

# MICHIGAN FARMER

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WHEN we hear that there is a ten thousand acre farm in Michigan that has been reclaimed by the dike system it arouses our interest. On visiting this farm, the writer was amazed at the methods that are used to change swampy land into a farm that is highly productive and very profitable. Mr. Jacob DeGeuss, manager of the Prairie Farm, Saginaw county, is the type of a farmer who understands big business and is capable of managing a gigantic proposition. The work on this farm requires the assistance of 260 men; a small town has sprung up and this little village is inhabited only by the employees of the Prairie Farm. Ten thousand acres of land have been reclaimed by a system of dikes and this year they are growing 1,000 acres of mint, 650 acres of beets, and the rest of the 4,500 acres under cultivation has been planted to general crops.

The reclaimed lands were marshy, and outside the dikes the farmers are having considerable trouble with the water. Two years ago it was up in the buildings on the outside of the dikes and while other farmers were having their crops ruined, the Prairie Farm employees were plowing on the reclaimed land. The dikes have been constructed with two large steam plows and the water from the land is pumped into a series of ditches and canals, the total length of which is seventy-five miles.

We were driven across this farm and the miles of streams seemed to carry us to a foreign country where all was strange and unfamiliar. The methods used on this Prairie Farm in Michigan are very similar to the dike system that is used in Holland. Men are given the privilege of hunting muskrats in these streams and serve the double purpose of catching the rats that might undermine the dikes and act as inspectors to guard against any breaks in the earth that would allow the water to rush in on the cultivated land.

The broad expanse of smooth land seems foreign to the farmer in Michigan and the little rivers flowing around the fields mark them off like islands that have been made to order. The scene recalls what we have read of the dike farms of Holland and the wonderful canal and ditch systems built centuries ago in China. The soil is rich and black and the large number of men plodding back and forth across the broad fields remind the visitor of pictures of the peasants on the big estates in Europe. Mr. DeGeuss said that the people in this country had the impression that most of the farmers in Holland were market gardeners and cultivated but a few acres of land, but this is not entirely true and there are many fine dike farms in Holland that have thousands of acres of well cultivated and productive land.

Mr. DeGeuss has had little trouble in hiring good men for the farm work but told a story of a foreigner who came from Chicago to work and it illustrates why some men will congregate in the city but refuse to work on the farm. The poor workman stood up to his ankles in the mud and as he gazed blankly into the distance remarked, "Chicago is all right, America no good." The farm employs a varied class of labor and the blacksmith and wood-

## A Michigan Dike Farm.

working shops are capable of making all ordinary repairs without the expense of calling in other assistance. The hospital, general store and fire department are features of this farming business and every department of the farm work is organized to perform its work with the greatest efficiency. Engineering skill is needed to run the seventy-five horsepower engines in the pump house and the centrifugal pumps have a capacity of 40,000 gallons per minute.

Mr. DeGeuss believes that money is well expended in the proper preparation of the soil and it is easy to show the re-

sults in the sugar beet business. He is in the cells. A cold rain will cause the quantity to diminish and ragweed, smartweed, or fireweed will color and flavor the oil. The crop is studied and every drop of mint oil is produced with the minimum of expense which also means that it will bring the maximum of profit.

The Grand Trunk Railroad has constructed a spur track to this farm and the farm is to pay one dollar over the regular charges for every load that goes out until the cost is cancelled. The elevator on this farm was largely constructed by the regular men and it is modern

in its machinery and well built in every particular. There are ten miles of fine roads on the reclaimed land and 1,660 implements are needed to farm the extensive acreage under cultivation, and this is increasing at the rate of 500 to 600 acres every year.

Mr. DeGeuss hires Slavs and Bohemians to care for the sugar beets and they contract to weed four inches on each side of the row and the other twelve inches is cared for by the regular employees of the farm. The question of controlling weeds in the beet fields has been a serious proposition on this Prairie Farm but it was solved by planting barley along with the beets. The barley would start first and the beets could be cultivated before they were up and the weed crop was thus delayed in its start and was much easier to control. Mr. DeGeuss believes in alfalfa and buys the finest seed on the market regardless of the price. He does not inoculate and believes that inoculation decreases the germinating power of alfalfa.

Seventeen hundred acres of land have been limed with the refuse from sugar factories and the stock furnished sufficient manure for one hundred and sixty acres. Sugar beets have been running thirteen to sixteen tons per acre with a net profit of \$5.00 per ton. There are one hundred and fifty Herefords on the place; the cows raise their own calves and Mr. DeGeuss is selling the steers and retaining the heifers. A fine herd of registered Holsteins is supplying milk for the farm village and the employees receive their milk for six cents per quart.

The company owning this farm made no mistake when they selected Jacob DeGeuss to be their farm manager. He is a type of the business farmer who knows scientific agriculture and has the capacity of handling a great mass of detail. He is responsible for the organizing and equipping of the employees' baseball team and he encourages the men to be upright in their work and saving in their habits. He is always in close touch with his men and has hobbies just like the rest of them. He loves horse racing first and baseball second, and is a worthy example of the big business farmer who can mix work and pleasure without allowing the work to suffer.

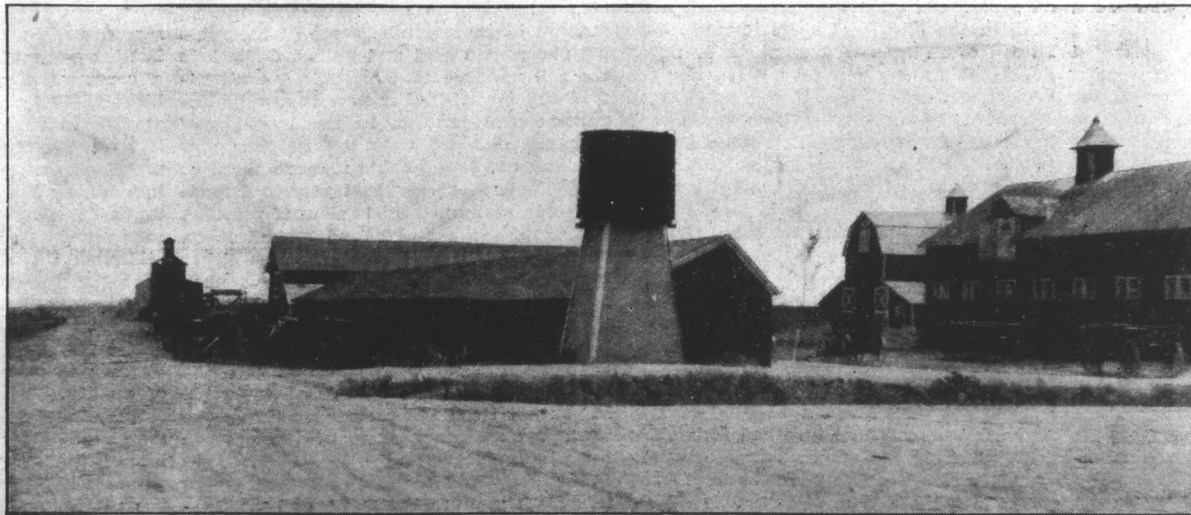
Mr. DeGeuss made the following statement regarding the outlook for agriculture in this country: "If we cannot raise twice as much on our land as we have in the past, some day people will starve in this country." He is managing the Prairie Farm with due consideration for the conservation of fertility and the increase of production. It is well worth the time of every farmer to visit one of these big enterprises

where they are studying the problems of the soil and striving to place agriculture on a business basis the same as the corporations in any other industry. It will be an inspiration to the man who neglects many opportunities on his own farm and it shows the possibilities of doing big things with the soil when capital, brains, and energy are directed toward its cultivation. Such an object lesson is also of peculiar interest on account of Michigan's large area of undeveloped swamp land.

R. G. KIRBY.



General Store and Post Office Patronized Only by Employees of Prairie Farm.



The Railroad Run a Spur Track to the Elevator to Handle the Products of this 10,000 Acre Farm.



### SUGGESTIONS GATHERED AT THE RECENT ROAD CONGRESS.

So voluminous was the material presented at the six-day session of the fourth annual meeting of the American Road Congress that it is impossible to present it here without excluding other matters of importance and since much of it concerned only the professional road builder, we have for the benefit of the Michigan Farmer readers, gathered such items as would be helpful and interesting to the average citizen and taxpayer.

Encouragement should be given to the development of a school of road engineers who are not only able to build the more expensive types of roads but also a school of men who can use funds economically in the construction of common roads.

The sequence to be followed in road improvement, as voiced by prominent road builders at the convention is, first, the improvement of ordinary roads, next the roads of second class, then the trunk lines, and finally the national and international roads. It is by following this programme that the masses will be educated to the significance of improved roads, which will make it easier to secure support for the more costly highways when the time for their construction has arrived.

The maintenance of the road should be provided for before the road is built. If it is impossible to have available funds for keeping the road in repair, then the road should not be constructed.

Roads should not be permitted to get out of order. As soon as a defect of any kind shows it should be immediately attended to.

Much temporary road work has been done and found to be very unsatisfactory. It wastes money and is certain to disappoint taxpayers and patrons of the road.

Main roads should be constructed so as to carry their maximum load during the most trying weather conditions. If not so constructed, heavy loads will break the surface and make the expense of maintenance higher.

A careful study should be made of a road before laying it out. Not only its present use, but the probable future should be considered, since it is future demands that the road is being prepared to meet.

In issuing bonds to raise money for road construction, the greatest care should be exercised to have these bonds paid up before the road is worn out.

It is observed by road officials that too large an amount of money is being expended for temporary covering of wooden bridges. The general impression is that bridges and culverts should be built of stone or concrete, or other permanent materials, thus avoiding further expense for their maintenance.

There are about 2,100,000 miles of unsurfaced roads in the United States. Wide experience has taught us that proper grading and drainage and the use of a road drag at the right season of the year, will make a very serviceable kind of road of this class. Some states have adopted a compulsory drag law which provides funds and men to look after this work. Illinois and Iowa were mentioned as states having such statutory measures.

The unsurfaced roads should be worked when wet, this puddles the surface, enabling the road to shed water; it also keeps the soil in place.

The use of the wide tire wagon was recommended. Narrow tired wagons are known to be as hard, or even harder on many types of roads than are automobiles. Wagons constructed so that hind wheels run outside of front wheels are specially to be desired by the road builders.

The New York Assembly has enacted a law which gives the state supervision of the construction of all roads within the state. The counties pay all the way from nine to 35 per cent of the construction cost of state roads. The amount of a county's appropriation depends upon its population. The money raised by a county is used under the supervision of the state engineers.

A new system of road maintenance is being taken up in some states. In New York, the plan followed is something like the system used by the railroads, section gangs are employed and provided with proper equipment, such as steam rollers, oil trucks, etc., so that the repairs may be made at the least possible expense. Our common roads are being put to greater use at the present time than they have in years gone by. Thirty years ago, two out of every three persons were farmers, whereas, now only

one out of every three is a farmer. To feed this increased number of non-agricultural classes, requires the transportation of exceedingly large amounts of farm products.

### MANURE LOSSES.

A heap of barnyard manure has an odd way of refusing to stay put. The farmer who has barn manure in a big pile against the barn is more likely throwing it away than saving it. A hundred revolutions are going on in that pile of manure and they are not bettering it.

Some of the nitrogen is becoming ammonia and evaporating. Some becomes nitrates which dissolve when the rain comes and sink into the ground. And, after a more complex and scientific fight about it, some becomes nitrogen gas and disappears.

Now nitrogen, we are told, is worth about eight cents a pound. A horse, the learned statistician informs us, produces at that rate, \$10.40 worth per year. It's worth saving.

When liquid and solid manures are kept together they "leak" and lose value much more rapidly than when stored separately. The more compact it is, the less loss. It is far better, when possible, to apply the manure direct to the fields instead of piling it up for some future time with the resultant deterioration.

Soil, method of cultivation, and kind of crops, all regulate the net return one gets from a ton of barnyard manure. The Ohio Experiment Station, using barnyard manure, eight tons to the acre, on a rotation of corn, oats, wheat, clover and timothy, succeeded in getting an increase return to the value of \$4.69 per ton. An average for the whole time in the tests where rotation was practiced was \$2.97 per ton of manure.

The most valuable manure, the manure that contains the most nitrogen and potash, is the hardest kind to save. It is the liquid excrement. There are a good many stockmen now who have cisterns in their barns. It is a good method of saving manure where correctly done but in applying the liquid, there is the same danger of making the ground hard as with commercial fertilizers. This is not the fault of the manure, or the fertilizers. It is because humus has not been plowed under.

Despite warnings from our colleges and our experiment stations, the money we annually throw away in the form of manure is appalling. And what makes that fact still more distressing is that it is preventable. Compared to European methods of manure conservation, it seems that we are still in the infant class.

In this country there are approximately 19,500,000 horses and mules, 51,600,000 sheep, 47,000,000 hogs, and 61,000,000 cattle. Figuring usual values on nitrogen, phosphoric acid and potash, these animals produce in one year, \$2,225,700,000 worth of fertilizer.

And we are told that one-third of this is lost by careless handling. That is about \$750,000,000.

The first law of economy is to stop waste. Therefore, the first thing the American farmer should do, it seems, is to make an effort to stop the waste of this valuable fertilizing element.

California. L. L. DeBRA.

### LIGHT SEEDING AND ITS RESULTS IN THE WEST.

Thought perhaps some of our farm methods would be of interest to Michigan Farmer readers.

One thing that seems strange to a person from the east is our light seeding of all grain. All crops stood here much more than in the east, and since farming here I have often wondered whether or not a light seeding would not be better for the eastern states. When I was farming in Michigan it was not at all uncommon to hear the expression, "that piece of ground is rich, it will stand more seed." Now the very reverse is true here, the better condition the soil, and the more plant food it contains, the less seed we sow, for this richer soil will force more stools from one grain.

Thirty pounds of wheat per acre and one bushel of oats is the extreme maximum limit, and the farmers who fit the soil good are sowing less than this. One year ago our wheat made some over 32 bushels per acre from a seeding of 19½ pounds. This year we threshed 20 bushels per acre from 14½ pounds and our precipitation from sowing to harvest was only 4.38 inches. One 14-acre field sloped down on a flat and the wheat on this flat stood so much that there was not mois-

ture to mature it and only yielded one-half what the upper half of the field did. We think that, could we have sown eight or 10 pounds on the low ground our yield would have been 28 or 30 bushels per acre on the whole field. We sowed 15 pounds of oats per acre this year and but for the extremely dry summer we would have had a good crop; however, we only had 19 bushels per acre.

One grain of corn will often make two to four stalks, this depending some on the season and cultivation.

I know these light seedings will seem incredible to a person who has not studied our western conditions.

Colorado. FRED. L. PALMER.

### SOIL AND FERTILIZER QUESTIONS.

#### Composted vs. Fresh Stable Manure.

What is the difference between fresh barn manure or well rotted manure, and which will produce the most weeds when applied as a fertilizer?

Shiawassee Co. T. N. V.

If you take an even quantity of fresh stable manure and pile it in a yard and then fork it over two or three times during the summer time, until it is well rotted, you will have a much smaller quantity, so far as bulk is concerned, than the pile of fresh stable manure was originally. In the decomposition of the compost heap much of the volume is lost. The coarse organic matter, the straw used for bedding and that sort of thing, rots and decays and its volume is quite perceptibly lessened. Many of the weed seed which were in the bedding have been destroyed by the fermentation of the manure so that you will have manure that contains less foul stuff if it was composted. On the other hand, in the decomposition of this manure fermentation has driven off or allowed to pass away some of the ammonia or nitrogen. Again, if the pile has been allowed to leach, if it is an excessive rainy season or something of that sort, you have lost some of the soluble plant food in the process of composting, which you would not lose if you had applied the manure fresh. The composted manure contains a larger per cent of available plant food. If you want to raise market garden crops, if you want to get immediate effects, you can get better results with composted manure. On the other hand, the fresh manure contains more bulk and consequently more organic matter, most of our soil needs organic matter as much as it does plant food, and consequently it would be more profitable to apply the manure fresh on most lands, and certainly for ordinary crops. In applying the manure fresh you save every bit of the plant food, you save all of the organic matter and you save the labor and expense of composting it. If the manure is forked over two or three times during the summer time so that it will rot, it costs considerable money in the way of labor and you have lost all this, the handling of the manure, and besides you have lost some organic matter, and you have lost some available plant food.

It used to be quite popular to compost manure before it was used, but farmers have found out that they don't get as good results with a given amount of manure after it has been composted as they do if they applied it fresh, taking everything into consideration. The fresh manure, containing more or less bedding is just what is wanted in the soil to increase the humus or vegetable matter in the soil. Then, nowadays we don't want to allow any plant food to go to waste.

We can't afford to let this manure ferment in the pile and have the ammonia go off volatilized into the air. Again, we can't afford to run the risk of an excessive rainy season and have this pile of manure leach and take some of the soluble phosphoric acid and potash down into the soil underneath. Again, we can't afford the labor. Labor now is a very important consideration in the business of farming, and we can't afford the labor necessary to handle this manure three or four times. The very best way to dispose of stable manure is to haul it, if possible, direct from the stable and spread it on the ground. Then there is no loss either in plant food or labor. It is done at a minimum expense. I realize that sometimes it is impossible to do this, in other words, it is not practical. In the summer time we haven't any place to put the stable manure. The land is all in crops. If you put it on the pastures early in the season you destroy some of the pasture for that season.

The cows and sheep won't feed where this fresh manure is spread, and we generally need all the pasture grass that we can get at that time of the year. The

other fields, of course, are covered with growing crops and you can't spread the manure, so the only way for us to do is to pile it up in a big pile and then haul it out later on when some of the crops have been removed, but we don't fork it over, we don't go to this expense. Just as soon as we can get the fields clean of crops, and get the time we haul it out and from that time on until the next summer we calculate to draw it directly to the fields and spread it. Again, sometimes it happens that we can't do this if the snow is very deep or if the fields are very soft. Then we have to put it in a pile again in some convenient place, preferably out upon the field where the manure is going to be spread later on, pile it up in a big pile and leave it until the condition of the field is such that one can go on with a manure spreader and spread the stable manure. This, of course, necessitates handling the manure over once more, which is expensive, but which cannot be avoided. COLON C. LILLIE.

### WHY BOYS LEAVE THE FARM.

Boys who are playmates will reveal to each other their plans for the future without reserve. One boy wants to be a farmer, another a mechanic, another a doctor, and so on. These plans are liable to be changed often before they get to real work for themselves. Boys readily learn that they will soon be men, and this knowledge sometimes causes them to make their parents much trouble. It gives them an independent feeling. If home conditions are not agreeable they look forward to the time when they can change them or get away from them.

I saw this independent feeling illustrated not long ago in a manner that pleased me. I was working beside a threshing machine, and a little boy was standing near revealing to me his plans for the future in a confidential sort of way. He said that in so many years (he had the years counted up) he would be thirteen years old, then he was going with a threshing machine to learn to be a thresher. "Well," said I, "by that time you will be just about large enough to carry water for the boys to drink."

"Huh," said he, with a contemptuous expression on his face, "I'll never carry water for them fellows."

This independent spirit frequently gets hold of a boy when he is quite young and gets hold of him in a way that is hard for his parents to control. Study them. It is not undignified for a father to knuckle down to a son when he thinks he has been too hasty or too exacting. Such action is likely to give a boy the impression that you mean to be fair with him, and when he gets that impression you have a strong hold on him. The time is soon coming when you cannot force obedience, and you may as well get ready for that time.

I remember a circumstance which came under my observation when I was a boy. One of my playmates was trying to mount a horse, and his father was looking at him. He was having much trouble in mounting and the father finally remarked that the boy was always behind and always would be. I considered that the remark was very ungenerous as the boy was short and the horse was tall. The remark was made before the boys' playmates. The boy lived to show the world that he was neither slow nor dull, notwithstanding his father's judgment to the contrary. It is needless to say that that boy stayed on his father's farm no longer than he was compelled to.

Boys like to be known by their neighbors as good boys. An acquaintance stated to me that one of the sweetest sentences that ever fell on his ears came from the lips of a neighbor woman on his return to his native place, after having battled with the world for a quarter of a century. She greeted him with, "God bless ye—ye were a gude boy." This unstudied expression coming from this unlettered Scotchwoman made a lasting impression upon him. When old age is bearing down upon us, and time has left its mark on every feature, we like to be remembered as good boys.

Branch Co. O. A. VANDERBILT.

It is scarcely necessary to refer to the importance of quality in addressing the readers of this paper, for the Michigan Farmer has always been a farm paper of quality.

Still, it is well to remember, in buying merchandise for the home or farm, price is not the only thing to be considered. Almost invariably the cheapest article is the most expensive, because of its short life or because it so often proves unsatisfactory.



## LILLIE FARMSTEAD NOTES.

We finished sowing the wheat, 75 acres, on the very last day of September. We were delayed a day or two, owing to the fact that the traction engine broke down and we had to give the last harrowing with horses before drilling. This is a few days later than I like to sow wheat, yet I have had good wheat that was not sown until in October. It all depends upon the season. The warm weather and plenty of moisture since sowing is bringing the wheat on rapidly and it looks fine. In some of the fields that were sown before any rain came, that is, before the drought was broken, the wheat came on nicely after the rain and now presents a magnificent growth. Years ago, with a growth as large as these two fields have at this time of the year, if the weather continued warm the farmers would be afraid that it would get too large a growth, but I am of the opinion that this wheat is all the better for the growth that is already made, and I wish my wheat was as far advanced as that. However, the prospects are that it will get a good growth. We have had no frosts as yet. Tomato vines haven't been touched with the frost and it doesn't seem possible that we can have such a sudden change of weather that it will stop the growth of wheat immediately. The prospect for a good growth of wheat is more encouraging than it has been for the last two years. Both last fall and the previous fall wheat did not do well. It was too wet and cold. This year things are more normal. The ground is not wet yet. Seemingly we have had splendid rains and plenty of them since the 15th of September, yet the ground is not soaked at all, just in nice condition to work.

These splendid rains since the 15th of September have started the new seeding which lay dormant all summer. This applies both to the red clover seeding in the wheat last spring and also to the alfalfa which was sown alone and with nurse crops. It is all coming on now and looks nicely. The only question is whether it will get growth enough so that it will stand the winter should we happen to have a severe winter. It is not as large as I would like to see it, but it is not dead, and there is hope left yet that we will not lose our seeding. On the wheat stubble we mixed a considerable quantity of alfalfa seed with the red clover seed. There seems to be almost as much alfalfa as there is red clover. It is a much better stand of alfalfa than ever before, although I have been mixing the alfalfa seed with the red clover, and I am of the opinion that this comes from the fact that the clover made a poor start. Always before the clover came up readily in the spring and made a growth which seemed to crowd out the alfalfa and might have done so. This year the clover did not make this growth and the alfalfa had a good fair chance. It is a little slower to start than red clover and consequently red clover gets the advantage of it. However, I did mix in more alfalfa seed this spring than ever before.

## Filling Silos.

One of the annual big jobs on Lillie Farmstead is completed, and that is filling the three silos. Two of these silos will hold, when full, 200 tons each and the smaller one for summer feeding will hold about 100 tons. This makes in the neighborhood of 500 tons of silage and it is quite a job to fill them all. It costs a lot of money, at any rate. This year I purchased a new ensilage cutter of my own, having power to run it, so that the real expense of filling the silos is much less this year than formerly, because I did not have to pay for the ensilage cutter and power. We had splendid weather for this work, and are very thankful for it. A few days the weather was very hot and it made the men sweat and the horses, too, especially those that were drawing the corn harvester. But the land was in fine condition, quite a contrast to last year, and two years ago. Then we were in the mud, and the latter portion of the corn had to be cut by hand as we couldn't get the corn binder to work. This year nothing of this sort occurred. The binders worked perfectly and the ground was in splendid condition. We had a heavy shower on Friday night but we had the corn all cut and finished up Saturday noon. The ground was a little wet and sloppy Saturday to finish but we were so near through that we did not notice the little mud.

## Succotash Ensilage.

I have a fine illustration this year of succotash ensilage, that is, a leguminous crop mixed with the corn crop. As I

have stated before, a ten-acre field of lima beans made a tremendous growth of vines but did not fill well, neither did they pod very well, and even where they did they did not fill, and there was not enough beans in them to pay for hauling them to the canning factory and getting them threshed, consequently I put them all into the silo. I had two teams all the time and three teams a portion of the time hauling beans, and four or five teams hauling corn. We would back a load of beans up next to the ensilage cutter and fork them in on top of the corn. The ensilage cutter had capacity enough so it could take a good stream of corn, one bundle right after another without cutting the bands and also a good layer of beans on top of the corn. In this way we got a splendid mixture. The beans were distributed evenly through the corn. And with this ten acres of lima beans and about four acres of soy beans, I had a sufficient quantity of beans to mix in with the silage in all three silos. I am of the opinion that I have got a splendid lot of silage this year. The corn wasn't as heavy as it ought to have been; it was thick enough but it didn't grow tall enough, owing to the drought. If I hadn't had the beans this year to mix in with the corn I wouldn't have had anywhere near enough to fill the silos. As it is, we only lacked a little in one of the silos of getting all three of them full.

A new idea for the final covering of the silo has just made its appearance in the agricultural press, and that is to cover the silo after it is settled and well trampled down, with about a half an inch of common salt. As soon as I saw this I took to the idea at once. Joe Wing says that practically none of the corn was spoiled. It appealed to me so strongly that we have covered our two silos, which we are laying by, with salt. It took about a barrel and a half to cover the two silos. You have got to feed the cows salt anyway, and when you are opening up these silos you need not feed them any extra salt. If there is too much salt on top it can be laid back a little bit and fed later on.

## Fall Plowing.

Today, October 13, we have started the engine to do some fall plowing. The weather permitting, I propose to plow a good portion of the land which we calculate to put into crops next spring.

