements. * * I need your help. I must have it if your dreams and mine for this institution are to be realized."

Does anyone doubt that any Grange could be strengthened by leadership such as this—leadership that seeks co-operation and suggestion of its co-workers? Think what a power thirteen officers of a Grange might become, even in one year, by conferring frequently together over ways in which to overcome obstacles and to meet difficult situations! For my part I have often wished that the Grange manual had required that, whenever a feast is spread, the officers should sit at one table and talk concerning ways and means to improve their own Grange. What force would be engendered if the master and overseer sat down together for the express purpose of planning how to begin their Grange on time; or the master and stewards discussed methods of improving the ritualistic work; or master and lecturer planned the programs together; or

master, secretary and treasurer spent an evening together in revising lists of members, and making lists of people who are eligible to membership in the vicinity, all with the view in mind of making the Grange organization grip them in some worth-while way; or, what could not be done if all the officers and members of committees met in conference to discover what definite things their Grange could undertake for the distinct betterment of the neighborhood. Such co-operation, invoked candidly, is dynamic in results.

There comes to mind a certain local Grange where for years it has been the practice of its lecturer to seek very much of this volunteer suggestion from other officers and members. Scarcely a program in years has been planned without a conference of from two to seven or eight persons, and not infrequently a general call is made to the entire membership for topics and suggestions. This simple—but all too unusual—practice chiefly explains why this Grange is one of the foremost in its state in program work.

Let us suppose that this same Grange should apply the same tactics to other lines. It is interesting to speculate what it might accomplish with this system of frequent, frank conferences applied to the department of financial co-operation; to the building of a hall; to the organizing of farmers into other helpful groups for the improvement of farm interests; to the promotion of sociability or better recreations in the community. There is no reason to suspect that the principle that proves so good in one department would not work well in others. JENNIE BUELL.

POMONA MEETING AND FAIR.

Shiawassee Pomona was recently entertained by Perry Grange, the host planning to combine the Pomona meeting with its annual fair. The plan worked well, the exhibits surpassing those frequently seen at town or county fairs, and the attendance proving very satisfactory. The exhibits were placed in the town hall, the sisters' part of the show comprising hand embroidered bed linen, table runners, centerpieces with crochet and tatting trimmings, punch work, cobwebby laces, battenberg work, sofa pillows and bedquills, together with a fine display of canned fruits and vegetables, pickles, preserves, honey and baked goods. In the section devoted to fruits, grains and vegetables were prize squashes weighing 30 lbs.; one pumpkin of the common variety tipped the beam at 46½ lbs.; there were immense beets, citrons and potatoes and good specimens of all the vegetables now in season. Some very fine Rural New-Yorker potatoes came from a field which yielded over 300 bushels per acre and these, together with a magnificent display of apples were among the exhibits reserved with a view to placing them on exhibition at the State Grange meeting at Flint next month. A large number of Indian relics were shown by different members and an interesting collection of butterflies and moths was shown by G. A. Scofield. Among the antiquities seen were a bible printed in England in 1789 and brought to this country in 1829 by Jas. Bridger; a book on anatomy printed in 1775; a calf yoke made in 1850; a spinning wheel and a number of old muskets. A goat in a pen caused much amusement as a sign over it invited, "Join the Grange and have a Free Ride."

A portion of the afternoon was given up to an interesting program. State Master Ketcham told what was being done by other Granges and particularly those in the remote northern sections of the state where many subordinates are being organized among the Finns. C. C. Miller, of M. A. C., described the advantages offered by the short courses at the College, while A. R. Potts told of the one-week lecture courses planned to be given in the country by men from M. A. C. He explained that where there are 30 men desiring such a course this service may be obtained by each contributing \$1, when four lectures each day will be given on any subject chosen. The primary school pupils filled in the last half hour of the afternoon with songs which were highly appreciated. The evening was given over to degree work performed by Perry Grange and to a public meeting held in the opera house.

CATALOG NOTICES.

Pittsburgh Perfect Fence, manufactured by the Pittsburgh Steel Co., Pittsburgh, Pa., is fully illustrated and described in a pocket-size catalog sent upon request by this company. In it are listed various styles and heights of farm and ornamental fencing and accessories, as well as wire fencing, etc. Mention the Michigan Farmer when writing for this catalog.

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