## SOME DISADVANTAGES OF FALL PLOWING.

The time for fall plowing is at hand but the farmer should not be in too great haste to plow up his fields. Often much more harm is done by fall plowing than there is good accomplished.

True, much good is always done in aerating the soil and in the killing off of many of the injurious insect pests, but in many instances the bad effects due to the washing of the plowed lands and the leaching of plant foods from light soils are much greater than are the good effects.

Hill-sides where the soil is light or washy should never be fall plowed, nor should other fields where the soil is of such a nature as to allow the plant foods to leach. On the flat lands where the soil is of a heavy clay or loam type and where there is no danger of washing, fall plowing will make the ground much lighter and much easier to till in the spring when the "rush" season of getting in the early crops is at hand. Here it is advisable.

On slopes and hill-sides, however, the soil may wash and much of the plant food in the surface soil will be lost. Not only this, but if the soil is of a sandy nature the effect will be just the reverse of lightening it and it will be in much poorer physical condition than if it had been left unplowed.

On lands of the lighter or washy types it is well to put in cover crops to hold the soil in place and to retain the plant foods which are already there.

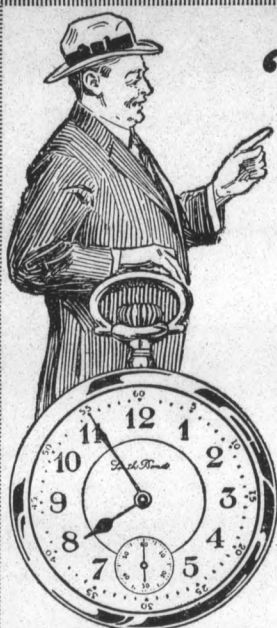
Indiana.

J. R. CAVANAGH.

## WANTED.

At once, a few men who are hustlers, for soliciting. No experience necessary. The work is dignified, healthful and instructive. In writing give references and also state whether you have a horse and buggy of your own. Address Box J. F., care Michigan Farmer, Detroit, Mich.

The ranges are not carrying many wethers or yearlings, and many ewes are being shipped to market with the approach of the end of the shipping season of 1913. Farmers are anxious to secure feeding yearlings, but the offerings on the Chicago market have been far too small in numbers to go around.



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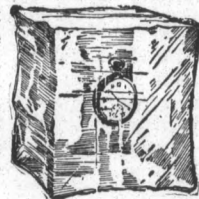
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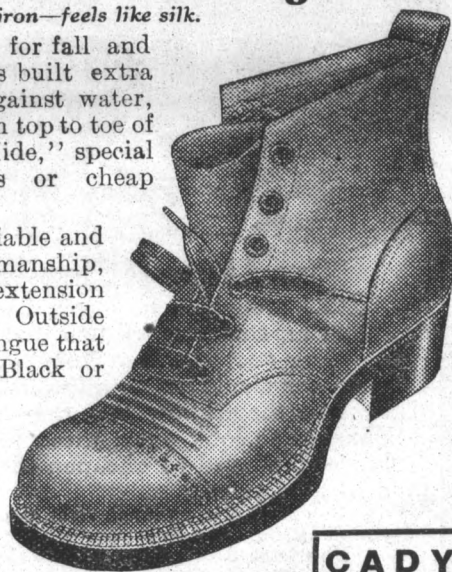
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## Practical Science.

### THE CONSERVATION OF PHOSPHORIC ACID AND POTASH.

BY FLOYD W. ROBISON.

The liquid excrement of animals contains about two-thirds of the total nitrogen in the food consumed. As a matter of fact, in the mature animal neither gaining nor losing weight the nitrogen found in the urine is an exact or almost exact, complement of the nitrogen consumed in the feed. The one-third nitrogen not found in the liquid excrement may be recovered from the solid excrement and consists largely of the undigested residues of food, together with certain products which are the results of the digestion in the body of the food consumed. Phosphoric Acid and Nitrogen Exist Together in Plants.

Most of the phosphorus which is found in foodstuffs exists in a more or less fixed combination with the nitrogen. The essentially vital portions of the feedstuffs is characterized by its phosphorus content. The cellular structure consists in an essential quantity of phosphorus and while the protein or albumin is distinguished or characterized by the nitrogen which it contains, the nucleo-proteids, or the proteids intimately associated with the life reproduction, contain as an essential constituent phosphorus as well. In food products, therefore, nitrogen, phosphorus and sometimes sulphur are very closely related in the same compound. We might therefore expect that the liquid excrement of animals, which contains the highest content of nitrogen, would also contain the largest content of phosphorus. This, however, is not so. For we find the solid excrement of animals containing larger percentages of phosphorus. Hence it must readily be seen that to carefully conserve the ingested nitrogen and phosphorus, it is essential that both the liquid excrement and the solid excrement be carefully conserved. Again, during growth of a crop the administrative agents of the soil which are most available, are taken up by that crop, consequently an analysis of the crop at maturity of the plant would represent those soil constituents which were most available in that soil. Consequently, we see that each crop removes from the soil not only so much nitrogen, phosphoric acid and potash, but the most available and expensive plant food constituents in that soil because they are so readily available.

#### The Effect of Passing Through the Animal.

When the food is consumed by the animal, it passes through a certain set of changes which in part restore it to nearly its original condition of availability. That portion of the food which is digested is returned to the soil in almost as satisfactory a condition as it was in when removed from the soil by the plant, but the undigested portions, however, are not nearly so available as they were at the time they were extracted from the soil by the plant. The modifications which they have undergone in passing through the alimentary canal of the animal have a considerable effect in promoting the decomposition which they must undergo before they can again be taken up by the plants. If to this valuable treatment within the animal system is appended the right kind of subsequent treatment in the manure pile, then the most is made of this undigested portion without waste.

#### Phosphoric Acid Removed by Crops.

According to some of our best authorities the various farm crops remove from the soil on the average something like the following amount of phosphoric acid per 1,000 lbs.:

Corn	7.1 lbs.
Wheat	5.5 lbs.
Oats	7.8 lbs.
Barley	7.9 lbs.
Wheat bran	26.9 lbs.
Linseed meal	16.6 lbs.
Cottonseed meal	30.4 lbs.
Corn stover	3.8 lbs.
Timothy hay	3.3 lbs.
clover	5.5 lbs.
Alfalfa	6.1 lbs.
Oat straw	3.0 lbs.
Corn silage	1.1 lbs.
Mangels	0.9 lbs.

If now these various crops are sold off of the farm the farmer must remember that for every 1,000 pounds of corn which he disposes of he is selling 7.1 pounds of phosphoric acid and phosphoric acid at the same time which, as we have stated before, was in a very readily available

form. Therefore, to keep his soil up to its optimum efficiency he should restore to that soil at least 7.1 pounds of phosphoric acid for every 1,000 pounds of corn removed. Now there are various ways of accomplishing this. In the first place the farmer may in selling his corn turn about and buy wheat bran. In so doing, for every 1,000 pounds of wheat bran that he buys he is purchasing, as we see from the table given above, 26.9 pounds of phosphoric acid. In order therefore, to supply the amount of phosphoric acid removed in the 1,000 pounds of corn it would be necessary to feed upon the farm something like 200 pounds of wheat bran. And similarly in the case of cottonseed meal which likewise is high in its content of phosphoric acid. If feeding is not practiced then the only other alternative is for the farmer to either purchase natural manure, which is rarely possible or else to secure commercial fertilizers containing at least as much phosphoric acid as he has removed from his soil by the crops sold.

#### Potash Removed by Crops.

In a similar way regarding potash. While the urine contains most of the nitrogen and the feces, or solid excrement, most of the phosphoric acid, we find again that the liquid excrement contains the greatest quantity of potash. This, of course, is because of the exceedingly ready solubility of the potash salts. Growing crops remove potash in approximately the following amounts per 1,000 pounds:

Corn	5.7 lbs.
Wheat	8.7 lbs.
Oats	4.8 lbs.
Barley	4.8 lbs.
Wheat bran	15.2 lbs.
Linseed meal	13.7 lbs.
Cottonseed meal	15.8 lbs.
Corn stover	10.9 lbs.
Timothy hay	14.2 lbs.
Clover	18.7 lbs.
Alfalfa	17.9 lbs.
Oat straw	17.7 lbs.
Corn silage	3.7 lbs.
Mangels	3.8 lbs.

#### To Build up the Soil.

Now a return to the field in barnyard manure of the equivalent of the feed removed adds nothing essentially to the soil but does encourage the production within the soil of more available plant food material. If the soil is deficient in productive power it can only be built up by the use of either commercial fertilizers in addition to natural manures, or by the purchase of barnyard manure, unless as is done on many farms, a great deal of feed is brought onto the farm and fed to stock upon the farm, thereby of course actually increasing the nutrients returned to the field.

#### LABORATORY REPORT.

##### Feed Definitions.

The Association of Feed Control officials of the United States have formulated definitions for some of the more common feed stuffs that come as by-products in the manufacture of other articles. Some of these are:

Corn germ meal is a product in the manufacture of starch, glucose and other corn products and is the germ layer from which a part of the corn oil has been extracted. Linseed meal is the ground residue after extraction of part of the oil from ground flaxseed.

Meat scrap and meat meal are the ground residue from animal tissue exclusive of hoof and bone. If they contain any considerable amount of bone they must be designated meat and bone scrap, or bone meal. If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Oat groats are the kernels of the oat berry with the hulls removed.

Oat hulls are the outer shaffy coverings of the oat grain.

Red dog is a low grade of wheat flour containing the finer particles of bran.

Oat shorts are the covering of the oat grain lying immediately inside the hull, being a fuzzy material carrying with it considerable portion of the fine floury part of the groat obtained in the milling of rolled oats.

Prime cottonseed meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellow, not brown or reddish, free from excess of lime, and must contain at least 38.6 per cent protein.



## Live Stock.

### CARE AND MANAGEMENT OF PREGNANT ANIMALS.

Successful breeding operations depend in a large measure upon the care and management of the females during that period in which they are carrying their young. In addition to the general rules of sanitation and housing of pregnant animals there are particular precautions that should be observed so that safety and success may be assured, and as the time of birth approaches they should be more rigidly adhered to. The nearer the breeding females can be kept to their natural condition the more favorable it will be, as too much attention and pampering is likely to do harm.

Mares should be worked moderately, but not subjected to severe, fatiguing work, especially as pregnancy advances, as the most difficult cases of parturition occur under this circumstance. It is essentially necessary that they should be exercised regularly; slow work may be given up to the seventh, eighth or ninth month, when more care must be observed, but even the exercise should be given moderately up to the time of parturition. Under no circumstances should a mare carrying a foal be compelled to pull heavy loads or allowed to run, jump or travel rapidly over rough, broken ground. It is always better to exercise mares in harness rather than in saddle, as they can be held in better control. If it is found inconvenient to exercise the mare by driving, allow her liberty in a good yard or paddock, where she may go out and in as she pleases. In general it may be said that all animals bearing young should have plenty of outdoor exercise.

The feeding of pregnant animals is a subject for careful consideration, especially in such cases where a certain amount of labor has to be performed, or where an animal is producing a heavy flow of milk. There is an increase of appetite and a tendency to fatten during the second half of pregnancy. This should be guarded against, as it is liable to become troublesome by either interfering with the growth of the foetus, causing abortion, difficult parturition or some other result, such as parturient fever, etc. The food should be of the best quality, and should be easily digestible, not of a kind that will cause constipation. All fermentable, damp, musty or mouldy food should be avoided, as it will likely give rise to indigestion or colic, thus endangering the life of the foetus through possible abortion. Small quantities of common salt added to the food from time to time assists digestion and assimilation. Salt assists in the passage of the blood through the membranes. Various phosphates and lime salts should be supplied if the food is deficient in these mineral substances. Prepared bone dust contains the necessary salts for the development of bone and tissue and is used on many breeding farms with excellent results. Dairy cows that are being fed heavy rations of rich concentrates should have plenty of these phosphates and salts mixed with their grain foods.

Frozen foods, such as roots, herbage and silage should never be fed to pregnant animals; neither should cold drinking water, as all are likely to give rise to an inflammation of the womb, abortion or some other unfortunate circumstance. A brood mare about three or four weeks before foaling should be kept in a comfortable, roomy stall, in sight of her stablemates. It is important that the doors should be plenty wide, so that when passing in and out there will be no possibility of the mare injuring herself. For cows the standing platform should have a very slight incline, just enough for the drainage of urine, as standing on a very inclined platform might throw the weight of the foetus backward so as to cause abortion. Cleanliness here should always be attended to, and under no consideration must cows in this condition be crowded, but instead should be given comfortable open stalls. As soon as they show signs of approaching parturition they should be removed from the rest of the herd and not allowed with them as long as any vaginal discharge remains. At the same time proper disinfection and cleanliness should be observed. The animal should also be properly groomed, as it will have a beneficial effect, not only

in the mother, but in the foetus. Men in charge of cows at this time must treat them kindly and handle them with judgment, as rough treatment is likely to produce evil results. In giving medicine and stimulating remedies care must be taken, as the life of the foetus may become imperiled. This applies especially in the cases where the animals are allowed to become constipated, and it is necessary to give them a strong purgative; careful feeding will be all that is necessary to keep the bowels regulated, and this is best accomplished by feeding plenty of succulent and laxative food and providing means for the animal to exercise in the open air. Outdoor air and exercise exert a stimulating and invigorating effect upon pregnant animals and is far better than allowing them to become off-feed and constipated and depending on epsom salts, raw linseed oil and the like to correct the mistakes of improper feeding and management.

New York. W. MILTON KELLY.

### LIVE STOCK NEWS.

This is the time for all farmers who want to feed range lambs the coming winter season to secure their quotas, and those who wait too long are likely to get left or else to be obliged to pay higher prices. After October is over slim supplies of range feeders may be expected but through the month liberal supplies are counted upon. Mutton and lamb are becoming greater favorites with the meat-eating public, as the price of beef is soaring so high as to cut down the demand seriously nearly everywhere, and the lamb fattening industry promises well. There is also a good field for farmers who engage in breeding ewes, and the demand for good breeders is gaining in volume, numerous shipments being made to Michigan and other states near Chicago. Many farmers are finding that a small flock of sheep and lambs is a handy thing to own.

Several of the old-time sheep feeders in Michigan are going to engage rather extensively in feeding flocks of range lambs during the approaching winter season, regarding the outlook as highly encouraging. E. G. Head, of Michigan, the winner of several grand championships in the International Live Stock Exposition in Chicago for car lot lamb classes, is going to feed extensively and bought in a recent day 1,732 head of fleshy 64-lb. Montana range lambs in the Chicago market, paying \$6.65 per 100 lbs.

R. B. Wilson, a prominent all-around stockman of Washington, who marketed a flock of his lambs in Chicago recently, says the ranches of that state are being cut up into small farms pretty generally. He adds: "But I am going to stay in the sheep-raising business, for I like it better than farming. Most sheep around Ellensburg are shipped to Seattle, but Chicago gets most of the lambs, as demand in the west is not large enough to care for all the lambs raised at satisfactory prices. Herders are paid as high as \$50 a month. The country is well irrigated, and good farming land is worth from \$150 to \$200 an acre. Fruit is plentiful, apples being grown for commercial purposes. Baled clover and alfalfa sells for \$12 a ton and timothy for \$15."

The Chicago & Northwestern Railroad Company is making strenuous efforts to revive cattle and sheep feeding operations along its lines running west of the Missouri river. In order to aid in bringing this about feeding-in-transit rates will be established, and this is expected to result in about 150,000 Montana sheep and lambs being winter fed in the Black Hills region of western South Dakota. The railroad company proposes to furnish grain and hay raisers representing the new settlers of South Dakota a chance for marketing their crops in condensed form at a minimum cost. This is especially true of sheep. After being fattened on hay and grain the flocks will be run to feeding stations near Chicago by the way of Pierre, South Dakota, and furnished a good finish on corn, facilities for this being supplied by the railroad.

Dr. Kurt Schern of the imperial board of health of the German empire has come to this country to make a first-hand study of the best way to fight hog cholera, and he is now in Ames, Iowa, a daily worker in the new hog cholera serum laboratory, where he is making an exhaustive study of cholera and other diseases which have caused such enormous losses for several years to Iowa owners of swine. In a recent interview he said: "We have much hog cholera in Germany, and when there is an outbreak the veterinary authorities quickly establish a strict quarantine. All traffic in the infected farm is watched; not a hog is sold, and in this way the German authorities check the spread of the disease from one farming community to another. In the United States cholera infection seems to be carried promiscuously, and this results in vast territories being heavy losers by the disease. In Germany we are still investigating and experimenting with serum, just as the American veterinarians are doing. However, we do not believe, as many Americans seem to think, that a perfect method of making serum has yet been found, and hence we depend more on the quarantine control than on the use of serum."



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WYKES & Co., Mich. Sales Agts., 401 Godfrey Bldg., Grand Rapids, Michigan.

## Good Prices Received by Breeders.

The sixth annual sale of pure-bred registered Holstein-Friesian cattle at the state fair grounds at Detroit by the Michigan Consignment Association, was a decided success. This sale enjoyed the largest attendance of Holstein breeders of any of the six preceding gatherings and the prices received exceeded by all odds those paid at the former sales. One hundred and twenty-six animals sold for \$29,490, making an average of \$234 per head. The lowest figure paid was \$55 for a week-old calf and the highest was \$760 for Burtondale Jane Segis, a splendid heifer calf of nearly eight months, raised by W. E. Fellows and bought by D. H. Hoover. The high quality of the offerings contributed in no small degree to the success of the day.

Michigan is to be congratulated upon the fact that a very large per cent of the cattle will remain within her borders to start new herds and strengthen old ones. And because of the anxiety of our dairymen to change from common to pure-bred stock there is certain to be a larger future for these annual sales.

No small part of the sale's success was due to Cols. Haeger's and Kelly's work with the hammer, and to the efficient management under the direction of H. W. Norton, Jr.

The following list gives the names of all the consignors, animals sold, the approximate ages, the names of buyers and the prices received.

Consigned by J. W. Worthington, Howell, Mich.

Females—Becky Metta De Kol (198134) to A. R. Eastman, Howell, \$125; Countess Lizzie (205348) to A. R. Eastman, \$140; calf, 9 mos., to Jones & Lutz, Oak Grove, Mich., \$200; calf, 1 yr. to Jas. Couzens, Pontiac, Mich., \$210; calf, 9 mos., to J. H. Austin, Oak Grove, Mich., \$160; calf, 3 mos., to A. R. Eastman, \$195; calf, 7 mos., to A. R. Eastman, \$180; calf, 4 mos., to H. F. Auten, Little Rock, Ark., \$205; Idlewild Fearless Mercedes (212194) to F. W. Savage, Belleville, Mich., \$120; Madje Hengerveld Pietertje (182124) 2 yrs., to Lakewood Farms, Battle Creek, Mich., \$240; Roseoline Colantha 2nd (181-673) 8 yrs. and 2 mos., to J. E. Mitchell, Pontiac, Mich., \$205; calf, to A. R. Eastman, \$120; Windmere Juno (174206) 2 yrs. 1 mo., to J. H. Austin, \$265.

Consigned by J. Fred Smith, Byron, Mich.

Females—Elzevere Canary Brook De Kol 11 mos., to M. N. Bornber, Howell, Mich., \$125; Elzevere Pearlina (185853) 2 yrs. 1 mo., to Beach & Wirt, Battle Creek, Mich., \$320; Dell Myrtle De Kol (137902) 5 yrs. 5 mos., to E. Norton, Diamonddale, Mich., \$240; calf, to R. Baker, Pittsford, Mich., \$95; De Kol Hat Barnum Mechthilde (73885) 12 yrs. 2 mos., to C. G. Laura, Romulus, Mich., \$165; Gladys Queen of Evergreen Lawn (151071) 3 yrs. 10 mos., to E. Norton, \$210; Korndyke Barnum De Kol 2 mos., to F. W. Savage, \$180; Vashti Lady (189199) 2 yrs., to Lakewood Farms, \$250; Winnie Jewel of Evergreen Lawn 201013) 1 yr. 6 mos., to Jas. Couzens, \$130.

Male—Elzevere King of Butter Kings (71595) 3 yrs. 7 mos., to F. W. Savage, \$375.

Consigned by H. W. Norton & Son, Howell, Mich.

Females—Becky Netherland Queen (159394) 2 yrs. 11 mos., to Dudley E. Waters, Grand Rapids, Mich., \$350; De Kol Bleske Beryl Wayne (172330) 2 yrs. 7 mos., to J. R. Hicks, St. Johns, Mich., \$235; heifer, 1 yr., to Floyd Jones, Oak Grove, Mich., \$125; calf, 7 mos., to F. W. Savage, \$175; Hengerveld Mercena De Kol (121315) 5 yrs. 1 mo., to Beach & Wirt, \$400; Jumbo Queen Second (134037) 3 yrs. 10 mos., to W. I. Osborne, Rockyfeller, Ill., \$320; Mapleside Countess Calamity (87656) 7 yrs. 11 mos., to Dudley Waters, \$390.

Male—Calf, 10 mos., to R. Baker, \$85.

Consigned by W. E. Fellows, Flint, Mich.

Females—Burtondale Buckeye Segis (197045) 1 yr. 1 mo., to Dudley E. Waters, \$200; Burtondale Dutchess Hengerveld (211626) 7 mos., to Dudley E. Waters, \$280; Burtondale Edna Pietertje (211-631) 6 mos., to Lakewood Farms, \$230; Burtondale Grindelia (211630) 7 mos., to F. H. Mapes, Gains, Mich., \$150; Burtondale Jane Segis (211624) 8 mos., to D. H. Hoover, Temperance, Mich., \$760; Burtondale Johanna Rue (211622) 9 mos., to Dudley E. Waters, \$310; Burtondale Juno Belle (211634) 3 mos., to John M. Tobin, Allegan, Mich., \$205; Burtondale Margaret Netherland (211621) 9 mos., to Jas. Couzens, \$295; Burtondale Pauline Segis (211-632) 6 mos., to John M. Tobin, \$225; Burtondale Prudence Segis (211623) 8 mos., to Mich. Reformatory, Ionia, \$225; Burtondale Segis Bellwood (211627) 8 mos., to Dudley E. Waters, \$280; Burtondale Segis Echo (211629) 8 mos., to Lakewood Farms, \$315; Burtondale Segis Queen (211625) 8 mos., to Dudley E. Waters, \$310; Burtondale Walker Segis (211628) 7 mos., to Dudley E. Waters, \$315; Burtondale Wayne De Kol (211633) 2 yrs. 4 mos., to J. M. Tobin, \$205; calf, 7 mos., to Jas. Couzens, \$300; Kate Korndyke Hamilton (197517) 1 yr. 5 mos., to Jas. Couzens, \$205.

Consigned by Reed and F. P. Knowles, Howell, Mich.

Females—Bell Wayne Canary (99980) 7 yrs. 7 mos., to E. J. Everett, Rochester, Mich., \$220; Butterfly Maid (18506) to Dudley E. Waters, \$220; Colantha Count-

ess Lillest (166093) 1 yr. 9 mos., to W. I. Osborne, \$325; Colantha Countess Viola, (166094) 2 yrs. 1 mo., to Albert L. Smith, Chilson, Mich., \$345; Countess Trildiamond (14568) 3 yrs. 6 mos., to Beach & Wirt, \$245; Hengerveld Johanna Perfection (175571) 1 yr. 8 mos., to Lloyd Lake, North Branch, Mich., \$155; Mermaid Poppzar (163002) 2 yrs. 2 mos., to Robin Carr, Fowlerville, Mich., \$340; Segis Pontiac Boon, 2 mos., to Jones & Lutz, \$140.

Consigned by J. E. Burroughs, Flint, Mich.

Females—Atlas Bessie Pauline (194721) 1 yr. 1 mo., to Floyd Jones, \$140; Corinne Pauline De Kol (61332) 12 yrs., to W. K. Gore, Centerville, \$85; Flint Atlas Lassie (184063) 1 yr. 6 mos., to Jas. Couzens, \$200; Flint Atlas Nudine (186347) 1 yr. 4 mos., to Michigan Reformatory, Ionia, Mich., \$170; Flint De Kol Atlas Tula (157-184) 2 yrs. 3 mos., to Chas. E. Caulkins, West Unity, Ohio, \$250; Hengerveld Pauline De Kol (192304) 1 yr. 10 mos., to John A. Rinke, Warren, Mich., \$330; Johan Cynthia De Kol (177633) 1 yr. 7 mos., to Jas. Couzens, \$350; Johan Hengerveld Belle (163319) 1 yr. 10 mos., to Jas. Couzens, \$320; Johanna Hopes Zubrod (167-288) 1 yr. 11 mos., to Jas. Couzens, \$280; Johan Jewel De Kol (177632) 1 yr. 7 mos., to J. L. Wilson, Grand Rapids, Mich., \$385; Johan Kuperna De Kol (197295) 9 mos., to Jas. Couzens, \$230; Johan May Durkje 2d. (192813) 10 mos., to J. Fred Smith, \$150; Johan Nellie Wayne (167825) 1 yr. 10 mos., to Jas. Couzens, \$365; Johan Netherland Belle (163202) 1 yr. 11 mos., to Jas. Couzens, \$325; Johan Oosterbaan De Kol (167290) 1 yr. 11 mos., to Jas. Couzens, \$340; Johan Pietertje (167-289) 1 yr. 10 mos., to Jas. Couzens, \$340; Johan Vale Elzevere (204573) 9 mos., to Jas. Couzens, \$190; Johan Yette De Kol (167291) 1 yr. 1 mo., to J. L. Wilson, \$305; Salina Brightest De Kol (73494) 11 yrs. 11 mos., to John A. Rinke, \$150.

Males—Johan Judge Hengerveld (104-676) 1 yr. 7 mos., to M. W. Willard, Gd. Rapids, Mich., \$500; Segis Beets Inka De Kol (116128) 2 mos., to Dewey C. Pierson, Hadley, Mich., \$115.

Consigned by Dewey C. Pierson, Hadley, Mich.

Females—Athenia Snow De Kol (116339) 4 yrs. 9 mos., to W. H. Parshall, Howell, Mich., \$330; Dutchess Mercedes De Kol (141262) 4 yrs., to Wm. B. Hatch, Ypsilanti, Mich., \$250; Renno Pauline Burke (150613) 3 yrs. 9 mos., to Elmer Ross, Imlay City, Mich., \$145; Shadyside Canary Segis (185702) 1 yr. 8 mos., to Jones & Lutz, \$190.

Consigned by J. H. Johnson, Farmington, Mich.

Females—Azelea Lilith Pauline De Kol (179486) 2 yrs. 2 mos., to Geo. E. Crabb, West Toledo, Ohio, \$300; calf to F. H. Mayes, Gains, Mich., \$115; Beauty Pietertje Pontiac Korndyke (170810) 2 yrs. 11 mos., to W. I. Osborne, \$265; Canary Pontiac (188273) 2 yrs., to Albert L. Smith, \$225; Edgeriver Hattie De Kol (172858) 6 mos., to W. K. Gore, Centerville, Mich., \$210; Edgeriver Lizzie (172860) 2 yrs. 6 mos., to Fred M. Warner, Farmington, Mich., \$210; calf, 5 mos., to J. E. Mitchell, \$155; Nellie Kastra Pietertje (194943) 2 yrs. 6 mos., to W. I. Osborne, \$200; Nellie Kastra Pontiac (179487) 2 yrs. 4 mos., to C. G. Laura, \$275; calf, one week, to Thurber Cornell, Howell, Mich., \$95; Pauline Orine (68696) 10 yrs. 7 mos., to Geo. Hake, \$125; Pietertje Mercedes Colantha (188274) 2 yrs., to Albert L. Smith, \$275; Rosa Bonheur Pontiac (194544) 1 yr. 8 mos., to Albert L. Smith, \$265.

Consigned by D. H. Hoover, Temperance, Mich.

Females—Clothilde Sarcastic (78101) 8 yrs. 4 mos., to Frank I. Jenkins, Lansing, Mich., \$285; Daisy Pontiac De Kol (130-824) 3 yrs. 10 mos., to W. I. Osborne, \$275; Elzevere Bonheur De Kol 3 yrs. 5 mos., to Lakewood Farms, \$205; Lilly Clothilde 2d. (146265) 3 yrs. 1 mo., to Geo. E. Crabb, \$275; Lady Hengerveld Rosewood (178938) 1 yr. 10 mos., to Lakewood Farms, \$200; Pontiac Camilla (109406) 6 yrs. 7 mos., to J. R. Hicks, \$310; Pontiac Camilla 2d. (155618) 3 yrs. 2 mos., to Lakewood Farms, \$260; Segis Calamity Rosewood (196525) 1 yr. 5 mos., to W. I. Osborne, \$285; Serida Genesta De Kol (78979) to W. E. Fellows, Flint, Mich., \$230; Vale Pontiac Camilla (188464) 2 yrs. 4 mos., John A. Rinke, \$105.

Male—Rosewood King Calamity, 8 mos., to J. E. Mitchell, \$90.

Consigned by E. M. Starkweather, Northville, Mich.

Females—Aggie Jane 2d. (166399) 2 yrs. 10 mos., to J. E. Mitchell, \$215; Anza Korndyke De Kol (212153) 2 yrs. 7 mos., to Fred M. Warner, \$190; Anza Pietertje De Kol (212366) 2 mos., to Floyd Smith, Fowlerville, Mich., \$115; Bell Segis Payne Hengerveld, 2 mos., to E. H. Eckley, Romeo, Mich., \$110; Bell Ykema Korndyke De Kol (212802) 1 yr. 11 mos., to Jas. Couzens, \$300; Bessie De Kol Clotho 2d., 2 yrs. 5 mos., to Dudley E. Waters, \$300; Blanche Ykema De Kol (212154) 2 yrs. 6 mos., to E. A. Hardy, Rochester, Mich., \$215; Daisy Anza De Kol 2d. (212-264) 3 yrs. 7 mos., to J. R. Hicks, \$240; Daisy Anza Tirania Posch De Kol (212-265) 1 yr. 10 mos., to W. C. Herman & Son, Toledo, Ohio, \$280; Independence Pontiac Maid (212155) 2 yrs. 9 mos., to Chas. E. Caulkins, \$265; Johanna Calamity Colantha De Kol (192629) 1 yr. 9 mos., to W. K. Gore, \$160; Lydia Korndyke De Kol 3 rd. (212138) 1 yr. 7 mos., to H. F. Auten, \$230; Lady Jane Posch, 2 yrs. 4 mos., to Albert E. Jenkins, Mason, Mich., \$215; Topsy Korndyke Pietertje 2d. (212-152) 1 yr. 6 mos., to Nelson Buzzard, Fenton, Mich., \$200.

Males—Beauty Pietertje De Kol Pontiac (116378) 2 mos., to Walker Sons, Walkerville, Ont., \$200; Segis Fayne Pontiac Hengerveld 2d. 2 mos., to Kalamazoo State Hospital, \$55.



# BEST GRAIN TO FEED WITH SILAGE, SOME HAY, CORN STOVER AND STRAW.

What is the most economical grain to buy for milch cows this year, to feed in connection with silage, hay and corn-stalks? We will probably feed them the hay and stalks on alternate days, one feed a day. The hay is mostly clover and alfalfa.

Wayne Co.

H. J. L.

With plenty of alfalfa hay and good corn silage made from the whole corn, so far as food nutrients are concerned, one can compound practically a balanced ration, but while the food nutrients are practically balanced it is not a desirable ration in another way. It contains too much bulk for the concentrates. A ration ought to be balanced in two ways, first as to the food nutrients, that is, the carbohydrates and protein, and second, as regards the proportion of bulk and concentrates. A cow won't do her best on an entirely bulky ration, neither will she do her best on an entirely concentrated food. They should both be fed. A good rule is that two-thirds of the food nutrients should be found in the roughage and one-third of the food nutrients in the concentrates. Now as H. J. L. has only a limited amount of hay, and not all of it is alfalfa, his ration would not only be too bulky but it would not balance so far as the food nutrients are concerned. In other words, it will be deficient in protein, and this must guide him in the purchase of a grain to properly balance this ration. What he wants is a concentrate that is richer in protein than clover hay is, because it must balance up the lack of protein in the corn silage. You can't balance this ration with corn meal or ground oats or ground barley because they are not rich enough in protein, but you can balance it with cottonseed meal, gluten feed, dried brewers' grains, etc. Now these are the kind of foods that you want to buy, because they are rich in protein, the very element your ration is deficient in. Of the three kinds of feeding stuffs named, cottonseed meal, gluten feed, and brewers' grains, I would simply take the analysis of these three different kinds of feeding stuffs, get the price that I would have to pay for them, and then I would figure on the cost of a pound of digestible protein, and I would purchase that feeding stuff which would give me a pound of digestible protein for the least money. There is another food that is coming into a little prominence in feeding dairy cows, and that is cull beans. You can probably make a third of your grain ration cull beans, which you can get at a reasonable price. They can be bought at the present time for \$14 or \$15 per ton and they contain over 20 per cent of digestible protein. If you will grind the cull beans and mix 100 lbs. of these with 200 lbs. of cottonseed meal, or 200 lbs. of gluten feed, or 200 lbs. of dried brewers' grains, it will cheapen your ration. The cows probably wouldn't eat it well at first but perhaps you may succeed in getting them to eat the bean meal so that you could mix it half-and-half which would cheapen the ration still farther. If you can it will pay to do it, because half of the grain ration being cull beans will work no detriment to the cows. Some people feed cull beans by cooking them or boiling them and then feeding them after they are boiled. In this way the cows soon learn to eat them and relish them very much.

## TEACHING THE HEIFER.

Some people have a serious time in breaking a heifer to milk for the first time, and yet every practical dairyman knows that if the heifers have been handled as they ought to be, they are really broken before they freshen. A heifer that is kept in the stall that is to be her home after she freshens, for at least two months beforehand, gets used to all of her surroundings, is made a little of by the stable man every time she is put in, and has her udder manipulated just a little every day, a little at first, and then more and more, when this heifer freshens she is practically broken to be milked. On the other hand, if she is kept in the pasture away from the cows and barn until she freshens and then put into the barn, she is naturally difficult to break. She resents being milked because she is not used to being handled and is afraid of the man. In this way kickers are developed. By educating the heifer before she freshens it is rare that she will result the manipulation of her udder and it is even less rare that you have a picker.



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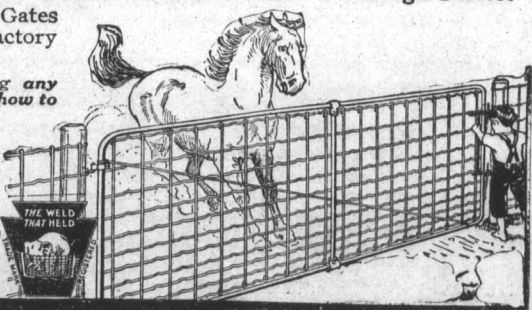
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DETROIT, OCT 25, 1913.

### CURRENT COMMENT.

**The Farm Water Supply.** Just the other day a man who is in the business of putting down deep wells was heard to remark that unless there is an abundance of rain before the ground freezes up, there would be a demand for his services all through the winter. Put into other words, his remark would mean that a great many farmers are depending on shallow or surface wells from which an adequate supply of water depends upon a liberal rainfall.

From the standpoint of health, if not that of profit, it would be a good thing for these prospective employers of the well man if we had a dry autumn. Investigations made in many places show that shallow wells are an unsafe source of farm water supply. Investigations made by the Bureau of Plant Industry in co-operation with the Minnesota Board of Health showed that of 79 typical farm wells in Minnesota, only 20 were good, while 59 were more or less polluted. In a similar examination in Indiana, the water from only 159 of 411 shallow wells was good, while that from 209 was bad and from 43 of doubtful quality. In 116 out of 177 deep wells examined, the water was of excellent quality.

These comparisons speak for themselves and are the best kind of an argument for the giving of greater care and attention to the farm water supply.

**Our Beef Industry.** A question now holding the interest of many farmers in Michigan and throughout the country is whether or not the placing of cattle and beef upon the free list will have the effect of materially cheapening the price of fat cattle in this country. This, of course, is a question to which only time will reveal the answer, but the present trend of the cattle market is an excellent indication of what the cattle feeders of the country think about it. It will also be noted that whenever and wherever an opinion is expressed by anyone who is in the cattle trade, a prediction of higher rather than lower prices for cattle and cattle products is expressed. This, too, is contrary to the usual attitude of the dealer in any commodity, in whom natural caution is generally reflected by the expression of "bearish" views on the future trend of the market.

In the last analysis the future trend of prices must depend upon the old law of supply and demand. In this connection some recently published statistics compiled by the Department of Commerce relating to exports and imports of beef cattle are of interest. These figures show that for the eight months ending with August, 1913, the exports of beef cattle from this country aggregated only about \$1,000,000, as compared with \$44,000,000 for the same months in 1904. On the other hand, imports of cattle increased from 9,357 in the eight months ending with August, 1904, to 340,105 in the same period of 1913, and their aggregate value from \$181,145 during the eight months given for 1904 to \$5,031,842 for the same period in 1913. In addition to this increase in the imports of beef cattle, there has

been a marked increase in the imports of beef, which for the full fiscal year of 1904 aggregated but \$14,922 as compared with the value of imports of beef aggregating \$89,204 for the single month of August, 1913, and a total value of imports for 1913 of \$303,934.

Of course, the imports may be expected to increase greatly with the removal of the tariff on beef, but it is quite certain that prices will not fall below the world price level. Thus the whole question resolves itself into the simple proposition as to whether there is a world surplus of beef cattle or not. It is apparently the judgment of those who should be best informed on this point that there is not, and while it is likely that the removal of the tariff on cattle and beef may check a further advance in the price of the domestic product, it seems unlikely that there will be any decrease in market values which will prove a menace to the cattle feeding industry of the United States. At least it is the consensus of opinion of those who have most carefully studied the situation, that feeding cattle of the right kind, even at the present high price of feeders, will afford a safe and profitable market to Michigan and American farmers for their home-grown feeds.

**The Extent of Rural Indebtedness.** Reference has been made in a previous comment to an investigation made

by the Department of Agriculture in the autumn of 1912, relative to rural credit conditions in the United States. In an article published in the Bulletin of Social and Economic Intelligence, published by the International Institute of Agriculture, further deductions were made from the statistics gathered in this investigation, showing that the total indebtedness carried by the farmers of the United States is not less than \$5,000,000,000. Of this amount 55.9 per cent is in real estate mortgages, 14 per cent in chattel mortgages, 7.8 per cent in loans on cotton as collateral, and the remaining percentage represented by loans on other crops and by various forms of unsecured credit. In the matter of unsecured credit, the correspondents furnishing the data from which these figures were compiled were of the opinion that 77 per cent of farm owners and 46 per cent of farm tenants are in a position to give good security or an endorsed note for loans. It was the opinion of the correspondents who reported on this condition, however, that 36 per cent of owners and 37 per cent of tenants were in a position to offer security but were unable to obtain loans for short periods, while 40 per cent of owners and 44 per cent of tenants were unable to obtain long term credit on what the correspondents considered ample security.

With regard to interest rates, there was a great variation in different sections of the country. From Wisconsin there were reports that farmers were able to borrow money at four to five per cent, and it was found that the savings banks in Massachusetts loaned money to farmers at from five to six per cent. In the mountain states interest rates were much higher, running about 9.9 per cent, while in some of the southern states 10 per cent was a common rate, and in some localities as much as one per cent per month was paid. These figures are given to illustrate the point that co-operative credit is needed badly by a very considerable percentage of the farmers of the United States.

Had this investigation been conducted during the stringency of 1907, for which it is generally conceded there was no business cause, or even during the past few months when money has been closely held by banks, enabling private capitalists to advance the interest rates in many localities, this would have been made still more apparent. The great obstacle, however, to the establishing of rural credit organizations in the United States, is the fact that such a large percentage of our farmers are forehanded and either do not need to borrow money for the satisfactory conduct of their business or have such excellent credit that they are able to make reasonably satisfactory loans under present conditions. These men would very generally lack the inclination to join a credit society in which they would become jointly responsible for the loans of other members who did not enjoy such excellent personal credit.

There is, however, undoubtedly room for such credit organizations in every state and practically every county in the United States, and there is no doubt that by this means the comparatively large percentage of farmers who are able to give good security, as shown by the figures quoted above, yet who are unable to get adequate accommodations at present,

would be benefited thereby. And if experience proves that by this means they are able to get better terms or cheaper interest rates in the making of loans, those who do not at present so badly need their aid would be attracted to and become affiliated with these organizations.

At the present time a committee of the American commission to investigate agricultural credit in Europe is formulating its report upon its findings, which report will undoubtedly be made to Congress after it convenes in regular session this winter. There will yet remain much to be done, not only in the matter of enabling legislation, but also in the promotion of public sentiment before this undoubtedly desirable movement can become well established in this country. This time would, however, be materially hastened if the farmers' organizations of this and other states, such as the Grange and Farmers' Clubs, would discuss the question of rural credit in their monthly meetings, particularly with a view of arriving at some conclusion with regard to the needs of their own membership along this line. To be a maximum success a plan for the establishment of better rural credit must be adapted to the needs and conditions of a majority of those who will be benefited thereby, and an early discussion of the problem throughout the country would aid in the crystallization of sentiment to an extent which would be a valuable guide to Congress and the patriotic citizens who devote their energy to the promotion of this movement.

**U. S. C. of C. Approves Currency Bill.** The Chamber of Commerce of the United States of America, met in

Detroit last week. This organization includes over 300 Chambers of Commerce, Boards of Trade, Commercial Clubs and Trade Organizations throughout the United States. For the second time since the Currency Bill has been under consideration by Congress, this organization at the recent meeting took official action with regard to that measure. In order that the sentiment of the constituent bodies having a membership in this organization might be secured, this question was submitted to the members for a referendum vote a few weeks ago. This vote was canvassed at the recent Detroit meeting, showing the result to be 303 for the pending currency bill and 17 against it. Certain recommendations were submitted to a referendum vote of the constituent organizations, several of which were endorsed, as follows:

"1. In favor of the increase of the federal reserve board to nine members, the two additional members to be chosen by the original seven members, subject to the approval of the president, the compensation of the governor and vice-governor to be fixed by the board itself.

"2. The creation of the federal reserve council to be elected by the regional reserve banks, the president and vice-president of the council to reside in Washington and to sit at meetings of the federal reserve board but without vote; their salaries to be fixed and paid by the banks.

"3. That in the creation of the new system of regional reserve banks, a beginning to be made with the present central reserve cities (three in number), the number to be increased gradually by the federal reserve boards as in their judgment conditions warrant.

"4. Concerning note issues:  
"(a) That restriction of the issue of federal reserve notes to \$500,000,000 to be eliminated.

"(b) That interest on federal reserve notes be eliminated.

"(c) That it be made unlawful for any federal reserve bank to pay out any notes but its own, the notes issued being given an identifying number.

"5. That federal reserve notes should not be obligations of the government but should be guaranteed by the United States and that they shall be redeemable by federal reserve banks and not at the treasury of the United States.

"6. That federal reserve banks mutually guarantee the federal reserve notes by providing that said notes shall become a first and permanent lien upon the combined assets of federal reserve banks.

"7. That the reserve requirements of the Owen-Glass bill be modified and reduced for both country banks and banks in reserve cities."

Several of the constituent bodies failed to vote on the propositions submitted on the ground that the members were not sufficiently familiar with the proposition to warrant the expression of an opinion. The majorities for the different propositions submitted were, however, large and may be taken to reflect the sentiment of

a large and varied class of the country's business men.

As noted in a previous comment on this subject, many of the recommendations of this organization previously made have been incorporated in the bill, and without doubt the interest taken in the proposition and the support given to the bill by this body will prove a powerful influence toward its enactment into law.

### A LITTLE PAINT IS A GOOD INVESTMENT.

Here and there in the country one sees farms where all the buildings are kept freshly painted. What a difference it makes! How fresh and new and cheerful the farm looks. These are the places strangers stop to look at, and many times \$20 worth of paint adds \$500 to the value of the farm.

In the United States there are thousands of paint manufacturers, and yet not over six or eight are known to farm folks. These are the ones who are proud of their paint, who know they make a good paint and who want the people, everywhere, to know about it.

You will find them advertised in the Michigan Farmer.

### HAPPENINGS OF THE WEEK.

#### National.

In moving a trainload of troops from Ft. Morgan, Ala., to Meridian, Miss., a fatal accident occurred at Buckatonna trestle 60 miles north of Mobile. The train was thrown into a deep ravine, killing 25 of the soldiers and injuring 100 others. It is believed that at least 20 of the injured will die. The cause of the wreck is not reported.

Mrs. Emmeline Pankhurst, the English militant leader has been detained at Ellis Island, while enroute to this country, by the immigration officials. A special board of inquiry acted upon Mrs. Pankhurst's case. However, President Wilson announced that he will intercede for the militant leader and allow her to enter the country under bond.

A wreck was caused Sunday on the Big Four near Sandusky, Ohio, through use of the latest type of locomotive, which was found to be too heavy for the light rails. Three persons were seriously injured in the wreck, and 25 others hurt.

Three persons were accidentally killed when an automobile in which they were riding was struck by a train at Trotwood, Ohio.

No change has occurred in the strike situation in upper Michigan. It is alleged, however, that desertions on the part of strikers from the miners' union are occurring daily. Funds and stores are being nearly depleted.

Gen. Daniel E. Sickles, the only surviving corps commander of the battle of Gettysburg, celebrated his eighty-eighth birthday in New York on Monday.

A fire in the business district of Ottumwa, Iowa, resulted in a loss of property valued at \$415,000. Fully one-half of a city block was swept away by the flames.

A new record for marksmanship was made by the U. S. flagship Wyoming of the Atlantic fleet, in Lynnhaven Bay, on October 19.

The Illinois Central Commission, which is arranging for the celebration of the one-hundredth anniversary of the admission of Illinois into statehood in 1818, is also asking the U. S. Congress to designate November 19, 1913, as a holiday in commemoration of the fiftieth anniversary of Abraham Lincoln's delivery of his famous Gettysburg address. By this means the commission hopes to make the celebration a nation wide.

For the first time in the history of Michigan athletics, the Michigan Agricultural College defeated the University of Michigan at football on Ferry Field at Ann Arbor last Saturday, the final score being 12-7.

Reports indicate that Port Huron voters are well pleased with the commission form of government. The second election under the new system will be held in November and primaries are now the absorbing interest.

#### Foreign.

Affairs in Mexico have changed little during the past week. There is scarcely any interest on the part of the general public in the approaching election to be held October 26. There are three presidential candidates, and by common consent, they have agreed not to allow their adherents to participate in parades, speech makings, and other practices that would be likely to stir up undue party strife. Even the press is giving little attention to the coming event. Since the Congress has been dissolved it is necessary that the election be held under the authority of General Huerta and General Blanquet, the War Minister. Gen. Felix Diaz, who recently went on a special mission to Japan, is now returning to Mexico, accompanied by several Japanese envoys. The dissolution of the Congress referred to above and the assassination of several officials, apparently with the consent of the present administration, has caused a change of attitude on the part of Washington officials, the outcome of which change can only be awaited.

While flying outside of Berlin the new airship of Count Zeppelin was completely destroyed and 28 persons were killed. The explosion of two tons of gasoline wrecked the airship when a thousand feet in the air. Among the victims were Germany's foremost aviation experts. This is the sixth mishap that Count Zeppelin has had with his airships during the past five years.



# 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.

## Mishaps of the Four Ms' October Nutting Party

By LILLIAN M. COLE.

IT was a bright afternoon early in October. The day was very warm, and the leaves were falling in a lazy, don't-care sort of way. It seemed as if autumn had forgotten her mission and was taking summer's place. It was also fall housecleaning time, and one could hear the slap-slap, whip-whip of many carpet pounders.

School was dismissed for the day. The small boys raced off for a final dip in the old swimming hole. Their sisters decided to have one more tea party on the lawn, and were bringing out chairs, tables, dishes, and whole families of dolls.

Four young girls strolled homeward eagerly discussing a very successful ending of the first month of school. They were lively, merry girls, about fifteen years old.

"I tell you, girls," exclaimed Madge Walters, "we ought to celebrate. Here are our first month reports and we certainly ought to be proud of them."

"This warm day makes me think of a picnic," said Molly Brooks.

"Why can't we have a picnic tomorrow?" asked Mildred Canfield.

"Yes, why not," said Margaret Wetherbee. "It will probably be our last, for it will soon be too cold."

"I have it," exclaimed Molly. "Let's take our lunch and go to the woods. You know that nice little grove out near Brown's."

"That's just the place. It will be a good walk to sharpen our appetites," chimed in Mildred.

"What kind of trees are in that grove?" asked Margaret.

"Hickory and maple," answered Molly. "And I don't believe Mr. Brown would care if we gathered some of the nuts. I heard him tell father yesterday that he had taken all he wanted from the grove, and anybody who wanted them was welcome to them."

"I know somebody who isn't welcome to them," said Madge. "Robert and a lot of other boys went there last year. They clubbed the trees and broke off many small branches. They broke down the fence, too. Mr. Brown came out and gave them orders never to go there again, and I don't think they will."

"We will ask him to let us in. I'm sure he won't refuse, for we will promise to take just the nuts lying on the ground," said Margaret.

By this time they had reached Molly's home and she asked them to come up on the porch to finish their plans.

"I can't," said Mildred, "for I promised Mother I'd come home early and help her."

"Let's finish our planning right here. What time can you start, girls?" asked Margaret.

"I can't go very early for I have to take my music lesson," said Madge.

"And it's my turn to do the baking. Dorothy and I take turns, you know. If it were my sweeping day I might do some of it this evening, but it's too warm now to heat up the kitchen."

"Why not start directly after dinner," suggested Madge. "All in favor of starting at half-past one hold up the right hand."

Four hands went up.

"Carried," said Margaret, laughing. "The next question is, what shall we take to eat?"

"Let's have a pot luck affair," said Molly. "I'm longing for something unusual. Don't tell anybody what you intend to bring and we'll have a surprise."

"It will be a surprise," said Madge, "if all of us happen to bring the same thing."

"I don't think we will," said Mildred.

"Then it's agreed to meet at half-past one and have pot luck," said Margaret. "Meet at my house for it is on the way to the grove."

"And don't forget a basket for nuts," said Mildred.

"Why not take our lunch baskets?" asked Molly.

"Unless we want to eat as soon as we get there, we would have to put the nuts on top of the lunch and I, for one, don't like pressed lunch," was the answer.

"I never thought of that," said Molly. "But then, I never do think until it's too late."

"You wouldn't be Molly Brooks if you were thoughtful," said Margaret.

Then the girls went their several ways with goodbyes and promises to meet at Margaret's at exactly half-past one.

Saturday was all that could be desired for their excursion. As they went down the street it would have been difficult to find a group of girls in better spirits. More than one person turned for another look at the merry party with a basket on each arm.

"I'd like to know what is in your baskets," said Mildred, eying them curiously.

"I wouldn't," said Madge. "I'm not

husband isn't home but I guess I'll do. You see Mr. Brown thinks a great deal of those trees. They're all young ones he set out himself, and when those boys broke off so many of the branches he felt pretty bad. He wouldn't care about you girls, for I'm sure you wouldn't do any harm to the trees. As for nuts, you may have all you can carry. I was down there yesterday and there were a good many on the ground. This brisk wind will bring down more, too."

"But don't you want some for yourselves?" asked Margaret.

"No," replied Mrs. Brown. "We have all we want from the grove. You see there are many hickory and walnut trees around the house."

The girls thanked her and were about to start off when she said, "What are you going to do for water? You will certainly be thirsty."

"We thought we would come here for some if you are willing."

"You're very welcome to all the water you want," said Mrs. Brown, "but there's

said Mildred. "Let's put our lunch baskets under these bushes while we pick up nuts."

"That's just the place," cried Margaret. "We'll probably eat supper here. We couldn't find a more beautiful place, and it's so near the spring. We will be entertained by spring music."

For the next hour little talking was done for they found plenty of nuts to keep them busy. They had removed their hats, for it was still quite shady under the trees. The wind was blowing and occasionally a nut dropped.

"I wish those nuts would stay where they are for a few hours. I don't care to have one come down on me," said Molly.

"The trees aren't tall so they don't have very far to fall. I don't believe they would hurt much if they should strike you, Molly," said Margaret, looking up among the branches.

Just as she finished speaking the wind stirred the topmost branches and several nuts fell. One of the largest struck her on the forehead, just above the left eye.

"Ouch," she cried, putting up her hands. "I didn't suppose they would fall that hard."

"Come down to the spring and put cold water on it," suggested sympathetic Madge.

The cold water stopped the pain, but a large lump rose, that showed signs of turning purple.

"You're a beauty," laughed Mildred. "Does it hurt much?"

"No, it doesn't hurt at all now, but I promised to sing a solo in church tomorrow morning. I'll be a pretty thing to get up before all those people."

"Better turn your head and sing out of the corner of your mouth," remarked Molly.

"A valuable suggestion. Thank you Molly. I think I'll follow it."

By the time the baskets were filled each girl was ready for supper.

"I'm nearly starved," declared Madge.

"I believe I dreamed about eating dinner and really didn't have a mouthful," groaned Mildred.

"How does my head look, girls?" inquired Margaret, anxiously.

"It's a most beautiful purple color," answered Madge, "a right royal purple."

"Seems to me I see a bit of yellow around the edge," said Madge, who was examining it closely.

"That's Margaret's 'streak of yellow' showing up," laughed Mildred. "I bet she is thinking of breaking her promise to sing tomorrow."

"You're right for once," said Margaret, "and can you blame me?"

"Girls, I can't wait any longer to find out the contents of those other baskets. I'm 'Mildred, the Curious' this afternoon."

"I think we're all curious about the supper question. I feel as hollow as a drum," said Madge.

As nobody had brought a tablecloth, newspapers were used, with stones on the corners to keep them from blowing away.

From out the four baskets came four pies, four plates of sandwiches, a pan of baked beans, two dishes of potato salad, one dish of fruit salad, two bottles of strong cold tea, two bottles of lemon juice and sugar, besides cheese, celery and pickles.

"What a conglomeration!" exclaimed Mildred. "But doesn't everything look delicious?"

"I'm glad my fruit salad isn't entirely melted, though it is rather soft. Several pieces of the frosting belonging to my lemon pie are sticking to the paper, but I'm thankful it's no worse," said Molly.

"Lemon pie is a great thing to take to a picnic," laughed Margaret.

"I know it," said Molly, "but I wanted something good and it's the best stuff I

## Indian Summer Days—By CHARLES E. JENNEY.

Now Summer dreams, and in her dreaming sees  
Her glorious prime again; through leafless trees,  
And through the glamour of the rising haze  
The leaves give, incense-like, in their last blaze.

Dreams of old days, recorded not in script,  
When Nature from unsullied fountains sipped;  
When woods primeval flourished far and wide,  
And winds o'er vast unbroken prairies sighed;

And, dreaming, sees the red man's ghost arise,  
And, fitfully against the darkening skies,  
Dim spectres of some ancient wrongs and ills,  
The war-dance act around the smouldering fires.

Sees in the gloaming wigwams pitched in row,  
And, gruesome sight, are those skulls there below?  
But daylight shows the horror-stricken gaze  
Corn shocks and pumpkins where grew golden maize.

So Summer dreams, and dreams of Spring once more;  
June's perfect days, and August's prime lives o'er.  
And if she wakes, why Night will soon be by  
And Spring will come again to you and I.

hungry now. Whatever is in them will look much better in three or four hours."

"I don't believe any of you had as much trouble this morning as I had with my lem—," began Molly, but caught herself in time and concluded with, "my hair. Really, girls, I told the truth for I washed my hair this morning. Then, of course, while I was curling it I managed to burn it right in front."

"Serves you right for being vain," observed Madge. "I know my basket is heavy. Seems heavier than when we started."

"Just wait until the other one is filled with nuts," remarked Margaret.

"I wish it wasn't quite so warm. I'm afraid my fr—, there it goes again," exploded Molly. "I'm not going to say another single word before supper."

"Now, Molly, don't say such things. It's wrong to tell falsehoods," said Mildred, while the others laughed at the idea of Molly keeping still. But she managed to keep silent for five minutes.

When the girls reached the Brown residence they stopped to ask permission to picnic and gather nuts in the grove.

"Well," said fat, jolly Mrs. Brown, "my

a spring over in the northwest corner of the grove, near the brook. The water is fine and very cold. That will save you carrying it so far."

The girls again thanked her and set out down the dusty road.

As they entered the grove Mildred dropped wearily to the ground and said with a sigh, "That's a pretty long two miles, I'm thinking."

"It's more than two miles," said Madge. "It is two miles to the corner the other side of Brown's house, and three-quarters of a mile from that corner to the grove."

"I'm rather tired myself. Suppose we rest and look about awhile before we begin to gather nuts," suggested Margaret, and the tired girls gladly agreed to it, for the grove looked very cool and inviting.

After resting a few minutes they made a tour of inspection of the whole grove. The bright sun shining on the bright-colored leaves, the golden-rod and other beautiful autumn flowers, made the whole place seem like an enchanted wood. At last they found the spring and had a refreshing drink.

"I should think that water is good,"



know of. I burned three fingers brown-ing the frosting, too."

"I think we have plenty of pie and olives," remarked Madge.

"What kind is yours? Mine's cherry," said Mildred.

"Mine's peach and I see Margaret's is pumpkin. Lucky me. I always did like pie," was the answer.

"You will certainly get enough of it for once. I am glad they're not very large so we can have a piece of each one. They do look so good!" exclaimed Molly.

"I think we better begin with more substantial things, though," said Margaret, passing the beans.

"The idea of a picnic without cake. We nearly always have too much of that," said Mildred.

"I guess we all thought of that and didn't bring any," put in Madge.

The girls certainly were hungry if we judge by the way the good things disappeared. After the dishes and remains of the feast were packed away, Mildred suddenly exclaimed, "Let's go wading. I saw a fine place not far off. The creek spreads out and makes a regular little lake. It didn't look very deep, either."

"All right! The very thing! Let's go!" chorused the others.

"But where are our towels?" asked Margaret.

"Oh, we can hold our feet up in the sun until they dry," suggested Molly, laughingly.

"We can take these newspapers we used for a tablecloth," said Madge.

"Yes, wipe our feet on our tablecloth," laughed Mildred. "But as long as they served as tablecloth first, I don't object."

What fun it was to wade in the warm, shallow water! They paddled and splashed and enjoyed it as much as children would.

Finally Madge called out, "Enough is enough. If I stay in much longer my feet will be soaked up so much I won't be able to get my shoes on. They aren't any too large when my feet are dry."

She sat down on a large stone at the edge of the water with her shoes and stockings near and proceeded to dry her feet on a newspaper. A merry little breeze came along and blew her stockings to the very edge of the bank, but she did not notice.

"Look, Madge! There go your stockings!" cried Molly, excitedly.

Madge reached for them but the wind was more nimble than she. It gave another puff, and just as her finger tips touched the stockings, they fell off into the water.

"Oh, dear me! What shall I ever do to get home!" she moaned.

"Use newspapers!" suggested Molly.

"Go without any and people will think you have white ones," suggested Mildred.

"I might pass muster either way if it were dark, but who wants to stay here that long," mourned the poor unfortunate.

"I'll hang them on a tree in a sunny place and they'll soon dry," said Margaret, wringing the water out of them.

Mildred and Madge were still paddling about in the water when Margaret returned. As she drew near, Mildred jumped upon a stone and began in a theatrical voice, "Behold the benevolent Lady Margaret. She goes about doing only good. She kindly suspends your most humble hosiery on the grand old hickories when the playful breezes waft them into the—"

Just then Mildred threw out her hands to make a speech more dramatic, lost her balance and fell into the water with a mighty splash.

"O-h-h-h," she spluttered as she scrambled to her feet.

"Are you hurt?" the others asked anxiously as they led her toward the bank.

"No," was the shivering answer, "but I'm so dreadfully wet."

"I should say you were wet!" laughed Madge. "I thought I was bad enough. And you do look so funny."

Then the three girls laughed until the woods rang.

"I don't see anything to laugh at," grumbled Mildred. "All I'm doing is dripping. That wind isn't very warm, either."

"I should judge not by the way your teeth are chattering," said Margaret. "Forgive us, Mildred, for you do look ridiculous. But come, we must go up to Brown's and get you some dry clothes. We'll go across the meadow and up the lane and nobody will see us."

"I'll stay with Madge until her stockings are dry," said Molly.

How Mrs. Brown did laugh when she saw Mildred! "You certainly look like a

drowned rat," she exclaimed. "But come right in. Now take off those wet things and I'll get you some dry ones. It's lucky I was late with my baking this afternoon, for the range is still hot and your clothes will soon dry."

When Mildred was again clad in dry garments and sitting by the kitchen stove drying her hair, Margaret said, "It seems to me you look just as funny as you did before. That dress fits so well and is so becoming."

As Mrs. Brown was several sizes larger than slender Mildred, her clothes had to be "tucked up and tucked in," as she expressed it, with pins. The blue and white striped house dress had a generous tuck pinned in the skirt, the sleeves were tucked up with pins and the belt was all laid in with tucks; and still the waist fell to her hips and the skirt dragged on the floor. On her feet were a large pair of fur-topped slippers that gave forth a dismal "flap, flap, flap," with every step.

"A new style of Bulgarian blouse," laughed Margaret.

"It ought to be called a sharp blouse on account of the sharp points of those pins," said Mildred.

Presently Madge and Molly came and readily joined in the laugh.

Then, after silence had reigned for about two minutes Molly said, "I can't understand why it wasn't me who took that tumble. I'm the one who is always having such mishaps."

"I don't quite understand how you could slip off the stone when you were five feet away from it," remarked Mildred serenely.

"That is the only reason I didn't," said Molly with a laugh. "But don't feel sorry girls. Something will happen to me before we get home, I know. You've each had your accident and I'll have mine. I am sure I'm not lucky enough to escape."

And she didn't escape. Just at the edge of town was a hill that rose gently from the surrounding country, but had a steep slope toward town. As they reached the summit, Molly set her basket down with a thump that loosened the fastenings of the handle on one side, but poor Molly was too tired to notice it.

"I do believe this road stretched while we were out there today. It seems at least four miles from here to the grove," she groaned.

"How does my head look now, girls?" asked Margaret for the tenth time.

"The size remains the same, but I think the color improves. It seems to be of a deeper and more brilliant hue than it was an hour ago," answered Madge.

"Then I feel certain I won't sing tomorrow," said Margaret, folding her hands with a look of resignation.

"I move we go home," said Mildred.

"Second the motion," said Madge and Margaret. "Come on, Molly."

"I'm too tired to move," was the answer.

"You can't stay here all night and use your basket for a pillow, for you know you would be afraid of the shadows as soon as dark comes," counseled Margaret.

"Quick girls!" cried Mildred. "there goes Willie with his express wagon. Let's have him draw the nuts home!" and off she ran.

The other girls snatched up their baskets and started off on a run. Molly didn't run far, however. As she lifted her basket one side of the handle came off, scattering the nuts to the ground, where they started to roll down the hill.

"Oh, girls," she cried out. "Just see! Oh, dear! What shall I do?"

"Pick them up," was the comforting answer, as the other three turned back.

"I'm too dead tired to pick up a one," said Molly, despairingly.

"Never mind. We'll help you," said Margaret; "and see, here are six that didn't fall out."

"How did it happen?" asked Madge.

"Why, I picked up the basket and it immediately began to rain nuts," answered Molly, her good humor returning. "I see now the handle is loose on one side. I suppose I loaded it rather heavily, for it doesn't look very strong."

"There's never any great loss but some small gain is with it," said Mildred. "You won't have to carry these nuts down hill for they rolled down of their own accord."

"That is a big gain," returned Molly. "It will be so very pleasant to carry this basket in my arms like a baby."

"Tie a string to it and drag it on the ground like a sled," suggested Madge.

"Provide a string and I will," cried Molly.

"Or a hat band," said Mildred.

By this time the nuts were again in the

broken basket and the journey was resumed.

Before they had gone a dozen steps Molly exclaimed, "Why didn't we put the nuts in my lunch basket and put the dishes in the broken one?"

"Just because we didn't think of it," laughed Mildred.

"Let's do it now," said Madge.

The transfer was soon made and they once more started on their journey. Just then a large automobile overtook them and Margaret recognized her uncle, as the machine stopped.

"Oh, Uncle Ben! I was never so glad to see you in my life," she cried. "We are almost tired to death."

"Get in and your troubles will all be

ended," he said gaily. He was well known to all of Margaret's friends so no introductions were necessary.

Soon they were laughing and talking. Of course all the accidents were described, and Margaret's head was admired.

"Well, well," he exclaimed as the story was ended. "You certainly have had some adventures today. I think you had better call them, 'The Mishaps of the Four M's.'"

You will see in life just what you are looking for. If the lenses of your telescope are smoky you will see the gloom; if they are clear you will see the rainbow.

## Thrash It Out—By MARGARET ERSKINE.

When folks they go agin you, as folks they often do,  
Don't sit about in corners of an atmospheric blue,  
A-sulkin' by your lonesome, puttin' peaceful folks about;  
Just clench your fists me'phoric, and with 'em thrash it out.

When you've got a bitter canker a-eatin' up your heart,  
Don't sit a-fondlin' it as if you feared from it to part,  
But just get up an' tell folks what you's feelin' bad about;  
There'd be no crawlin' cankers, if we'd only thrash things out.

Molehills will soon be mountains, if we sit an' watch 'em grow;  
An' poundin' at the Bread o' Life, won't help keep sweet th' dough  
Nor make it better eatin'. An' of this I have no doubt,  
You'll find the world nigh Heaven, when you've thrashed th' bitters out.

## MYSTERIES OF BIRD MIGRATION.

BY ORIN E. CROOKER.

There are still many unsolved mysteries in the realm of bird migration. These feathered travelers go and come with almost clock-like regularity and often cover thousands of miles in their migratory flights. But many things associated with these long jaunts yet remain matters for speculation or further scientific investigation.

It is now quite generally supposed that birds undertake the northward flight in spring because of certain physiological changes which prompt them to seek the usual breeding grounds of the species. The southward flight in late summer and autumn is supposed to be the direct result of a diminishing food supply. But these suppositions may not be said to be proven; there may be more subtle causes than these which operate to impel birds to undertake these extensive journeyings.

Another mystery that is yet unsolved is that of the migratory flights being taken for the most part by night. It has been suggested, however, that this is to more easily escape birds of prey which would probably hang upon the outskirts of such an army of migrants were they to undertake to travel by daylight. Here also the theory appears plausible, yet may be far from the truth. How birds keep their course; whether the young follow their parents the first time or some experienced leader; why they fly high on clear bright nights and low on nights of cloud and storm—all these are yet problems without an authoritative answer.

Certain species of birds present individual problems peculiar to themselves. The golden plover, for instance, starts from Nova Scotia and evidently launches out over the broad Atlantic, as he is not cited on land in his southward journeying. Neither is he seen on any of the islands in mid-ocean, except very occasionally when evidently driven to shelter by severe storms. When he next comes under observation he has reached the mainland of South America. Here, then, is a distance of 2,500 miles at the very least, which, so far as anyone knows, this bird must cover at a single flight. Does he do so, or has he some as yet undiscovered resting place in mid-ocean where he stops for food and rest? No one knows.

Where does the chimney swift spend the winter? His migratory course has been traced pretty accurately through the southern states, Mexico, and Central America. Then he disappears to winter somewhere in the tropical regions of South America or possibly in the islands of the south seas. At any rate his winter abode is shrouded in mystery.

Why does the Redpoll visit Spitzbergen is a problem that is unsolved. There is nothing on this bleak and inhospitable arctic land to attract even such a bird as the Redpoll who wanders in winter rather than migrates. The nearest land, too, from which he could come is Norway. He is usually found in an exhausted condition as though from a long flight such as he is not accustomed or equal to. It may be that he is the victim of some tricky air current; perhaps he is a hardy venture-some bird explorer like the Norsemen of old, some of whom undoubtedly visited

the shores of America before the time of Columbus.

The Connecticut warbler, a dapper little bird which breeds in Manitoba and winters in South America, makes its southward flight through the Atlantic states, but when it comes north in spring it always does so west of the Alleghanies. To what peculiarity of bird temperament shall we assign this vagary of flight? This is only one of innumerable mysteries which puzzle the student of birds.

## QUEER ACCIDENTS TO HUNTERS.

BY ISAAC NOTES.

Considering the risks and chances hunters take when after big game, it is surprising that they escape unhurt from some of their adventures. It is often said that hunters lead charmed lives, and the cleverness with which they make hair-breadth escapes seems to prove the truth of the saying. Some of these encounters and adventures have a humorous or ludicrous element about them when they are recalled years after they happen, despite their tragic seriousness at the time of occurrence.

A deer-hunting friend of mine in Texas had an exciting experience a year or two ago with a big buck, an experience which was laughable enough after it was all over, but no "laughing matter" at the time of its occurrence. He had been told that the rattling of deer antlers together in imitation of the sounds of bucks fighting would bring to the scene any bucks which might happen to be within hearing of the peculiar noise. He borrowed a pair of antlers from a farmer, and the next day went off a mile or two into the woods, climbed into an elm tree with low, wide-spreading branches and began knocking the antlers together.

In a few minutes he saw two big bucks coming towards him, each from a different direction. They met right under him and began fighting. The fight was a long and furious one, and my friend was so interested in watching them that he forgot all about his gun and didn't attempt to kill one of the deer. In his excitement, while trying to change his position in the tree so as to get a better view of what was going on directly below him, he missed his footing and fell upon the back of one of the bucks. His unexpected appearance surprised and frightened the animals almost out of their senses, and they quit fighting and broke for the thick timber. My friend was carried some distance upon the back of the buck before he was dumped off into a bunch of cactus. The accident might easily have led to most serious injury to the hunter, and yet no harm resulted to him.

This recalls a rather ludicrous and yet dangerous adventure, an account of which I read many years ago, which resulted in a hunter having a most unlooked-for ride on the back of a wild, infuriated buffalo. It was many years ago, when great herds of buffalo roamed over our western plains. According to the story, a party of four hunters had gone out on the plains to shoot these animals. They camped, one beautiful night, near a stream in a rough, somewhat mountainous section, so rough that they knew a large herd would not



be apt to come along that way and run over them, for in those early days when buffaloes traveled in great herds they sometimes took alarm at something and stampeded.

When such herds stampeded it was generally in open country upon the plains. They avoided rough, mountainous regions where they could not run well, so experienced buffalo hunters and plainsmen always camped in these rough localities. But among these hunters was an eastern man who was not familiar with the habits of the buffalo, and as the night was beautiful and starry he rode out across the plains after supper, although cautioned by his companions against doing so.

He rode on and on, charmed by the wide flower-decked plains, with the moonshine so bright you could almost read a paper by its light, as the air, in those early days was clear and free of smoke. When he finally turned to go back to camp he lost his way and became bewildered; then, knowing that his companions would be out looking for him the first thing in the morning, he dismounted, unsaddled and staked his horse and lay down, with his head on the saddle, to sleep in perfect contentment and fancied security.

As he had wandered around a good deal he was tired and dropped off to sleep almost instantly. But sometime in the night he was awakened by a tremendous roaring and trembling of the earth, and sprang up to find a great herd of stampeding buffaloes coming toward him from the east, the western moon reflected in their glaring eyes like ten thousand coals of fire.

He ran for his horse, but before he could reach it the buffaloes were upon him. To human appearances there was no escape for him, but fortunately one of the bulls leading the herd lunged at him, caught him on its horns and tossed him into the air. When he came down he found himself astride the back of a big buffalo bull. He grabbed the long hair growing upon its shoulders and held on like grim death. Thus he was comparatively safe from their trampling hoofs as long as he stuck to the back of the buffalo. And as so many others were wedged in around this one it didn't have room to jump, pitch and plunge until he got thoroughly settled upon the animal and got a good grip on its long hair.

As this buffalo was near the front of the herd, and was naturally excited by the strange creature sticking to his back with the persistence of a cocklebur, he ran more rapidly than his fellows and gradually pushed ahead of the herd. The plains were level, and there were no trees, streams or gullies to interfere with their progress; so, after getting out ahead of the herd this lone buffalo kept straight ahead in the general direction it had been going.

On account of the clear moonlight the hunter could see far ahead of him across the level plains, although his efforts to stay on the back of the bounding buffalo allowed him no time to look about him. After getting some distance ahead of the herd, and finding that he was able to stick to the buffalo's back, he could form some idea as to the distance they were ahead by the sound of the others' hoof

## HALLOWEEN.

BY CHAS. H. MEIERS.

When October is exhausted  
And lies dying in the night,  
When the pumpkin vines are frosted  
And the sidewalks glisten white  
In the moonlight that is dancing  
On the lawn, no longer green,  
Then's the time when boys go prancing  
Through weird pranks—'tis Halloween.

Then's the time when nearby ditches  
Yawn for gates and wagon wheels,  
And the goblins, ghosts and witches  
Scamper close upon the heels  
Of the girl who sees in fancy  
Phantom forms, grotesque and lean,  
As she walks with old Aunt Nancy  
From the store on Halloween.

When we see the children playing  
Pranks, we're not inclined to scold;  
But in fancy we go straying  
Back to happy days of old,  
When we cut the same sly capers—  
Not intending to be mean—  
That will fill tomorrow's papers  
With the pranks of Halloween.

beats, though he didn't dare try to turn and look behind him.

As they plunged ahead through the white night they finally got into somewhat broken, hilly country; one hill in particular was so high and steep that it was almost a mountain. It was so high that the hunter didn't believe the buffaloes would run over it, but that the herd would split when they came to it and go around it. So, as his buffalo passed near this mountain, the hunter slid off the animal's back and ran for the mountain, while the buffalo was so relieved at getting rid of his strange rider that he plunged on straight ahead. The hunter reached the mountain and ran up its steep side to a point which he believed to be out of danger from the oncoming herd. Then he sat down and looked back at their ten thousand gleaming eyes, and listened to the thunder of their hoof beats upon the prairie sod.

Sure enough, when they reached the mountain on which he sat the herd divided; one part went on the north side of the mountain and the other to the south of it, two black streams of bounding, billowy life, leaving the hunter in perfect safety.

For some time he sat there thinking of his queer experience—what a narrow escape he had had, how far he had ridden on the buffalo's back, where his companions were, and what had become of his faithful horse. While sitting there wondering what he should do first, he heard shouting, and soon the sounds came nearer. He shouted back at the top of his voice, and presently all his companions rode up, having been out on the plains behind the herd looking for him, with dread in their hearts, believing that he had almost certainly been trodden into the ground. Great was the joy of his friends when they found him sitting there on the mountain side, strangely cool and calm, and absolutely unhurt. Even his horse was safe, as it had run in front of the herd, gradually bearing away to one side until it had gotten out of their way.

The hunter's being tossed into the air upon the horns of the mad bull, instead of causing his death, was the only thing that saved his life, and the only thing, humanly speaking, that could have saved it.

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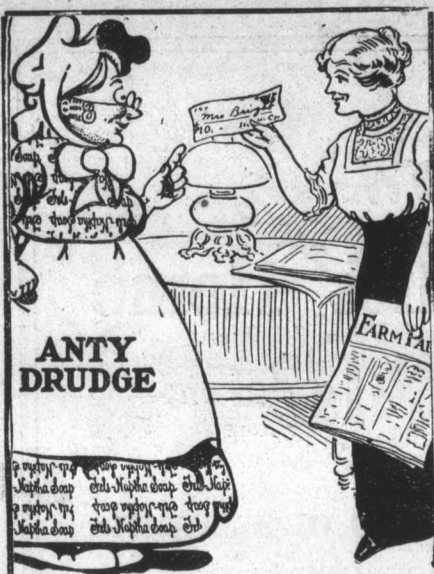
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A Seven-year-old Farmer Reader Sends his Latest Photograph.

This is a picture of me and my pony. She is a year and a half old and I named her Beauty. I haven't got her broke so I can ride her yet, but Papa is going to break her next year so I can drive her to a little buggy. I am seven years old, have light blue eyes and dark hair. Have just begun to go to school. I hope I will see my picture in *The Michigan Farmer*.—Glenn Frisbie, Van Buren County, Michigan.





### ANTY DRUDGE

**Mrs. Bright:** "Oh, Anty Drudge! Just come and see the check for \$10.00 I got as a prize from our Farm Paper. They offered a prize for the best article on 'How to Make Housework Easy,' and I wrote about washing and doing all your work with Fels-Naptha Soap and cool or lukewarm water, and I got the prize."

**Anty Drudge:** "Dearie, I am proud of you. I hope your article will help lots of tired-out women, too. It's worth more than \$10.00 for women to know about Fels-Naptha Soap."

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Fels & Co., Philadelphia.



## Woman and Her Needs At Home and Elsewhere



### How One Mother Deserted Her Child.

AN EASY WAY TO MAKE BREAD.

BY VERA T. WONSER.

**I**F all the nervous, hurried, worried people in the world knew the immense advantage to be gained by getting away from everything and everyone connected with their daily grind and looking on as a disinterested spectator for a short while, the most of the discontent and fretting would cease.

Young Mother tried it last fall, though all the family except Husband and one Old Maid Aunt disapproved, and though she was only gone one short week, she feels "like a new woman," to use her own words.

It had been a hard summer. Small Daughter cut some teeth, there were quarts and quarts of fruit and vegetables to can and pickle and preserve, countless small chicks and some turkeys to look after, company from the city every Sunday or so, to say nothing of the wood and water to carry when Husband occasionally forgot it. She was a very Young Mother, too, with a conscience out of all proportion to her strength, and she got to feeling that the world was out of joint. She worked and worked and worked, and she thought, without getting any thanks, for she was so tired she couldn't feel that husband's good nature and content were the thanks he forgot to mention. When October came, she was just a bundle of "blues" and "nerves."

"Let me take care of Baby Daisy and you go away for a week," suggested the Old Maid Aunt.

"I never could leave her," said Young Mother.

"You might better leave her now for a week than leave her for three months while you go to a sanitarium," threatened Old Maid Aunt darkly.

Young Mother got pale, cried down the baby's neck, then wiped her tears on the little white dress and said she'd talk it over. Grandma, on both sides, groaned in chorus.

"Leave your baby for a week. I never heard of such a thing. I couldn't have done that way with my children," said they. And all the rest of the women of both families looked horrified at such unmotherly conduct.

Then Husband, who was a very good sort, said in his most masculine tone, "Well, she is going anyway. She is all tired out and nervous and needs a rest. What rest would she get with a baby in a strange house?"

So Young Mother left for a week with a cousin in a near-by town. She wanted

something entirely different, she said. For one week she didn't have to get up and get breakfast. She never knew until she came to the table what she was going to have to eat. And she never washed nor dried a dish.

Neither did she take baby fingers out of mischief, nor sigh over little sticky finger prints on windows, nor groan over mud on baby shoes. She fed no chickens, carried no wood nor water, built no fires and took care of no milk. She simply ate and rested and "Went." She shopped all one day, then went to a concert at night. She went to two women's clubs, a lecture, an art exhibit and a demonstration in cooking, besides going to church three times the one Sunday she was there and hearing a marvelous pipe organ and the best singers in the town.

At the end of the week she was physically tired out, but her mind was clear and her nerves considerably calmed down. Besides she was crazy to get back home, from which she had fled in despair the week before. She could hardly wait to see Baby and Husband, and the nearer she got to the farm the more she wondered how she ever could have gone away.

The grandmothers seemed positively disappointed that they hadn't a sad tale of trouble to tell when she got home, but Young Mother didn't care. She had come back brimming full of new ideas, ideas in cookery gained from the demonstration she attended; ideas in home decoration and the real dignity of home-making got from one woman's club, and a host of helpful hints about Baby Daisy's training, gleaned from the mothers' club, and the music she had heard came back to her all through the winter. On trying days she had only to close her eyes and conjure up a mental vision of the great church with its quiet and peace, the subdued lights coming through the stained windows, the solemn tones of the great organ, to have the uselessness of worrying over the trifles of her daily life made plain to her.

Thus one mother is a convert to the idea of leaving the children for awhile.

"I know everyone but Husband and Aunt thought I was utterly heartless," she confided, "but I know I've been a better mother to Daisy ever since I got back, and I love her more than ever now I've had a chance to see what life would really be without her."

DEBORAH.

### The Quest—By MILDRED M. NORTH.

My grandmother used to tell me  
Of a man who, so they say,  
Went out to look for a helpmeet  
In a most unusual way.

Of course, he wanted her lovely,  
He wanted nice things to eat,  
But above all things to be saving,  
And likewise clean and neat.

And he vowed that he would find her,  
The lass who should be his wife,  
Or he'd go with his socks unended  
For the rest of his natural life.

And his grandmother told him,  
When he asked her what she thought,  
That a lass who scraped her breadtray  
Would prove the one he sought.

Now this youth was good to look at,  
Dark eyes and dark brown hair,  
With a face that was bright and winning  
And a manner debonaire.

And one morning bright and early  
He donned his Sunday best  
And with his horse, Bay Billy,  
Set out upon his quest.

Wherever his fancy led him  
There he stopped and asked to rest,  
And always of some maiden  
He made this strange request:

"I would buy some oats for Billy;  
He's been taught a silly whim,  
And if it is quite convenient  
Will you please to humor him.

"If some scrapings from your bread tray  
You will sprinkle on his feed,  
I will surely thank you kindly,  
Billy will be pleased indeed."

And each maiden sweet and blushing  
Quickly hastened from the door,  
Scraped the breadtray, brought the  
scrapings—  
Some were ne'er so clean before.

Some had few and some had many,  
Still he smiled and rode away,  
And at night their dreams were haunted  
By the stranger and his bay.

Then one evening just at sunset,  
He beheld a cottage small,  
Where red roses leaned and listened  
Nodding o'er a low stone wall.

And a maiden bade him enter  
With a face so fair and sweet  
That he quite forgot Bay Billy  
And the fare that he must eat.

Then at last he did remember  
What had brought him on his quest,  
And although he feared and trembled  
Still he put her to the test.

But she laughed, half shy, half saucy,  
As she stroked Bay Billy's nose:  
"Will he eat his oats without them  
Just this once do you suppose?"

"Mother always cleans her breadboard  
I'm her daughter, so must I."  
And it seemed Bay Billy's master  
Was well pleased with her reply.

For he lingered, loath to leave her,  
Came again another day,  
And One Day in pride and triumph  
Came and bore his bride away.

So now, lassies, scrape the breadboard,  
Have it clean and neat I pray,  
For some day a gallant stranger  
May come riding by your way.

### LETTER BOX.

#### In Answer to "Signs of the Times."

Dear Deborah:—Think for a moment what has caused this lack of religion we find so prevalent everywhere. Has it not really been forced upon us? Is it not better that people make no pretense at something they will not put into practice?

If I profess to believe in the teachings of Jesus and then go about my daily affairs, watching every opportunity to take advantage of my fellowman, neighbor, or whomsoever I meet, is it not plain that I am a fraud? If business places such demands on us then had we not better keep still about religion? When you can get the business man, the real estate man, the monopolies and trusts, and the heads of our governments christianized as Jesus taught them to be, then you will have no trouble in keeping this same religion in the homes of our American people.

So long as the middle classes or laboring classes see that religion is only used as a weapon to keep them in subjection and subordination, so long will religion diminish.

I have had many talks with persons who claimed to have a strong belief in christianity, but when the test of putting it into practice was applied, they replied that was not business. So, then, we infer that religion is theory, business is practice.—Yours, Hay Rube.

### AN EVENING WITH BOOKS.

BY IRMA B. MATTHEWS.

It is really quite difficult to plan an entertainment for an evening party, for it seems that there is nothing new to be thought of. The writer recently was asked to plan something and after due thought decided to have an evening with books.

After the guests were assembled they were invited into the dining room where the table was covered with a number of pictures and articles, and they were told that each article represented a book. Each was supplied with paper and pencil and



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told to name as many of the books as possible.

Everyone enjoyed it and had much sport over some of their guesses. Below is a list of the books used, with titles. No doubt others will also suggest themselves to those wishing to use them.

Picture of man with Hon. Thompson, Indianapolis, written below it. (The Gentleman from Indiana).

Picture of a cowboy, and Virginia above it. (The Virginian).

Two pictures joined, one a man with several sheep, the other a picture of mountains. (The Shepherd of the Hills); A small black stone. (Black Rock).

A box with the picture of a man pinned upright on top of it. (The Man on the Box).

A moonstone. (The Moonstone).

A basin containing several tiny branches from a tree set thickly into it, the basin must first be filled with sand, in the center a king from a playing card. (When Wilderness Was King).

A match. (The Lamplighter).

A picture of a wild cat, any wild animal may be used instead, below was written, "calling his mate." (The Call of the Wild).

A pair of wings cut from white paper. (White Wings).

A piece of lavender on a piece of old lace, if the lavender cannot be obtained use a piece of lavender cloth instead. (Lavender and Old Lace).

Picture with the head removed and another pinned on that looks toward the back. (Looking Backward).

A rose. (The Rosary).

A letter cut from red paper. (The Scarlet Letter).

A tiny book marked sketches with one or two sketches, very crude ones they were, too. (The Sketch Book).

A picture of an Indian Warrior. (Hiawatha).

Picture of a wolf and one of the sea joined together. (The Sea Wolf).

A picture of a Duchess cut from one of the daily papers. (The Duchess).

The name Marion pinned on a piece of gray cloth. (Marion Gray).

The most of the names selected would be available any place or there may be others substituted, nearly anyone can think of some. The prizes were a pretty book for the one who guessed the most, and a child's picture book for the one guessing least. The winner in the case had all but four correct.

Any simple refreshments may be served. Ice cream and cake is good, although the hostess on this occasion used jello with cake instead, and cups of hot coffee.

## DO YOU CARRY A TON OF WATER EACH WEEK?

BY CHARLOTTE BIRD.

The president of the Mississippi Normal College has estimated that every day, including wash day, the farmer's wife lifts on an average the week through a ton of water. This is the average woman who does her own work in a house without a modern water supply. The same investigator claims that the water used for cooking on the farm, is handled six times and each time it is lifted. It is lifted from the well, carried to the kitchen, poured out for different uses and at length is emptied out of doors. For the three meals a day ten bucketfuls are needed, which, having been lifted six times, is equivalent to 1,200 pounds of lifting. If one adds the water used in washing and cleaning about the house, for bathing and eating, it easily foots up to a ton.

Now this is where the water supply is at the door. For the rural water supply the well continues to be the chief source, whether the water be drawn by bucket, pumped by hand or by motor or windmill. Most generally, though, water for household uses on the farm continues to be pumped by hand, not very commonly drawn from the well by bucket in the primitive way.

But sometimes the well is rods away from the house. Whether the supply be a well or a spring, it may be down a hill in which case it has necessarily to be carried up. This is a truly heavy burden on any woman, one really not to be borne in patience, because it appears so unnecessary.

If a man found that he could avoid such an expenditure of strength by the purchase of some article which would cost two or three hundred dollars, would he not buy the machine immediately with the self-assurance that every year it would pay for itself? But so it has always been with a woman's labor; it has been cheap but arduous till she herself

has discovered her need and the possibility of reform. In many cases the man is not indifferent, he is merely absorbed in his own work. Yet the installation of a water system, it has been reckoned, would eliminate this useless drudgery, and such a system in a house need cost no more than about \$250.

The number of farm houses piped and supplied with water from tanks, filled by motors or windmills, has been steadily increasing in all parts of the United States. Yet the fact remains that nine-tenths of woman's drudgery on the farm has to do with the antiquated methods of the water supply for domestic uses.

It is a question whether the independent equipment will ever completely meet the needs of the farm home, but one thing is sure, it would be a long way better than nothing. The question of the water supply is very intimately connected with the uplift and comfort of life; it has intimately to do with the number of bathtubs and the housekeeper's time for rest and reading. Therefore, it is entirely worth while to give the subject an expert's serious consideration.

Meanwhile, while the farmer is weighing the possibility and advisability of linking scattered and isolated farm homes together by the pipes of a common water system, he should not rest content but immediately install a small plant which will supply his home and save the precious strength of his women folks. Thus it would well serve his own personal interests.

It might even go far to solve the problem of discontent on the farm, which is one of the greatest social and economical problems of our times. Under conditions where life is a long-drawn-out drudgery, where can there be any joy, any real contentment? Yet farm life could and should be the most delightful in the world. Some day farmers will make it such, because they will have learned how to make it beautiful and easy.

## THE SAND TABLE.

BY F. V. W.

I WONDER how many mothers who have little children that are too small to go to school, have begun to plan for the cold winter days when we are all shut in, more or less? Of course, it is best that little children should get out of doors for part of the day and if they are well bundled up they thoroughly enjoy playing in the snow but, if it is very cold, they soon make up their minds to stay indoors. Then comes the problem, "What can they do?"

Two or more children can have a better time playing indoors than one alone. Even if a child is very imaginative he will tire of his own games and call for something new. One good way to amuse a child is to let him have a sand-table to play in. We have all seen the large ones in kindergarten rooms but where only one or two children are to play they can be much smaller.

When we made one for our small son he was only two and a half years old but he would play by the hour forming hills and hollows in the clean, white sand. Being sure some of the sand would be spilled I had a rug closely woven of bright colored rags on which to set the table, and the sand that went overboard fell on this rug and could be shaken out doors when sweeping the room.

The table itself need not be over two feet wide by three feet long and about six or eight inches deep. This part may be made of a packing box but it should be lined with oilcloth so that the sand will not sift out. For legs we used those of an old sewing table and as they had casters on the table could be easily moved about. Any clean, white sand will do, but it should be dampened with warm water before the children play in it, because it dries out and is dusty.

There are many little things one can get to make this play more interesting, such as small trains of cars, little animals and tiny dolls that cannot easily be broken. Then the children can make houses and barns of the sand or with blocks and small branches of evergreen or other trees make trees and bushes.

When they are older many things can be taught little children with the use of the sand table. These the mother can learn by taking any teachers' primary magazine and they will be found interesting to the mother as well as the child. In this way the mother may teach her little ones while they are too small to go to school, especially in the country where there are no kindergartens. Both mother and child will profit by the hours spent together while the wind and storm howl without.

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## HALLOWEEN HINTS.

BY MAE Y. MAHAFFY.

There must be nothing said or formal about a Halloween party, the very nature of the day presupposing a time of rollicking fun and mystical happenings. Since it is the time given over especially to witches, hobgoblins, fairies, brownies, ghosts, and elvan creatures generally, any scheme for amusement must include these weird beings. Invitations adorned with a brownie may be used, or a witch riding her usual broom steed, a fairy, or some ghostly figure. The envelopes in which the invitations are enclosed should boast little stickers of similar design. The brownie is cut out on the outer edge of the invitation, and his clothing is tinted gray and brown. Gilt or bronze paint will prove more attractive for the lettering than ordinary ink.

A large attic, a barn or a huge kitchen are the ideal places for Halloween celebrations, unless one has a room containing a fireplace, since all sorts of jolly stunts may be tried out without fear of damage to rugs or furniture. Removing as many of these as possible is the next best solution of the problem. Decorate in the customary cornstalks, pumpkin lanterns, autumn foliage, strings of apples, pop corn and cranberries, with silhouettes of black cats, howling dogs, bats, owls, hobgoblins and witches, and here and there gray paper spiders, stuffed with cotton, with fine wire for legs, clinging to webs and made from twine.

Much more fun will result if the guests are all in costume rather than in ordinary garb. Ghosts will have but little trouble in arranging sheets, with masks of muslin having holes cut for eyes, noses, and mouths. Brownies should be clothed in gray or brown, their caps being long and loose, something like a stocking cap, with the tip stuffed with cotton to make it stand out well. Extra hose drawn over their shoes, with long, tapering toes, also stuffed with cotton, will add to their quaint appearance. Fairies should have gauzy wings, and filmy white draperies, bespangled with gold and silver paper, and should carry gold or silver covered sticks for wands.

A witch's costume is not hard to manage. A black dress, or just a skirt, for the waist will be almost covered by the large black shawl, will provide the gown. The hat is made by cutting a large circle with a hole in the center sufficiently large to fit over the head. The cut a triangular piece, roll it into a cornucopia-like shape, and fasten with glue or fine wire. It is then glued to the circle by slashing the base in several places to form tabs, this base being considerably larger around than the circle for the head. Bend the tabs outward and glue under the circle. Black pliable cardboard should be used for the hat, or it should be covered with thinner black paper. It may be decorated with gilt moon and stars, or have an owl or bat perched on the tip. A bunch of twigs tied to an old broom handle will represent the broom, and may have a cat or an owl perched on the handle. By staining the face and hands, wearing a wig of rope hair strung down from under the broad rimmed hat, hiding one or two teeth with black court plaster, and talking in a thin, squeaky voice, or a deep, doleful one, a very fair imitation of a witch may be obtained.

The most appropriate table for an evening of this kind is one of boards placed on trestles, but any large table will answer. Long strips of white paper, which can be bought by the roll, will answer for table cloths for the trestle table in attic or barn, but if an ordinary diningtable is used one can buy the Halloween luncheon sets, or paste figures of cats, witches, etc., on the linen cloth. With the trestle table the wooden plates, and tin or paper cups will harmonize nicely, and may be decorated by glueing cut-out figures to the rims of the plates and the outside of the cups. Plain white china mugs and plates may have similar decorations.

With the wooden plates a suitable centerpiece will be a black kettle swung from a tripod of fagot brooms. This kettle may be surrounded by pretty foliage, and may contain favors, comprising wierd artificial bugs, snakes, animals, etc., narrow ribbons running from these to each plate. Black tissue paper sprinkled with stars and moons may be tucked over the favors until the proper moment for their distribution.

Tiny cabbages prove ideal candle holders, scattered here and there over the table. Others may be made by cutting antic faces in rosy apples, oranges, turnips, potatoes, etc., and cutting a hole in

the top of each for the candle to rest in. Pumpkin lanterns should be hung all about the room, while here and there an iron skillet or kettle, surrounded with leaves and twigs, and holding burning salt and alcohol, will emit a wierd, ghostly light.

Oddly shaped gourds of small variety, and tiny egg plants, hallowed out and lined with waxed paper, will provide nut or bonbon receptacles. The place cards may be plain cards with quaint figures, sketched in ink or water colors, or small black cats, owls, witches, and the like cut from black paper and glued into place.

To the usual time-honored games and fortune telling tricks may be added a few of later origin, such as, the pendant ring. Suspend a ring from the chandelier by a thread. Provide each guest with a pencil in turn, and allowing three trials, let each endeavor by walking rapidly from one side of the room to thrust the pencil through the ring. Unless successful they must, of course, remain in single blessedness, at least until another Halloween rolls around to again predict their fate.

The game of fearful names will also prove interesting. The hostess in advance writes the names of all guests on slips of paper and places them singly in walnut shells, glueing these together again and keeping the men's and girls' separate. When ready to play this game the nuts are placed in two basins of water, and the men dip from the basin holding the girls' names, and vice versa, using a long handled spoon. When all have secured a nut they are opened, and if any two players have drawn each others names there seems every reason to expect a match from that quarter in the future, differing names bringing only unrequited affection.

Household Editor:—I have been a reader of the Michigan Farmer for 25 years and do so enjoy the paper. Now I want to ask a few questions which I hope someone will kindly answer. Does anyone know how to make that lovely pulled candy you always see on the fair grounds? It is full of holes, the white is flavored with vanilla, the pink with pineapple and the brown with molasses. I can make many kinds but this is my favorite, and I would like to know how it is made. Also, does anyone know how the coconut bar cookies and Mary Annes are made, which you buy at all the grocery stores?—An Interested Reader.

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# Farm Commerce.

## CITIES ARE SEEKING BETTER MARKETING CONDITIONS.

### Municipal Market at Lansing.

The municipal market of Lansing, located at Grand avenue and Shiawassee street, was opened Tuesday morning, October 7, and upwards of 60 farmers, with wagons loaded with produce, were on hand before six o'clock. Soon many Lansing citizens appeared with baskets on their arms and crowded about the wagons eager to purchase the fresh vegetables.

The mayor and several city officials were there early to see exactly how it worked and they were well pleased over the showing. A. P. Rogers, sealer of weights and measures, assisted by a patrolman, were in charge of the market and aided the farmers in placing their wagons. They inspected the measures used and found practically all of them correct. When the market opened the following Thursday morning, besides the vegetables and fruit the women sold cookies, cake and buns, for which there was a brisk demand. It is apparent that the city market is popular with the produce growers of Ingham and adjacent counties. Mayor Reutter has had the matter in mind for a long time and is delighted with the outcome.

### Flint Prepares for a Market.

The common council of Flint has voted to erect a concrete and steel market building on the city market site near the river on Smith street. The building will cost about \$7,000 and will contain "stalls" for loads of produce. The loads will stand on the concrete floor, backed up to the raised cement walk which will run through the middle of the market floor. Buyers will use this walk in making purchases from the wagons. The city is also building on the market site a shed containing nine stalls which will accommodate two teams each, and a hay shed in seven sections, each of which will shelter two loads of hay. These buildings will be thrown open for convenience of farmers and city buyers when completed.

### Pontiac Wants a City Market.

Pontiac city officials are making plans

for a municipal market but have not selected the site for same as yet. A possible site on the west side of Clinton street is held by the owners at \$16,000 and Mayor Johnson favors starting condemnation proceedings. Conversion of Mill street between Lawrence and Pike streets into a market place is also favored, with hitching posts placed along the street where farmers may tie their horses and carry on business from the wagons.

### Manistique Needs a Market.

The needs of Schoolcraft county in the way of a city market at Manistique are being agitated. Under present conditions as the Pioneer-Tribune of that city says, farmers must peddle their product about town and take the stuff home again when they do not sell out. With a city market, and commission men as an adjunct, the producer would always find a ready outlet for what he had to sell, and this plan would assist in developing the country more quickly than any other agency. It has been shown that Schoolcraft raises just as fine fruit and vegetables as can be found in the state, and business men should buy their supplies at home instead of going long distances even outside the state.

Kent Co.

A. GRIFFEN.

## HANDLING PERISHABLE PRODUCTS.

The value of the poultry and eggs used in a year in the United States is about \$750,000,000. About 10 per cent of these products produced on the farm are lost on account of decay before they reach the consumer. That means an annual loss of \$75,000,000 in this one industry. There are similar losses in other perishable food industries. The desirability of reducing these losses to a minimum is evident. They have been reduced to a considerable degree, due to improved methods of transportation and handling. People who do not produce anything edible at all are crowded into cities. The farmer must feed them. Getting perishable foods to the city consumer is a vast and important problem. The United States Department of Agriculture is doing much to improve the handling of such products

so as to reduce losses. And the predictions of the weather bureau as to whether it is going to be safe to ship products that would be spoiled if they were to become frozen have helped a great deal.

A good example of beneficial government aid is to be found in the case of the California citrus fruit industry. Ten years ago California oranges and lemons were in little demand by eastern fruit dealers. This was because of the high percentage of decay. The growers blamed many things for this rotting. Then the government took it up and after study found that mechanical injuries to the skin of the fruits permitted the entrance of spores of blue mould and that this mould caused the decay. The growers gloved the hands of the fruit pickers, changed the construction of the clippers, put springs under the wagons and in other ways protected the fruit skins. Now there is little decay and eastern cities in this country, and even cities in England, prefer California oranges and buy millions of them. The Department of Agriculture has also helped to make peach growing a great industry for the south. They are now shipped in good shape to the north. Proper handling with the aid of refrigeration has succeeded in getting Oregon raspberries as far east as Minneapolis in good order. The same government workers have made it possible to keep American grapes to add to our Christmas good cheer.

Transportation of perishable products becomes more and more important as the territory which must be drawn upon to feed our large cities becomes wider and wider. Eastern cities such as New York draw upon Georgia for peaches, Texas for onions, Washington for fish, Iowa for eggs and California for fruits. Although Michigan and Ohio have many large cities of their own to feed many of their products go east. Each product, from milk to watermelons, presents problems of its own. Refrigeration is probably the most important generally used help. The loss in each industry varies; in many it is being markedly reduced and study is going to mean reduction for others. Stopping to think about it all, it fills me with wonder at the fact that the loss is so small as it is.

Ohio.

E. J. CRANE.

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If you cannot provide bottle and mailing case, we have arranged with a large concern to provide a mailing case for six cents and a case and bottle for ten cents in stamps. When asking for mailing cases and bottle address Michigan Farmer, Detroit, but in sending the sample of milk be sure to address it to Michigan Farmer Laboratories, 674 Woodward avenue, Detroit.

Note.—If five cents in stamps are sent with each sample of milk or cream, for covering postage, your mailing case and bottle will be returned.

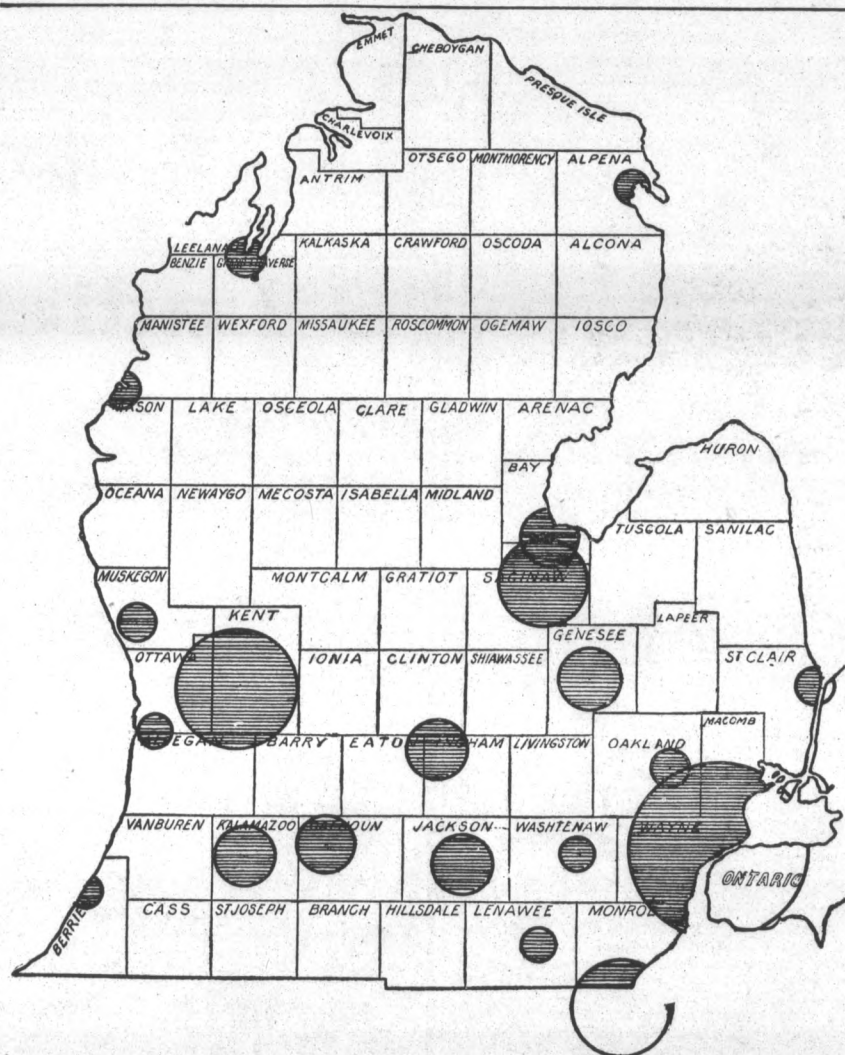
## A SUCCESSFUL SEASON

The first year of the reorganized fruit exchange at St. Joseph, Mich., is proving very successful. It is estimated that the exchange will handle between 250 and 300 cars of grapes this year, which is about 25 per cent of a normal output, the crop having suffered heavily from frost last spring.

A year ago 756 cars were loaded from this district, while in 1911, 1,150 cars were sent out, the latter year being the banner one in the history of the district.

Returns this year have been very satisfactory in spite of the short crop. The season is closing with basket selling at 20c, after having dropped from the opening price of 19c, down to 15c.

Care has been exercised in preparing the grapes for marketing. The state law and the rules adopted by the exchange on inspection and grading have been rigidly enforced. This has added to the benefits coming from the exchange, buyers being much please with their purchases.



The above map of lower Michigan shows 20 centers of population having over 10,000 people. The shaded circles are drawn to represent the probable territory from which the city residents draw supplies that are sold direct from farmers' wagons. There is an awakening interest in city markets, both on the part of consumers and producers, and as a result of the agitation councils of many cities have recently provided for markets while the fathers of other cities are contemplating ordinances making such provisions. In these columns we shall give these markets special attention during the coming year.



## Crop and Market Notes.

## Maine.

Waldo Co., Oct. 14.—Fall rains have changed the season from summer to autumn. Leaves are falling and indications point toward an early winter in Maine. The sweet corn crop in this section, owing to a backward spring, dry season, early frost, was fully 50 per cent below the average. The potato crop is well under way in harvesting, with a crop well up to the average. Some poorer pieces are only yielding about 160 bushels per acre while some extra good fields are producing nearly 400 bushels per acre. Potatoes fresh from the field are selling for 40c a bushel. The apple crop will be less than 50 per cent of the 1912 crop and very poor quality at that, but prices will bring out quite a good many barrels if not very choice fruit. Fresh eggs sell for 36¢@38¢; butter, dairy, 30¢@35¢; creamery 38¢@42¢ per lb. print.

## New York.

Columbia Co., Oct. 11.—Dry weather hit eastern Columbia county bad and the damage was increased by early frosts. Prices are bound to work high for consumers this winter. Butter 40¢; eggs 40¢; apples \$1.50@2.50; potatoes \$1@1.25 retail.

Columbia Co., Oct. 9.—The drought was broken Sept. 22, when one and three-fourths inches of water fell. Have had two good rains since. Pastures are revived and rye has been sown in good condition; wheat is little grown in this county. Many farmers are marketing their hay and straw; timothy hay and rye straw are selling at \$18 a ton; oat \$15; corn is \$1.10; oats 60¢; butter 32¢; eggs 36¢; cabbage scarce, selling at \$2 a bbl; onions and potatoes \$1 a bu; apples \$2.50 @3 per bbl.

## Pennsylvania.

Mifflin Co., Oct. 13.—The drought has been broken. Pasture is good. Wheat is looking good. Grain yielded fairly good, wheat going from 20 to 30 bu. to the acre; oats 30 to 50 bu; corn 25 to 50 bu. Prices: Wheat 85¢; oats 40¢; new corn 70¢; hay \$14 per ton; eggs 27¢; butter 30¢; apples \$1 per bu; potatoes 75¢.

Chester Co., Oct. 17.—Weather has been fine for the fall work. Corn is about all cut, but not much husked yet. Some wheat to sow yet. Considerable damage done by fly to the early sown wheat last year had a tendency to make sowing later this year, with some farmers. Farm products are selling for good prices throughout this section, and it looks as though they would go higher. Potatoes 80¢ per bu; wheat 87¢; corn 90¢; hay \$12 \$20.50 per ton; wheat straw \$8 per ton; oats 45¢; eggs 40¢; milk 4½¢@5¢ per qt.

## Ohio.

Ashtabula Co., Oct. 16.—Weather is cooler with frosts. Corn is all in shock. Farmers digging potatoes and threshing buckwheat which is a light crop. Potatoes rotting quite badly. The continued wet weather has much delayed bridge work, there being three large bridges yet to be completed that were destroyed by the spring flood. Dairy butter 30¢; beef, dressed, 8¢@10¢; pork 12¢; eggs 30¢; oats 40¢; wheat 90¢; potatoes 70¢@75¢; onions \$1 per bu.

Highland Co., Oct. 7.—Weather is fine; extra warm and dry. Corn is all cut and an average crop. Wheat sowing is the order of the day, about the usual amount being sown. A good many silos have been built and filled. Hay rather scarce and selling at about \$12 per ton. Hogs are scarce and high. Potatoes scarce, almost a failure. A good many summer and fall apples, but winter apples did not do well.

Fairfield Co., Oct. 11.—Corn is all cut and is about a half crop. Wheat seeding is about completed and the earlier sown fields are coming up nicely. The wheat crop for this year was very good in this section. The fruit yield was very light. Potatoes showed a small crop. Cloverseed is running well but the acreage is small. Cabbage, sweet potatoes and pasture are good. Wheat is selling at 90¢ per bu; oats 40¢; corn 55¢ for new and 80¢ for old; apples \$1 for picked and about 50¢ for wind-falls; peaches yielded light and are selling from \$1.25@2.40 per bu. Hogs are 8c, which is lower than recent prices. Milk cows rule from \$50@75. Hens are about 9¢; young chickens 15¢; turkeys very scarce and none are offered for sale at this date. Eggs 25¢ per dozen; butter 30¢; potatoes \$1.20; sweet potatoes \$1.

Columbiana Co., Oct. 11.—The month started in with plenty of rain and it has been nice and warm every day. Farmers are having a good chance to get their fall work done. Quite a good many have been husking corn but in some places it is hardly dry enough to crib. The potatoes that were caught by the frost a couple of weeks ago have mostly been dug but yielded a poor crop. There have been several sales around here and things seem to bring good prices, especially cows. Prices are from \$70@90 for common grade cows. Butter 30¢; eggs have raised to 32¢; potatoes have been selling for 80¢@85¢ but quite a few are holding for \$1.

Warren Co., Oct. 15.—Weather has been favorable for wheat sowing, and an average acreage is being put in. A small amount of rye is being sown. On Sept. 23 a killing frost occurred which did damage to late corn. Clover hulling is practically done. The acreage was large and the yield good. Seed is selling at \$5 per bu. Corn husking and shredding will begin next week. Hogs will be marketed early because of a short corn crop. Hog cholera is reported in almost every neighborhood. Local prices: Corn 70¢; wheat 92¢; apples \$1.25; potatoes \$1; sweet potatoes \$1.75; butter 27¢; eggs 27¢.

Harrison Co., Oct. 13.—We have been having a beautiful fall, and farmers are getting their work well along. Clover is about hulled and the yield is the best for three years. Apples are all picked and proved a very light crop. Sales are being

held almost every day and stock of all kinds selling high. Wheat is getting a fine start, it almost covering the ground now. We are trying alfalfa on the hills of Harrison county, and are having success where we are following instructions. Farmers are hauling coal and getting ready for winter. Wheat 90¢; corn 80¢; potatoes \$1; eggs 28¢; butter 30¢. Weather cool at present.

## Indiana.

Davies Co., Oct. 14.—Only two very light frosts have occurred up to date, not enough to injure late crops. We now have considerable garden stuffs such as green beans, cabbage, potatoes, tomatoes, more than at any time during the summer. We had several good rains about the middle of September which came in time for late crops of all kinds. Pastures are getting good, late corn doing well; fall sown grass and wheat look well. Our 50 per cent corn crop of August has jumped up to about 75 per cent. Late crops will also help out much. Corn cutting done and shredding has begun. Shredders will reap a great harvest this year. More corn has been cut and more wheat sowed than ever before. But a large part of our live stock has disappeared. New corn selling at 70¢; milk cows are scarce, \$50@100 apiece; potatoes \$1.30 per bu; wheat 90¢; butter 30¢; eggs 30¢; chickens 10¢ per lb; good hay \$15@18 per ton; timothy seed \$3.50 per bu; clover seed \$7@12 per bu. We are having the very best of fall weather, just an occasional shower since the heavy rains, and plenty of warm, sunshiny weather. Ideal conditions for getting fall work done.

Wayne Co., Oct. 14.—We have had extremely warm weather here this month until the 11th, when we had a shower, followed by a frost. A large acreage of wheat has been sown which is suffering from dry weather. Corn is drying very fast and some farmers are cribbing it. The yield will be heavy. The apple crop is good but not much demand for them. Good apples are selling for 60¢@75¢ per bu. Hog cholera is prevalent in some sections of the county, causing great loss.

Jay Co., Oct. 18.—No hog cholera in our county reported up to date, but a case is reported on the line in Adams county. Farmers are worried and are trying to guard against the spread of the disease. Clover seed is practically all hulled, a magnificent yield for the farmers this year. Potato crop scarce, selling for \$1 at stores now. Apples from the car command 75¢. Local crop is nearly a failure. Farmers report the millet yield the best in years.

## Illinois.

Perry Co., Oct. 6.—Farmers are rushing their work here, sowing wheat and grass seed, also harvesting stock peas. All crops are short except wheat. We only had two good rains during the summer months but have been having about enough during September and October. The thermometer reached 82 degs. today and we are having fine weather. Only had one light frost which did not damage. Had sweet corn, lima beans and tomatoes fresh from garden for dinner today. Eggs 25¢; butter 25¢; good apples 40¢; pears \$1; cabbage 5c lb; potatoes \$1.20 per bu; live geese 12c lb; hens 10c; young chickens 12c.

## Wisconsin.

Waushara Co., Oct. 14.—Very favorable weather has prevailed this fall. Potato digging is now the order of the day and the crop is fairly good. Farmers are holding a very large per cent of the crop for larger prices, the dealers now paying 50¢ per bu. Comparatively little wheat is sown here. Rye is up fine. Fall pastures are good. Prices: Oats 32¢; rye 58¢; wheat 90¢; barley 65¢. Live pork is 8c; veal 10¢@12¢ dressed; beef 4¢@6¢ per lb. Navy beans, hand-picked, are \$1.90 per bushel.

## Missouri.

Polk Co.—Abundant rains and unusually warm weather for the last 30 days has resulted in an exceptional growth of pastures. Considerable rye was sown for pastures, and wheat also promises well. The retail price of feed has decreased 10 per cent since the September rains, and buying and selling of live stock has received an impetus. Wheat selling at 83¢; corn 75¢; hay \$18; hogs 7½¢; eggs 15¢; butter 20¢. Seeding of wheat has progressed without hindrance, and the acreage will be an average, condition 100 per cent.

Phelps Co., Oct. 14.—Have had good rains this fall and most all farmers have sown all their wheat, there has been a large acreage sown this year. They are sowing a great deal of rye for winter pasture. Having lots of good pasture now. There was about a two-thirds corn crop raised. Live stock sells high.

## Kansas.

Cloud Co., Oct. 16.—A general rain has been falling over this part of the state, and was preceded by local showers. The moisture will improve fall grains, and wheat is in splendid shape for the winter. It is safe to say that this county will have nearly twice the usual amount of wheat another season, and the present favorable weather gives promise of a big crop next year. The grain is now bringing 78¢ per bu; corn 75¢. None of the latter grain is going to the elevators, feeders absorbing it all. Oats 50¢ per bu. Pastures are improving rapidly, and live stock will go into winter quarters in excellent condition. As a result of improved pastures, feed is declining in value. A large amount of cattle from other sections is being brought here for winter feeding. There are over 500 silos in this county, all of which are filled this fall. Corn fodder is about all cut. Cane and kaffir corn are being left until frost; these crops will make good fodder, but the seed crop will not get ripe unless frost holds off very late. Cattle and hogs are advancing in price, while horses and mules are lower, good 1,000-lb. mules now selling below \$100.

Trego Co., Oct. 15.—Wheat sowing is about finished. What wheat is up is (Continued on page 374).

## AUCTION SALE

Wednesday, Oct. 29, 1913, 1 o'clock, P.M.

Nostrand Herd of

## 25 JERSEY COWS, Grades &amp; Thor-oughbreds, and 1 JERSEY BULL On the Nostrand Farm

2½ miles north of Grand River Ave., on the Evergreen Road, 3½ miles North and East of Redford Village, Wayne Co. Prospective purchasers from distance desiring to take interurban will be met by auto at Grand River Ave. and Evergreen Road, between 10 and 12 o'clock.

TERMS—3 per cent discount for cash. One year's time good bankable notes, interest 6 per cent.

ELMER C. STARKWEATHER, Proprietor.

## 1000 Hereford Calves

Will be sold at PUBLIC SALE on Our Farm

THE CALVES are an extra lot, fat and of fine quality of the ZIH brand raised in Eastern Colorado. They will be sold in car load lots; steers and heifers separately. Come and see the best lot of calves ever offered for sale in Illinois.

Third Annual Mule Colt Show will also be held. Will sell and a few horses, among them six combined and broke to all sights YOU ARE WELCOME.

Mule Sale commences at 10:30 a.m. All stock loaded on cars free

Friday, Oct. 31 Tallula, Illinois

Charles C. Judy, TALLULA, ILLINOIS

## Dispersion Sale.

The entire stock of

Reg. Percheron Horses and Holstein Cattle

of A. H. DARLING, of Onondaga, Michigan.

WEDNESDAY, Oct. 29, 1913

On account of failing health I will sell at auction 30 head of horses and 24 head of cattle. One imported Stallion; 1 black 3-year Stallion; 2 yearling 8 allions; yearling Stallion; 3 fair Percheron Mares, supposed to be in foal; 1 black 4-year-old Mare, safe in foal; 1 Filly and 20 Grade Mares and Colts. 5 registered Cows, new milk; 1 registered 2-year-old Heifer, fresh soon; 4 Reg. Heifer Calves and 12 high grade cows. Take electric car to Kives Junction from Jackson.

D. BULLEN, Auctioneer. A. H. DARLING, Prop.

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GASOLINE, GAS, AND KEROSENE  
54 styles and sizes, 1½ to 40 H.P. Standard for 27 years. Recommended by users in all parts of the world. Use kerosene and other low grade fuels, besides gasoline and gas. Cheaper power. No watching. No Cranking to Start. Electric apparatus insures easy starting. Continuous running, summer or winter, day and night, if necessary.

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60 Days Free Trial 5 Year Guarantee

## FOR SALE

5000 White Pine hot bed sash, sizes 3ft. 6in. x 6ft. bottom rail in. x 4in. top rail 1½in. x 3¼in. stiles 1½x 3¼. muntins 1½x1½. 44 D. S. glass 6x7½in. Prices in lots of 25, \$1.25 each. These sash were built to order and cost \$3.50 each in car-load lots. 25,000 square feet second hand, 22 gauge corrugated iron measuring 26in. x 9ft. and 26in. x 10ft. at \$1.10 per square. 10,000 squares 1½ rubber roofing, with nails and cement, 50¢ per square. Buffalo House Wrecking & Salvage Co., Buffalo, N. Y.

## 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.  
169-621 Champlain Ave., N. W., Cleveland, Ohio.

## The Largest and Best Line of SHEPHERD PLAID SKIRTS

Delivered to your door by parcel post prepaid at manufacturer's prices. Skirts well made and guaranteed in every particular. A light weight skirt for \$2.50; heavy weight \$3. Exactly the same as retail for \$5 and \$6. Money back if not perfectly satisfied. Send at once for free samples of goods to select from and blanks for measurement.

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WHY NOT HAVE BEST LIGHT ?  
Steel Mantle Burners. Odorless Smokeless. Make coal oil produce gas—3 times more light. At dealers or prepaid by us for 25c. AGENTS WANTED.  
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LEARN AUCTIONEERING at World's Greatest School and become Independent with no capital invested. Winter term opens December 8th—following International Stock Show. Write today for free catalog. JONES NAT'L SCHOOL OF AUCTIONEERING, 14 N. Sacramento Blvd., Chicago, Ill. CAREY M. JONES Pres.

Farm Wanted—Want good Improved 40 acres in Eastern portion of State. Must be a Bargain. Will pay cash. Address, CHAS. DERRICK, R. No. 2, Fremont, Mich.

For Sale or Exchange for a farm or good income property. Tile Yard 1½ acres and two good houses. For particulars address owner. CHARLES LEE, North Star, Michigan.

## Farms and Farm Lands For Sale

100 Acre Farm—Half mile from Milford, Mich. Fine location. Good buildings. Price sixty-five hundred. Address, R. B. CLARK, Milford.

For Sale—In whole or part, 320 acre Southern Michigan farm. Good soil, buildings and fences. \$30 per acre. O.S. Schairer, 214 Dewey Ave., Swissville, Pa.

MICHIGAN Potato, Fruit and Dairy Farms at Prices and Terms to suit Purchaser. Write for free literature. ANDREWS & TUCK, Sidney, Michigan.

BUY NEW YORK FARMS NOW. Best lands, best crops, barns. Finest schools, churches and roads. For list, address McBurney & Co., 703 Fisher Bldg., Chicago, Ill.

## Beautiful Little Poultry &amp; Truck Farms

with nice homes, near Richmond. Send for our list. We have just what you want. Address Casselman & Co., 1018 East Main St., Richmond, Va.

## MICHIGAN FARMING LANDS

Near Saginaw and Bay City, in Gladwin and Midland Counties. Low prices. Easy terms. Good title. Write for maps and particulars. STAFFEL BROTHERS, 15 Merrill Building, Saginaw, (W. S.), Michigan.

Fertile Farms and unimproved lands in Delaware, diversified farming, live stock, delicious fruits and ideal homes. For information address, State Board of Agriculture, Dover, Delaware.

## Ogemaw Co., Mich., Cut Over Hard Wood Lands.

Adjacent to Rose City on D. & M. R. R. for sale cheap. For particulars address.

JACOB SCHWARTZ, Saginaw, Michigan.

## McClure - Stevens Land Co.

Successors to A. J. Stevens & Co. Established 1883. Farm, Fruit and Stock Lands. We own 20,000 acres of choice unimproved lands in Gladwin and Clare counties. Sold on easy payments. Interest 6 percent. Write for information. Gladwin, Michigan.

## A FINE DAIRY FARM

Of 160 acres near Morenci, Mich., well watered, fenced and tiled; strong clay loam upland and rich bottom land; double house, good barns and outbuildings; on main road, telephone and rural route, pleasant location two miles from the best small town in Michigan. Terms, \$100 an acre, part down, balance long time at 6%. Write or call on

C. A. WILSON, Agent, Morenci, Michigan

## Widow will Sacrifice for Immediate Sale

90 acres, 10 acres timber, balance under cultivation. 12-room house, good, plastered, papered, good condition; large barn, hen house, wood house, tool shed. Apples, pears, plums, grapes. 1½ miles to railroad town. \$1700, part cash.

Hall's Farm Agency, Owego, Tioga Co., N. Y.

## MARYLAND

## Money-Making Farm for Sale.

87 acres, 40 acres clear, balance wood, nice shade, barn and other outbuildings, 600 peach trees, 80 apple trees, 350 grape vines, 3 years old, 16 acres corn, 2½ acres strawberries, 1 horse, wagon, cart, harness, 3 plows, 2 cultivators, 2½ miles to Railroad Station and town, near school and church, free delivery. All included for \$2300. E. B. FIGGS, Real Estate Broker, 211 N. Division St., Salisbury, Md.

## For Sale For Cash—Good paying fruit and

than a mile from Flint, Mich. Modern 4-room bungalow, barn, chicken house, outside cement cellar, well and cistern. Buildings all new. 300 peach trees beginning to bear, also plums, cherries, raspberries, grapes and strawberries. \$4000. Sold with horse, chickens, farm implements, furniture and crop. Short walk to car line. Quick sale—move right in. Reason for selling—falling health. T. E. HANSEN, Flint, Mich., Atherton Road East. R. F. D. 1.



# Markets.

## GRAINS AND SEEDS.

October 21, 1913.

**Wheat.**—During the past week values have declined to a lower level, although on Monday there was a slight reaction from the lowest point reached. Crop and market news would appear to indicate that prices have now reached about their lowest figure, the market being supported by news of crop failure in India and drouth in South America. Farmers in America are also very slow about marketing this grain, both in the winter and spring wheat districts. On Monday deliveries of spring wheat were 1,584 cars short of the deliveries for the corresponding Monday in 1912 and winter wheat receipts were less than one-half those of a year ago. The bearish influences consist largely of a lack of demand for cash wheat, and the anxiety of Canadian dealers to get their holdings afloat before the shipping season closes. One year ago the price for No. 2 red wheat was \$1.10 per bu. Quotations for the past week were:

	No. 2	No. 1	Dec.	May.
Wednesday	93	93	94 1/4	98 1/4
Thursday	92	92	93	96 1/4
Friday	91	91	92	95 1/4
Saturday	91	91	92	95 1/4
Monday	91 1/2	91 1/2	92 1/2	96 1/2
Tuesday	91 1/2	91 1/2	92 1/2	96 1/2

Chicago, (Oct. 20).—No. 2 red wheat, 91 1/2@92c; Dec., 83 1/2c; May, 88 1/2c per bu.

**Corn.**—In spite of the decline in wheat values, corn prices have held steady and strong since a week ago. Everyone is aware of a short crop, and while this knowledge will cause a general substitution of other grains for corn, it nevertheless makes high prices for the cereal inevitable. Many sections that usually are exporters will not only not have any for sale this year, but will actually be importers of the grain. One year ago the price for No. 3 corn was 64 1/4c per bu. Quotations for the week are:

	No. 2	No. 2	Yellow.
	Mixed.	Mixed.	
Wednesday	71 1/2	72 1/2	72 1/2
Thursday	71 1/2	72 1/2	72 1/2
Friday	71	72	72
Saturday	71	72	72
Monday	71 1/2	72 1/2	72 1/2
Tuesday	72 1/2	72 1/2	72 1/2

Chicago, (Oct. 20).—No. 2 corn, 68 1/4@68 1/2c; No. 3, 68@68 1/4c; Dec., 67 1/2c; May 69 1/4c per bu.

**Oats.**—This grain has followed closely the tendency of the wheat market, and prices for the week past have ruled lower, although Monday saw an upturn of a fraction in quotations. There is a fair amount of offerings, and on the local market there exists a good demand for the product. One year ago standard oats were quoted at 36c per bu. Quotations for the week are:

	Standard.	White.
Wednesday	42 1/4	41 1/4
Thursday	41 1/4	41
Friday	40 1/4	40 1/4
Saturday	41 1/4	40 1/4
Monday	41 1/4	41
Tuesday	41 1/4	41 1/4

Chicago, (Oct. 20).—No. 2 white oats, 40c; standard, 39@40c; Dec., 38 1/4c; May, 41 1/4c.

**Beans.**—Transactions in this department have been carried on at a higher figure the past few days, cash beans for immediate and prompt shipment being quoted at \$1.95 per bu., Oct. \$1.95, and January \$2.

Chicago, (Oct. 20).—Market steady with light arrivals; supply almost entirely in the hands of dealers. Pea beans, hand-picked, are quoted at \$2.20 per bu; common \$1.50@1.75; choice red kidneys \$2.45@2.50, and white kidneys, nominal, \$3 per bu.

**Rye.**—Quotations for this cereal have advanced a cent during the week. Cash No. 2 is now quoted at 69c per bu. The market is dull. At Chicago the price for the same grade is 64 1/2@65c.

**Barley.**—Barley sales were closed at Detroit at \$1.55 per cwt. The cereal is quoted in Chicago at 48@52c per bushel, according to quality, and in Milwaukee malting barley is bringing 64c per bu.

**Cloverseed.**—This market is steady. Although in some sections, particularly in the southern counties of Michigan, Ohio and Indiana, there is an excellent yield of seed, in other sections the yield is only fair and the acreage very small. These influences so balance as to keep prices about steady. Prime spot is quoted at Detroit at \$7.80 per bu; Oct. and Dec., \$7.80; March, \$7.90; October alsike, \$10.25 per bu.

**Alfalfa Seed.**—Prime spot is quoted at \$7.25 per bu.

**Timothy Seed.**—A small advance is noted in this seed, prime spot selling at \$2.45 per bu.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in 1/4 paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.40; second, \$5.10; straight, \$4.90; 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, \$26.50 per ton.

**Hay.**—Condition of deal is unchanged. Carlots on the track at Detroit are: No.

1 timothy, \$16@16.50; standard, \$15@15.50; No. 2, \$14@14.50; light mixed, \$15@15.50; No. 1 mixed, \$13.50@14.

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

New York.—Prices rule about steady. Large baled, No. 1 timothy, 22; standard \$20.50; light clover mixed, \$19@20; heavy mixed, \$16@18 per ton.

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

Chicago.—Quotable higher as follows: Rye, \$8@9; oat, \$6.50@7; wheat, \$6.50@7. New York.—Steady. New rye straw, \$19@20 per ton.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Butter of good quality is firmer than a week ago, top grades showing some advance in some markets. Creameries are quoted at 1c lower in the local market, but are very steady, while dairies and packing stock remain unchanged. Quotations now are: Extra creamery, 30c per lb; firsts, 29c; dairy, 23c; packing stock, 21c per lb.

Elgin.—Market firm at 29 1/2c per lb.

Chicago.—Extra creamery is up 1/2c under a good demand which also extends to the cheapest grades. Medium qualities barely steady and rather hard to move. Packing goods easier and fractionally lower under increasing offerings. Quotations are: Extra creamery 29 1/2c; extra firsts, 27 1/2@28c; firsts 25@26c; seconds 24@24 1/2c; lades 23 1/2@24c; packing stock 22c.

New York.—Both creameries and dairies have made a good advance, the better grades showing the greatest gain. Packing stock 1/2c lower. Quotations are: Creamery extras 31 1/2@32c; firsts 28@30 1/2c; seconds 25 1/2@27 1/2c; state dairy, finest, 30@31c; good to prime 27@29c; common to fair 24@26c; packing 20 1/2@23 1/2c as to quality.

**Eggs.**—The egg situation shows little change from last week, good stock commanding outside figures at all points. Light receipts are giving the local market a very firm tone but quotations remain unchanged. Current offerings cancelled, quoted at 27c per dozen.

Chicago.—With receipts showing a gradual decline this market is very firm, fresh laid and fresh gathered stock selling readily. Firsts are quoted 1/2c higher. Quotations: Miscellaneous lots, cases included, 17@25c, according to quality; do cases returned, 16 1/2@24 1/2c; ordinary firsts, 22@23c; firsts 25 1/2@26 1/2c; refrigerator stock in fair demand at 23 1/2@24c for April firsts.

New York.—This market is firmer the better grades show an advance of a full cent over last week. Quotations are: Fresh gathered extras 34@36c; extra firsts 31@33c; firsts 29@30c; western gathered whites 30@40c per dozen.

**Poultry.**—Receipts of poultry are lighter this week and include a considerable proportion of poorly conditioned stock. Offerings of quality are higher, chickens moving up a cent and geese being quoted 2c higher. Poor stuff hard to move. Quotations: Live.—Springs 14 1/2@15c; hens 14@14 1/2c; No. 2 hens 10@12c; old roosters 10@11c; turkeys, 17@18c; geese, 13@14c; ducks 15@16c.

Chicago.—Supply ample, making discrimination against poorly finished stock possible. Turkeys are noticeably lower, due to limited demand. Chickens are about steady, while ducks of good quality are quoted 1c higher. Quotations on live are: Turkeys, good weight, 17c; others 12c; fowls, general run 13 1/2c; spring chickens 13 1/2c; ducks 13@14c; geese 8@13c; guinea hens \$4@6 per dozen.

**Cheese.**—Steady to firm at last week's figures. 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.

**Veal.**—Rather scarce in the local market. Demand moderate. Quotations are: Fancy 12 1/2@13c per lb; common 10@11c.

Chicago.—Steady to firm; condition of market improving. Quoted as follows: Fancy 15c per lb; good to choice 90@110 lbs., 13 1/2@14 1/2c; fair to good 60@90 lbs., 11@13 1/2c.

## FRUITS AND VEGETABLES.

**Apples.**—Supply is about as large as last week. Good grades rule from \$2.50@3.75 per bbl. At Chicago values rule from \$2.50@5.25 per bbl. No. 1 Jonathan's selling best. Bulk apples are in best demand now owing to activity of peddlers.

**Grapes.**—In 8-lb. baskets sales are made at 25@26c. At Chicago the market is fair with receipts small. General quotation, 25@29c for 8-lb. baskets.

**Pears.**—Fair supply and selling at \$1.25@1.50 per bu. for Bartletts. Duchess at \$3.25@3.50 per bbl.

**Potatoes.**—Although the trade seems dull just now and prices are unchanged from last week, there is a common opinion that values are destined to go higher. Quotations: In bulk, 60@65c per bu; in sacks, 65@70c per bu. At Chicago trade rules higher. Receipts last week were smaller. The demand is good, with Michigan stock going at 65@70c.

**Cabbage.**—Steady at last week's figures. Good quality quoted at \$2@2.25 per bbl.

## PRICES ON DETROIT EASTERN MARKET.

There was a smaller number of farmers' wagons on the eastern market on Tuesday morning. Buyers were numerous enough to keep values firm with last week's quotations. Potatoes of good grade selling at about 85c per bu. Cabbages are not plentiful, with white selling at 50c and red from 60@65c per bu. Apples

are firm at 75c@1.50, the majority of the offerings being poor in quality. Pears range from 75c@1 per bu; quinces \$2.50; lettuce 40@45c; endive 45c; peppers 60@75c; pie pumpkins 50c per bu; celery 25@30c large bunch; squash 50c bu; cauliflower 75@85c; cottage cheese 5c pint; pop corn 75c bu. Loose hay is in fair supply with prices averaging \$15@18 per ton.

## THE LIVE STOCK MARKETS.

Buffalo.

October 20, 1913.

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

Receipts of stock here today as follows: Cattle 250 cars; hogs 125 double decks; sheep and lambs 65 double decks; calves 1000 head.

With around 250 loads of cattle on our market here today, and 19,000 reported in Chicago, our cattle market was very uneven. Cattle with good quality and finish, weighing from 1,300 to 1,450 lbs. selling from 5@10c lower than last Monday. The handy weight butcher cattle that showed good finish and good heifer stuff selling from 10@15c higher than last week. Cow stuff about steady, except trimmers, which sold some lower. The cattle that was anyways off in quality or lacked finish sold 10@15c per cwt. lower. At the close of the market there was about a dozen loads left over, mostly heavy cattle.

We quote: Best 1350 to 1450-lb. native steers, \$8.50@8.75; best 1200 to 1300-lb. do, \$8.25@8.50; best 1100 to 1200-lb. do, \$8@8.25; coarse and plain weighty steers native, \$7.25@7.50; best Canada steers 1350 to 1450-lbs., \$7.85@8.25; do 1150 to 1250, \$7.25@7.75; choice handy steers, 1000 to 1100, \$7.75@8; fair to good steers, 1000 to 1100, \$7.25@7.50; grassy 800 to 1000-lb. steers, \$6.25@6.75; best cows, \$6.25@6.75; butcher cows, \$5@6; cutters, \$4.25@4.50; trimmers, \$3.85@3.90; medium butcher heifers, \$6.50@7; best heifers, \$7.50@7.75; stock heifers, \$4.50@5; common stock heifers, \$4@4.25; best feeding steers, \$7@7.25; fair to good do, \$6.25@6.75; common light stock steers, \$5@5.25; best butcher bulls, \$6.50@7; bologna bulls \$5.25@5.75; stock bulls, \$5@5.50; best milkers and springers, \$7@8; common to good do, \$5@6.00.

We had a liberal supply of hogs today and a slow market at the start; prices generally 5@10c lower. Few hogs sold at \$8.60, but the bulk landed around \$8.50. Pigs and lights \$7.75@8; roughs \$7.50@7.75; stags \$6.50@7.50.

The sheep and lamb market was active today; prices on lambs quarter higher than the close of last week; most of the choice lambs selling from \$7.65@7.75. Sheep market steady. Look for lower prices on lambs the last of the week as we are too high compared with other markets.

We quote: Choice lambs, \$7.65@7.75; cull to fair do, \$6@7.50; yearlings, \$5.50@6.25; bucks, \$3@3.50; wethers, \$5.25@5.35; handy ewes, \$4.75@5; heavy ewes, \$4.50@4.65; cull sheep, \$3@3.50; veals, choice to extra, \$11@11.50; fair to good \$10@10.50; heavy calves, \$5.50@8.

Chicago.

October 20, 1913.

Cattle. Hogs. Sheep.  
Received today ..... 17,000 40,000 50,000  
Same day last year. 24,296 34,454 57,403  
Received last week. 50,718 141,320 167,883  
Same week last year. 65,949 116,637 147,392

The late slump in prices caused the receipts of cattle to fall off sharply today, and the better class sold about a dime higher, others ruling firm. Receipts embraced 42 cars of good cattle from Alberta. Hogs were active at an average decline of 5c, sales ranging at \$7.65@8.50. Hogs marketed last week averaged 210 lbs., compared with 217 lbs. a month ago, 226 lbs. a year ago, 222 lbs. two years ago and 257 lbs. three years ago. Sheep and lambs were in good demand today at former prices, and the best lambs went a little higher, prime range lambs bringing \$7.30. Receipts were largely from Montana.

Cattle prices were on the down-grade most of last week, because of increasing receipts at a time when the general requirements of buyers were not particularly large. The strictly yearling prime beefs sold as high as a week earlier, these being in active request, and a new high record for the year was made when a sale was made of 15 fancy 849-lb. steers at \$9.60. The most striking feature of the market was the large sales of prime yearling steers and heifers mixed at \$9@9.55, with the better class of heavy steers selling at \$8.85@9.20. Steers sold largely at \$7.85@9.35, the common to fair light-weight grassy lots bringing \$7@8, and a few inferior steers going as low as \$6.75. Very good cattle of strong weights brought \$8.50, and medium lots brought \$8.10 and over, while butchering cows and heifers found an outlet at \$4.90@8.25, with scattering sales of a few head of fancy heifers at \$8.50@9.50. Cutters brought \$4.30@4.85, canners \$3.25@4.25 and bulls \$4.85@7.80. Declining prices helped to increase sales of stockers and feeders, the former going at \$5.50@7.60 for inferior to prime selected lots and the latter at \$6.50@7.75, while stock and feeding cows and heifers brought \$4.65@6.90 and stock calves \$7.15@7.75. An important factor in the stocker trade is furnished by large importations by the way of Buffalo from Ontario, many finding their way to Pennsylvania. This acts to weaken prices on this side of the line by checking the eastern demand in this market. Calves were bought freely at \$5@11.35, and milch cows sold fairly at \$50@110 each. Late in the week calves slumped to \$4.25@10.50, and cattle of most kinds,

the best excepted, sold 40@60c lower than two weeks ago, heavy steers catching in the worst. Late in the week a train of 15 cars of Canadian stockers and feeders arrived.

Hogs underwent some rallies last week because of smaller receipts but there was not much stability to prices, and reactions followed. Speculators were good buyers at times, but it happened rather frequently that when they tried to resell their purchases they had to accept lower prices. Whenever eastern shippers failed to buy hogs freely the market was apt to weaken, provided the receipts were of normal proportions. Pigs continued numerous, shipments being largely from cholera-stricken sections of Iowa, and sales were made at comparatively low prices, although the insatiable demand for fresh pig pork furnished a good outlet, packers making liberal profits. There is a lack of the usual good fall demand for provisions, and packers are planning to place the hog market on a lower basis for their packing operations during the winter packing season. Prime butcher hogs of medium weights have been the highest sellers, and prime light hogs sold at a further discount. Provision prices have declined of late. The close of the week saw hogs sell at \$7.75@8.50, with one sale at \$8.55. A week earlier hogs brought \$7.80@8.65. Hogs weighing from 225 to 275 lbs. went highest, while pigs brought \$4.50@7.90, stags \$8.30@8.60, boars \$1.50@3 and throwout packing sows \$6.75@7.70. Hogs sold the lowest of any time since early in May.

Sheep and lambs arrived less freely last week than a short time ago, with lambs greatly predominating, and feeder lambs comprising a big share. The feeder trade was extremely active all the time, and prices were well maintained generally, great numbers going to the country, especially to Michigan. Packers were able to force some sharp breaks in prices for mutton lambs, however, having little competition to face, whereas buyers of fleshy feeders had to compete with slaughterers. Sheep were relatively scarce and proved slower to weaken than lambs. At the week's close most fat lambs were 10@20c lower than a week earlier, but matured sheep were generally no lower. Lambs closed at \$5@7.10, yearlings at \$4.75@5.75, wethers at \$4.40@5, ewes at \$2.50@4.60 and bucks at \$3.25@3.75. Feeder lambs brought \$5.75@6.80, feeder ewes \$3@4.85 and breeding ewes \$4@5.25.

## CROP AND MARKET NOTES.

(Continued from page 373).

looking fine. The prospects for a crop next year were never better. Five inches of rain during September has thoroughly soaked the sub-soil. About 75 per cent of the usual acreage is being sown to wheat this fall. The weather for the past month has been ideal, only one frost so far this fall. The local market is as follows: Wheat 85c; corn 87c; oats 50c; eggs 25c; butter 20c; butter fat 28c.

## Nebraska.

**Hitchcock Co., Oct. 11.**—The past month has made a great change to cooler weather which reminds us that winter is coming. We have had several nice rains lately that are helping greatly towards putting the ground in shape for another crop. People are all busy seeding wheat. They are putting out a large acreage, from one to 400 acres. Some fields are looking up horses for eastern markets, paying from \$150@200 each for good sound horses that are fat. Cattle are in good demand at good prices. A car of potatoes has been shipped in and selling at 90c per bu.

**Antelope Co., Oct. 9.**—September, in this section of the state, was a very good month for doing work. There were two small rains that wet down four or five inches, but aside from this it has been dry and damage to crops has been large from lack of moisture. Corn is about ready to shock and threshing is practically done. Yield of small grain was light, but the quality was very good. Potatoes are very poor, hay is light. Stock looks good, although there have been a few cases of cholera and hogs are moving freely towards markets. They are worth \$7.20 per cwt; hens 10@12; corn 65c per bu; oats 43c; butter 25c; cream 31c; eggs 20c; hay \$9 per ton delivered. Horses, sheep and cows are scarce and high.

**Pierce Co., Oct. 8.**—The early part of September was warm but the latter part was cool enough to be pleasant and comfortable to do work. Two light showers during that month kept the grass looking well and furnished stock with pasture. Live stock on pasture is as a result looking well and will enter the winter in good condition. Plenty of feed is in sight for winter feeding. On local markets hens are selling at 10@12c per lb; hogs \$7.30 per cwt; milch cows are hard to find at from \$50@80 per head at public sales. Horses are more reasonable in value than other stock.

## South Dakota.

**Deuel Co., Oct. 11.**—Not much rain and farmers are busy digging potatoes which run from 75 to 200 bushels per acre. Price is 45c per bu; threshing is nearly all done. Not much plowing done this fall. Cattle and hogs are a good price and not many for sale.

## North Dakota.

**Foster Co., Oct. 7.**—Since the last report, threshing is finished; wheat will average about 10 bushels per acre; barley 30; flax 10. Potato yield is not as heavy as was expected earlier in the season. Fall seeding of rye is now on, with plenty of rain to start it out nicely. The fall run of poultry is scarce, butter selling at 30c; eggs 25c. About 15 cars of cattle on stalk corn and millet hay in feed lot, and they are doing fine for this class of feed.



## THIS IS THE LAST 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 morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

## DETROIT LIVE STOCK MARKETS.

Thursday's Market.  
October 23, 1913.

## Cattle.

Receipts, 1367. Bulls and canners are steady; others 10c higher than last week. We quote: Extra dry-fed steers and heifers, \$8; steers and heifers, 1000 to 1200, \$7.50@8; do 800 to 1000, \$6.75@7.25; do that are fat, 500 to 700, \$6@6.50; choice fat cows, \$5.75@6.25; good do, \$5.25@5.50; common do, \$4.25@4.50; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@5.75; stock bulls, \$4.75@5.25; choice feeding steers, 800 to 1000, \$6.75@7.25; fair do, 800 to 1000, \$6.50@6.75; choice stockers, 500 to 700, \$6.25@6.75; fair do, \$6@6.25; stock heifers, \$5.25@5.75; milkers, large, young, medium age, \$6@8.5; common milkers, \$4@5.0.

Bishop, B. & H. sold Sullivan P. Co. 2 cow and bull av 905 at \$5.25, 2 steers av 830 at \$6.75, 6 butchers av 725 at \$6.25, 5 cows av 874 at \$4.25, 1 bull weighing 1400 at \$6, 13 butchers av 680 at \$6, 4 do av 725 at \$6.75, 3 cows av 910 at \$4.50, 1 do weighing 1130 at \$6, 2 do av 1050 at \$6, 15 do av 841 at \$4.25, 2 do av 1060 at \$5.50, 13 canners av 815 at \$4.20, 10 do av 860 at \$4.20, 1 do weighing 789 at \$4, 26 steers av 1071 at \$7.40, 2 do av 765 at \$6.75, 1 bull weighing 1050 at \$6, 2 do av 1215 at \$6; to Rattkowsky 9 cows av 1002 at \$5, 1 bull weighing 1120 at \$5.75, 2 cows av 1075 at \$5.10; to Parker, W. & Co. 2 canners av 805 at \$4, 2 do av 795 at \$3.75, 6 do av 873 at \$4, 2 bulls av 780 at \$5.75, 22 steers av 1085 at \$7.90; to Jones 2 stockers av 695 at \$6.60; to Kappenberg 14 feeders av 811 at \$6.50; to Hintz 25 stockers av 617 at \$5.75; to Cole 12 do av 570 at \$5.50; to Applebaum 4 cows av 875 at \$4.80; to Bresnahan 3 stockers av 720 at \$5.75.

Roe Com. Co. sold Sullivan P. Co. 3 cows av 933 at \$4.40; to Rattkowsky 3 bulls av 587 at \$5.50, 9 cows av 888 at \$5.25; to Hammond, S. & Co. 7 heifers av 436 at \$5.50, 4 do av 717 at \$6; to Lehman 10 feeders av 736 at \$6.50, 3 stockers av 517 at \$6; to Newton B. Co. 16 cows av 901 at \$5; to Applebaum 4 heifers av 480 at \$5; to Parker, W. & Co. 18 butchers av 888 at \$6.25; to Trumbull 35 stockers av 590 at \$6; to Breitenbeck 2 heifers av 730 at \$6; to Mich. B. Co. 1 bull weighing 1270 at \$6, 1 do weighing 1140 at \$6.25; to Rattkowsky 3 cows av 873 at \$5.25; to Grant 2 do av 1050 at \$4.65, 2 steers av 800 at \$6.25.

Spicer & R. sold Newton B. Co. 13 butchers av 810 at \$6.40; to Sullivan P. Co. 1 bull weighing 1770 at \$6.25, 4 cows av 1022 at \$4.15; to Rattkowsky 6 butchers av 748 at \$5.50; to Kamman B. Co. 9 butchers av 953 at \$6.70; to Ford 5 feeders av 1014 at \$7; to Hirschleman 19 butchers av 743 at \$6, 6 do av 753 at \$6.30, 1 bull weighing 760 at \$6; to Hammond, S. & Co. 4 cows av 880 at \$4.25; to Ford 10 feeders av 907 at \$6.50.

Haley & M. sold Kull 23 steers av 836 at \$7, 1 do weighing 940 at \$7.25, 13 butchers av 702 at \$6.10; to Breitenbeck 19 do av 753 at \$6.35, 4 cows av 1020 at \$4.50, 1 bull weighing 750 at \$5.75, 15 cows av 862 at \$4.80; to Newton B. Co. 25 butchers av 788 at \$6.25; to Lowenstein 9 stockers av 561 at \$5.90, 6 do av 466 at \$5.75; to Newton B. Co. 3 bulls av 1150 at \$5.75; to Rattkowsky 5 cows av 1010 at \$5.60; to Sullivan P. Co. 4 do av 1000 at \$5.25, 3 butchers av 817 at \$6.50, 3 cows av 1137 at \$5.85; to Haveland 14 stockers av 628 at \$6.30; to Thompson Bros. 1 cow weighing 870 at \$4; to Kamman B. Co. 19 butchers av 976 at \$6.85; to Marx 12 do av 1047 at \$6.20; to Thompson Bros. 2 do av 805 at \$6; to Cooke 1 heifer weighing 620 at \$6, 3 steers av 847 at \$6.75; to Marx 2 butchers av 870 at \$6, 5 steers av 970 at \$7; to Rattkowsky 7 butchers av 470 at \$5.50, 1 cow weighing 980 at \$4; to Marx 4 butchers av 595 at \$6.10.

Johnson sold Kappingberg 7 feeders av 856 at \$6.25.

Same sold Mason B. Co. 15 butchers av 687 at \$5.75.

Same sold Applebaum 4 heifers av 590 at \$5.

## Veal Calves.

Receipts, 569. Market steady. Best, \$10@11; others, \$7@9.50; milch cows and springers, \$5@10 lower.

Bishop, B. & H. sold Sullivan P. Co. 1 weighing 150 at \$11, 1 weighing 140 at \$11, 5 av 155 at \$11; to Parker, W. & Co. 3 av 130 at \$10.50, 2 av 125 at \$11, 2 av 185 at \$11, 4 av 135 at \$10.50, 10 av 143 at \$11; to Hammond, S. & Co. 3 av 120 at \$9.50, 1 weighing 140 at \$9, 3 av 130 at \$9, 10 av 146 at \$11; to Nagle P. Co. 2 av 130 at \$10.50, 3 av 160 at \$10.75, 4 av 145 at \$10.75, 6 av 155 at \$10.25, 14 av 150 at \$11; to McGuire 7 av 145 at \$11, 7 av 40 at \$10.25, 4 av 150 at \$10.

Spicer & R. sold Newton B. Co. 5 av 165 at \$11, 1 weighing 125 at \$11; to Parker, W. & Co. 2 av 125 at \$10.50, 22 av 150 at \$10.60, 5 av 150 at \$11.

Roe Com. Co. sold Sullivan P. Co. 2 av 175 at \$11, 1 weighing 150 at \$9; to Thompson Bros. 2 av 160 at \$10.

Haley & M. sold Parker, W. & Co. 3 av 185 at \$11, 4 av 135 at \$11, 5 av 150 at \$11, 1 weighing 260 at \$7, 2 av 185 at \$10.50, 14 av 175 at \$11, 12 av 135 at \$11; to Newton B. Co. 5 av 60 at \$11, 7 av 140 at \$11, 2 av 170 at \$10.50.

## Sheep and Lambs.

Receipts 5529. Market steady. Lambs

10c lower than on Wednesday. Best lambs, \$7.10@7.15; fair to good lambs, \$6.25@6.75; light to common lambs, \$5@6; fair to good sheep, \$4@4.50; culls and common, \$2.75@3.

Bishop, B. & H. sold Parker, W. & Co. 120 lambs av 75 at \$7.25; to Sullivan P. Co. 65 do av 75 at \$7, 21 sheep av 95 at \$3.50, 13 lambs av 57 at \$6.35, 53 do av 55 at \$6.25, 27 do av 60 at \$6, 16 do av 60 at \$6.35, 14 do av 55 at \$6.50, 20 sheep av 100 at \$3.75, 11 do av 105 at \$3.75, 26 do av 110 at \$4.50; to Kull 30 lambs av 80 at \$7, 18 do av 70 at \$7; to Hammond, S. & Co. 7 do av 65 at \$7; to Sullivan P. Co. 25 sheep av 110 at \$4.25, 17 do av 85 at \$3.25; to Nagle P. Co. 30 do av 100 at \$4.25, 15 do av 90 at \$4.25, 15 do av 90 at \$4.25, 15 do av 90 at \$4.25, 13 lambs av 55 at \$6.25, 12 sheep av 100 at \$4.25, 13 do av 115 at \$3.25, 148 lambs av 70 at \$7, 268 do av 75 at \$7.25, 254 do av 70 at \$7.15, 277 do av 80 at \$7.10; to Hammond, S. & Co. 15 do av 75 at \$7.25, 24 sheep av 100 at \$4.25; to Sullivan P. Co. 19 lambs av 50 at \$6.25, 5 sheep av 110 at \$4.25.

Haley & M. sold Nagle P. Co. 110 lambs av 75 at \$7.10, 11 sheep av 105 at \$3.50, 23 do av 120 at \$4.25, 105 lambs av 75 at \$7.15, 55 do av 77 at \$7.25, 55 do av 75 at \$7.15, 91 do av 78 at \$7.10, 10 sheep av 97 at \$3, 12 do av 90 at \$4.25, 25 do av 115 at \$4, 13 do av 110 at \$4.25, 13 lambs av 50 at \$6.25, 10 sheep av 125 at \$4.25, 10 do av 90 at \$3, 23 do av 115 at \$4.25; to Parker, W. & Co. 11 lambs av 80 at \$7.25; to Newton B. Co. 79 do av 75 at \$7, 32 do av 49 at \$6.50.

Roe Com. Co. sold Thompson Bros. 14 lambs av 65 at \$6.35.

Taggart sold Hammond, S. & Co. 42 lambs av 60 at \$6.65, 5 sheep av 120 at \$4. Spicer & R. sold Newton B. Co. 11 sheep av 95 at \$4, 23 lambs av 55 at \$6.75, 12 do av 65 at \$6.75, 17 sheep av 80 at \$4; to Thompson Bros. 11 do av 75 at \$3.50, 64 do av 87 at \$4.65; to Parker, W. & Co. 54 lambs av 75 at \$7.25, 25 do av 60 at \$6.50.

## Hogs.

Receipts, 6241. Tops, \$8.10; light to good butchers, \$8@8.10; pigs, \$7@7.25; heavies, \$8@8.10.

Roe Com. Co. sold Sullivan P. Co. 600 av 180 at \$8.10, 51 av 165 at \$8.

Bishop, B. & H. sold same 160 av 175 at \$8.10.

Roe Com. Co. sold Newton B. Co. 174 av 163 at \$8.

Spicer & R. sold Hammond, S. & Co. 450 av 190 at \$8.10.

Bishop, B. & H. sold same 2,800 av 180 at \$8.10, 710 av 170 at \$8.05, 515 av 150 at \$7.

Haley & M. sold Parker, W. & Co. 580 av 185 at \$8.10.

## Friday's Market.

## Cattle.

October 17, 1913

Receipts this week, 1497; last week, 1587; market steady.

We quote: Extra dry-fed steers and heifers, \$8; steers and heifers, 1000 to 1200, \$7@7.50; do 800 to 1000, \$6.50@7; grass steers and heifers that are fat, 500 to 700, \$5.50@6.50; choice fat cows, \$6; good do, \$5.25@5.50; common do, \$4.25@4.50; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@6; stock bulls, \$5@5.25; choice feeding steers, 800 to 1000, \$6.50@7; fair do, 800 to 1000, \$6.40@6.75; choice stockers, 500 to 700, \$6.25@6.75; fair stockers, 500 to 700, \$6@6.25; stock heifers, \$5@5.50; milkers, large, young, medium age, \$7@8.5; common milkers, \$4@5.0.

## Veal Calves.

Receipts this week, 543; last week, 561; market steady. Best, \$10@11; others, \$5@9.50.

## Sheep and Lambs.

Receipts this week, 6261; last week, 8244; market steady. Best lambs, \$6.75; fair to good lambs, \$6.25@6.50; light to common lambs, \$5@6; fair to good sheep, \$3.75@4.25; culls and common, \$3@3.50.

## Hogs.

Receipts this week, 7015; last week, 7389; market slow; 5c lower than yesterday's average.

Range of prices: Light to good butchers, \$8.25@8.30; pigs, \$7@7.75; mixed, \$8.25@8.30; heavy, \$8.25@8.30.

## INTERNATIONAL ENTRIES CLOSE NOVEMBER 1.

Readers who contemplate making exhibits at this year's International should bear in mind that entries close November 1, and that no time should be lost in making entries to get them in before the final rush.

## CATTLE FEEDERS, ATTENTION.

In the issue of Sept. 27 we published an advertisement for Harry I. Ball, of Fairfield, Ia., in which he offered for sale 100 head of feeding steers and his services in securing others at a commission of 50 cents per head. Following our policy of investigating the reliability of advertisers we wrote a bank and a leading merchant in Fairfield, both of whom replied in his favor, before the advertisement was inserted. As a result of the advertisement one of our subscribers went to Fairfield to buy, but advises us that he found the cattle infected with pink-eye and the reputation of the advertiser unsavory. Further investigations are under way and until same are completed we would advise readers to suspend their confidence in this advertiser, whose copy was accepted by us in good faith after investigation as above noted.—The Lawrence Publishing Company.

American cattlemen have been holding thousands of Mexican cattle in bond in El Paso and at other places on the international boundary line, waiting for final action on the tariff bill. Cattlemen are permitted to hold such cattle in bond for a period of six months.



## HEWO BELGIANS They Are Here!

H. & H. Wolf, importers of Belgian Horses exclusively, advise old and prospective patrons that their new 1913 importation is now in their barns. It is in all respects by far the most select lot of horses of this breed that have ever been stabled in their barns. Big, weighty, type drafters of quality all through, that challenge comparison with the Best Anywhere. A select lot of mares, too. Get our terms and Guarantee. This will interest you as much as the horses.

**Hewo Stock Farm**  
Wabash, Indiana  
More than a quarter century  
with the breed.

## We Want HAY &amp; 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.

**2,000 FERRETS** They hustle rats and rabbits. Small, medium and large. Prices and book mailed free. NEWELL A. KNAPP, Rochester, Ohio.

**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 Butter & Cheese Co., 31-33 Griswold St., Detroit, Mich.

## BREEDERS' DIRECTORY.

## CATTLE.

## Aberdeen-Angus.

Herd, consisting of Trojan Erics, Blackbirds and Prides, only, is headed by Egerton W. the GRAND CHAMPION bull at the State, West Michigan and Bay City Fairs of 1912 and the sire of winners at these Fairs and at the INTERNATIONAL, Chicago, of 1912. WOODCOTE STOCK FARM, Ionia, Mich.

**GUERNSEYS**—Reg. Tuberculin Tested. Windsor, Mich. Waterbury, Mich. J. K. BLATCHFORD, Auditorium Tower, Chicago, Ill.

**Guernsey Bull** ready for service. Large, thrifty top notcher. Write today for description and price. G. A. Wigent, Watervliet, Mich.

**Purebred Registered HOLSTEIN CATTLE**  
The Greatest Dairy Breed  
Send for FREE Illustrated Booklets  
Holstein-Friesian, Assoc., Box 164, Brattleboro, Vt.

1 Holstein Bull.....\$900  
1 Holstein Bull.....\$100  
3 Holstein Bulls.....\$200  
1 Holstein Bull.....\$250

Our sire is brother to 3 world record cows. The dams are choice with large A. H. O. records. Quality considered these are very good. LONG BEACH FARMS, Augusta, (Kalamazoo Co.) Michigan.

**FOR SALE**—Registered Holstein bull 18 mos. old. Also bull calves. Excellent breeding. TRACY P. CRANDALL, Howell, Michigan.

**A FEW CHOICE** Holstein Friesian Bull Calves for sale. A. R. O. Stock. GREGORY & BORDEN, Howell, Michigan.

**For Sale**—reasonable prices, choice registered HOLSTEIN SIRE, ready for service. HATCH HERD, Ypsilanti, Mich.

**REGISTERED HOLSTEINS** HOBART W. FAY, Mason, Michigan. Farm right in the city, only a few minutes from Jackson and Lansing, electric cars from both cities every hour.

**Buy A World Record Holstein Bull** NEXT TIME. We have 2 with 75% same blood of 3 world record cows. Great bargains at \$250 each. LONG BEACH FARMS, Augusta, (Kalamazoo Co.,) Mich.

## Bigelow's Holstein Farms

Breedsville, Mich.

Have for sale several fine young bulls out of cows with high official butter and milk records.

Send for circular.

## "Top-Notch" Holsteins.

Choice bull calves from 6 to 10 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices. MOPHERSON FARMS CO., Howell, Michigan.

## Bull Ready For Service.

A grand son of Pietertje Hengervelds Count DeKor, and out of Bertha Josephine Nudine. This is an almost faultless individual. Guaranteed right in every particular, and "dirt" cheap to a quick buyer. Also 7 good cows, one fresh—the others yet to freshen. The above would make a fine herd for some one. \$1950 will buy the bunch. L. E. CONNELL, Fayette, Ohio.

**HOLSTEIN BULLS** ready for service. Bred, built, and come and see. E. R. CORNELL, Howell, Michigan.

**BUTTER BRED JERSEY BULLS**  
CRYSTAL SPRING STOCK FARM  
Silver Creek, Allegan County, Michigan.

## FOR SALE—Jersey Bull Calf

Dam's 2-year-old record 8610 lbs. of milk, 513 lbs. butter in 11 months. Sire's dam's record 10550 lbs. of milk, 604 lbs. butter in one year. WATERMAN & WATERMAN, Ann Arbor, Mich.

## Lillie Farmstead Jerseys

(Tuberculin tested. Guaranteed free from Tuberculosis.) Several good bulls and bull calves out of good dairy cows for sale. No females for sale at present. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Mich.

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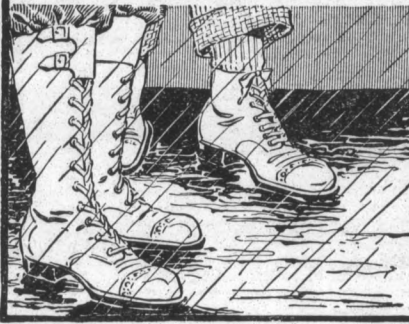
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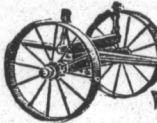
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# Horticulture.

## Tomatoes, Cabbage and Co-operation.

THE business of growing cabbage, and tomatoes extensively, in Hillsdale county, is confined practically to two townships. From the nature of these products, the territories in which they are grown on a large scale, is small in comparison with that of most other crops. Because of this fact, it will be of interest to many to know how cabbage and tomatoes stood the unprecedented drought experienced in this section during the summer and early autumn. Growers of these products in sections not affected by the drought, will, of course, be interested in the subject; and those not familiar with the business will find interest in comparing them with the crops with which they are familiar.

In considering the effect of the drought, let us first take the cabbage industry. The growing of this product in this locality is by no means new. It has been tried out for a dozen years or better, by farmers who have grown the crop annually. It is an established industry, and recognized as a paying business. The growers of cabbage have gone through unfavorable seasons, before now, but never one so disastrous as the present one. For weeks the plants stood almost at a standstill, the ground devoid of moisture, and the thermometer registering better than 90 in the shade. The effect from this was to make the crop uncertain and postpone the harvest.

But although the drought in itself was disastrous the pest which followed in its wake was worse. In normal seasons the cabbage worm is the only enemy and but little attention is paid to its work. A row or two of plants around the field may be destroyed, but there the destruction ceases. But this season the weather created conditions favorable for the cabbage louse and while the plants were practically at a standstill these pests destroyed whole fields. Heavy rains were the only effective remedy, and these did not come till close to the first of October.

In spite of these conditions, however, the crop is not a total failure. Rain has come, and good weather through October will do much for the cabbage fields. No crop in this locality was heavy this season, and the cabbage crop is better than the oat crop or early potato crop, and probably as good as the corn or wheat crop. In the case of the cabbage, however, the grower measures his returns entirely in dollars and cents, while this is not true of corn and other products fed mostly on the farm and converted into money indirectly.

In considering the growing of tomatoes, it should be mentioned that this business is new, and still in its experimental stage, though the successful crop of last year proved beyond a doubt the practicability of making the business a paying one. It was claimed by the men who introduced the business into this locality that tomatoes would stand a drought better than most other crops. In a sense this is true. The vines grew well, blossoms came, and tomatoes appeared. But as in the case of cabbage, the drought was not so bad as what followed in its wake. Weather conditions produced tomato rot, and many hundreds of bushels of fine, large tomatoes were picked and thrown away as useless. But with the tomatoes as with the cabbage, rains and favorable weather have done wonders at the eleventh hour. It seems likely, now, that the yield of tomatoes will compare favorably with the yield of other products grown in the same section.

As a general thing, cabbage is grown extensively only in the neighborhood of a krout mill, and usually tomatoes are grown in the vicinity of a cannery, although this is not always the case. Firms the members of which are usually non-residents, own and manage the mills and canneries. In order to conform to good business methods and be reasonably sure of filling their orders, these firms must of necessity contract the crop of the growers before the seeds are sown. It is true that in this locality, some growers decline to contract their cabbage, but it is also true that some must do so, if the krout mill is to be kept in the locality. An unfavorable season like the present, always makes it harder to get contracts. Those

who contracted their cabbage this year, at around four dollars per ton, are delivering with reluctance, their meager crop while the men who declined to contract are receiving the unusually high price of 15 per ton. Of course, the firm cannot contract for more than the average price in a normal year.

This state of affairs leads to a query: If the farmers of one township can own and manage successfully, a co-operative creamery, why cannot the farmers of other townships own and operate successfully a co-operative krout mill and cannery? Such a co-operative concern would enable the grower to reap much better returns for his labor. Much more of the money would remain in the community and business generally would be more brisk. Of course, this is up to the farmers. If they cannot co-operate in such an enterprise, or do not wish to do so, the plant managed by an outside firm is much better than none at all.

Hillsdale Co.

J. A. KAISER.

### FALL BEARING STRAWBERRIES.

Today, October 8, I had a dish of strawberries and cream for dinner; these berries were not picked from plants that were freaks of their kind, but from some overbearing sorts, the nature of which is to bear fruit during the entire season. The plants from which these berries were picked, were obtained from a plant breeder of Iowa, several years ago, before their introduction to the general public. There was five varieties in the lot, and since that time two of these have been introduced under the names of Americus and Francis. What have these plants done, with us?

The thought of having strawberries to place on the market right along through the month of July, August, September and October, is an alluring one, at least, upon first thought, it is. So the writer proceeded to try these sorts out, in high hopes that we had hit on something that would materialize as a bonanza. For five seasons we have been growing them and under differing conditions. Last season was the only one in which we had berries in commercial quantities. From an eighth of an acre, perhaps, there was sold \$20 worth of fruit, the same being harvested between the first of August and the first of November inclusive. The berries retailed at 25 cents a quart box. This was not nearly enough to place the operations on a paying basis; much more than that can be made in growing the regular sorts. This result was secured from spring-set plants. The plants were set in hedge rows, after the manner of the method we practice with our regular sorts. Blossoms were kept off until July 1, and efficient cultivation given; also irrigation applied at intervals, as needed. As the berries began to ripen, a mulch of cut straw was applied. Liberal quantities of fertilizer was applied to see just what there was in these sorts, as money makers. The result, on the whole, convinced us that it was extremely doubtful if these overbearing sorts would ever be able to establish themselves with the growers of this section, as a part of the regular crop routine. However, I did not wish to give them up entirely, and without further trial; so I concluded to grow the plants on a smaller scale. This season there are two rows across the garden, about 150 feet. Good cultivation and hoeing have been supplied; otherwise the plants have been left to themselves, just the sort of treatment that they would get under general field culture; and we have got practically nothing from them, three or four quarts through the season. As far as the writer is concerned, a few of the plants will be put in a favorable place and intensive methods applied, just so the family can have a dish of this fruit, now and then, out of its regular season. As for attempting to make these sorts a regular part of our operations, it is useless to try, till the overbearing strawberry has been very greatly improved upon.

However, it is not for me to say that the overbearing strawberry is not a practical thing, far from it. Under such conditions as prevail in sections of more southern latitude, results will vary greatly

ly from those secured by us. The strawberry requires quite a generous amount of warmth and sunshine to insure perfect development of its fruit; and while we get the sunshine, usually, we do not get as usual thing get the degree of warmth required, not during the late summer and autumn, at least. Under right conditions, that is, a rich soil, and abundance of moisture, these plants will produce a creditable amount of fruit, and it may be worth the effort, to the grower, to try them out as a novelty, or for the pleasure of having this fruit out of season; even in such a climate as prevails with us.

After all, I am not perfectly sure it would be such a very desirable thing to have a strawberry crop to harvest right along through the summer and fall; the thing would get pretty monotonous after a while; the same thing, day after day, and week after week. As it is, after three or four weeks of the work, we begin to tire of it; and this is especially true as regards the pickers. It would be too much like factory work to suit me. One of the advantages of farm life over that of many other avocations is the never ending change; at least the changes are sufficiently frequent that the work need not become monotonous.

Emmet Co.

M. N. EDGERTON.

### THE STRAWBERRY BED.

The other day I saw a neighbor working up the ground of his old strawberry bed. As far as I could perceive from a distance he was making an excellent job of the work. He went back and forth in the rows with a deep working cultivator until the soil must have been thoroughly mellowed, good and deep. Then one of his boys hitched the horse to the hay rake and gave the patch a good combing out. A few days prior to this the vines and weeds had been mowed and the rubbish raked off. Taking it all together, our neighbor no doubt thought he was doing an excellent piece of work, and so he was.

Nevertheless, the labor was misplaced, and, because of this, meagre reward must result. If this work had been done directly at the close of the picking season good would have resulted, but, given at this late date, the last half of September, it seems to the writer that any possible benefit will be largely nullified by the injury done in thus destroying growth made by the plants in preparing for next season's harvest. No doubt a lack of knowledge is the cause of a great deal of misplaced effort. We all know this to be true. No doubt many, if not all, have had personal experience along this line; lessons more or less expensive.

When holding a strawberry bed over for a second or third crop, the object to be held in mind is to induce the plants to make as large a growth of new vines and roots as possible, and this is best accomplished by getting busy directly after the last berries have been picked, providing conditions favorable for new growth in root and crown through a deeply mellowed soil and subsequent shallow cultivation. Old beds that were given proper treatment directly after harvest and a few thorough workings on the surface at suitable intervals afterward, now delight the eye of the owner with a luxuriant growth of vines and leaves.

M. N. E.

### MAKING LIME-SULPHUR SOLUTION ON THE FARM.

Tests were made recently by the Virginia Station in the home manufacture of concentrated lime-sulphur solution, assisted by various growers throughout the state. It was found that direct fire heat and steam were of about equal value in cooking the material, both from the standpoint of cost and efficiency, but steam heat was much more easily controlled. Both burnt and hydrated lime were about equally effective, but the hydrated lime was easier to handle, kept longer without becoming carbonate, and gave a higher percentage of clear concentrate. Ground quicklime was found to be undesirable. The 50:100:50 formula gave best results and the 40:80:50 next, both being preferable to the 62½:25:50 formula. A home-made solution containing a proportion of sludge appears to be almost as valuable for spraying as a clear solution, providing it has been properly made. Home-made concentrated lime-sulphur solution was found to cost about one-half as much as the commercially prepared at current prices. It required a little more care in its use since it is not generally as constant in strength as the best commercial brands.



## Veterinary.

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to someone else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

**Luxation of Stifle.**—I have a five-year-old mare that appears to have a locking of stifle joint whenever she stands in stable, but when out in pasture I have been unable to notice anything wrong. I work her all the time; she is not lame, but when backing I notice a little catch and she shows it some when stepping from side to side. D. W., Shabbona, Mich.—The ligaments that hold cap in position are weak and if you will clip off hair and apply one part powdered cantharides and eight parts fresh lard every week or ten days she will get well. The stall floor should be higher behind than in front for when she stands in this position the bone is better held in place.

**Rheumatism—Bots.**—I bought a team of horses last spring which were shipped here from South Dakota and two months after I bought them they appeared to stumble and show a little lameness occasionally on fore quarters. This lameness was much worse preceding storms. I am feeding them 2½ qts. to each of them three times a day and what hay they want. In the spring when I first bought them, they both passed some grubs. What is the cause of these conditions and what treatment do you recommend? D. B., Munising, Mich.—Your horses suffered from rheumatism and bots. Mix together equal parts powdered sulphate iron, powdered nitrate of potash, ground gentian and ginger and give each one a tablespoonful at a dose in feed two or three times a day. Two and one-half quarts of oats at a feed is not enough for a work horse. They should be fed twice that quantity morning and noon and three or four quarts in the evening.

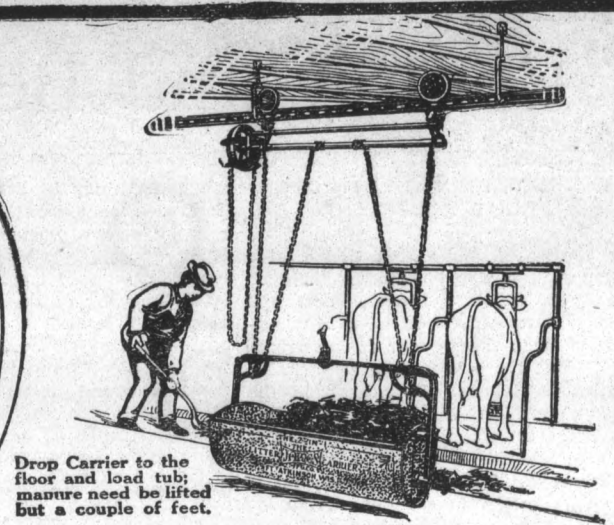
**Sore Throat.**—I have a cow which I feed bran and green corn, besides she runs in pasture; her appetite is poor and whenever she eats or drinks she froths and drools from mouth. Have given her soda, salts and ginger, but she does not improve. W. M., South Haven, Mich.—Apply one part turpentine, one part aqua ammonia and three parts olive oil to throat every day or two and dissolve 1 dr. of chlorate of potash in a pint of water and give it to her as a drench, pouring it into mouth slowly in order that it may gargle throat thoroughly; treat her two or three times a day.

**Rheumatism—Tuberculosis of the Liver of Turkeys.**—We have a six-year-old cow which we expect to fatten this winter that has gone lame in left hind leg, but I fail to find any swelling or tenderness in any part of the leg. My hens and turkeys have rather a peculiar sickness and am anxious to know what ails them. I have lost several grown chickens and matured turkeys. Some of them show lameness and every one that I have examined after death has enlarged liver; besides, it is covered with yellowish white spots varying in size from a pin head to a marble, some of these bunches were filled with matter and the liver has a rotten appearance. Mrs. E. G. C., Walled Lake, Mich.—Give your cow a tablespoonful of powdered nitrate of potash at a dose in feed twice a day. If you find a tender spot apply spirits of camphor twice daily. Your chickens suffer from tuberculosis and are not curable. Have your cows been tested for tuberculosis and do you feed your fowls milk?

**Simple Catarrh.**—Several of my chickens are sick; have a watery discharge from eyes, some swelling of lids and some of their heads are larger than normal. None of them have died, but I fear it a fatal disease. After a few days' sickness the comb darkens. Mrs. A. C., Union City, Mich.—Your chickens may be roosting in a damp, draughty place which is causing the whole trouble; besides, they may be drinking impure water, or their roost may need cleaning and disinfecting. Without studying the cause, learning what it is then removing it little headway can be made in effecting a cure. Remove sick from healthy and give some of the following compound powder at a dose in feed three times a day: Ground gentian, cinchona, baking soda and salt, a teaspoonful to every four fowls.

**Parasitic Worms Infesting the Digestive Apparatus.**—For the past two months I have been having trouble with my turkeys and several of them have died. Those that have died have shown a dullness, droppings are yellow and soft and the birds appear to grow weaker and weaker until they die. I have tried all the remedies I could think of and have been giving copperas in their drinking water. E. F., Jeddo, Mich.—Give each of your turkeys 25 grs. powdered areca nut at a dose three times a week for two weeks; also give them equal parts ground ginger and gentian with each meal, adding a little salt. A teaspoonful to full grown bird twice a day. It is needless for me to say you should clean and thoroughly disinfect their roost and change their run. They should be fed a good quality of food.

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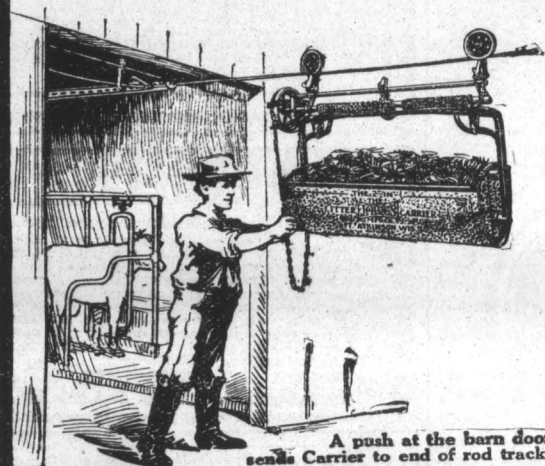
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**BIG TYPE DUROCS**—March and April Boars, ready for service. Pairs not akin. Also Shropshire Rams for sale. F. J. DRODT, R. No. 1, Monroe, Mich.

**ESSEX PIGS**—We are offering just now some very choice young Essex Pigs. No better time to get something good at reasonable prices. E. P. OLIVER, Flint, Mich.

**Duroc Jerseys**—20 Spring Boars Ready to Ship. CAREY U. EDMONDS, Hastings, Michigan.

**DUROCS**, Good Enough to Ship Without the Money. KOPE'KON FARM, Kinderhook, Michigan.

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**POLAND CHINAS**—Both Western and Home Bred. Either sex, all ages. Prices right. W. J. HAGELSHAW, Augusta, Mich.

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**P. C. MARCH AND APRIL PIGS**—The long bodied kind. Guaranteed to please. R. W. MILLS, Saline, Michigan.

**FOR SALE**—Poland China Boars. March and April farrow. Prices right. G. W. HOLTON, R. No. 11, Kalamazoo, Mich.

**POLAND CHINAS**—Choice lot of spring pigs, either sex. Prices right. L. W. BARNES & SON, Byron, Shiawassee Co., Mich.

**POLAND CHINAS**—Either sex, all ages. Something good at a low price. P. D. LONG, R. No. 8, Grand Rapids, Michigan

**Butler's Big Bone Prolific Poland Chinas** Big boars ready for service, weigh up to 250 lbs. not fat, from big prolific sows that not only farrow big litters but raise them. Write for what you want. J. C. BUTLER, Portland, Michigan.

**LARGE TYPE P. C. FALL PIGS** all sold. Have the greatest bunch of spring pigs I ever raised. Eight sows farrowed 86. Come or write. Expenses paid if not satisfied. Free livery from Farm. W. E. LIVINGSTON, Farma, Mich.

**350 BIG TYPE MULE FOOT HOGS**—All ages for sale. Prolific and hardy. Best breed for Michigan. Also Pones. J. DUNLAP, Box M, Williamsport, Ohio

**YORKSHIRE SWINE**—Young boars ready for service. Also spring farrowed gilts and Aug. farrowed pigs for sale. Pairs not akin. GEO. S. McMULLEN, Grand Lodge, Mich.

**Large Yorkshires**—Pigs farrowed in August from prize winning stock, for sale. JONES & LUTZ, Oak Grove, Michigan.

**IMPROVED LARGE YORKSHIRES** Sows and gilts bred for September and October farrow. Service boars. Pigs all ages. Breeding and prices upon application. W. C. COOK, R. 42, Ada, Michigan.

**YORKSHIRE SWINE**—A few choice boars left. Special prices for quick sale. OSTRANDER BROS, Morley, Mich.

**Lillie Farmstead Yorkshires** Spring gilts, splendid ones. Fall pigs, either sex. Gilts bred for Spring farrow.

**BOLON C. LILLIE** Coopersville, Michigan.



# Poultry and Bees.

## UNUSUAL EXPERIENCE WITH OPEN-FRONT HOUSE.

Eggs are going to be high this winter and I am planning to have even a bigger yield than I had last winter, because I will have a larger flock of hens. My Leghorns have been the wonder of the neighborhood. But there is nothing remarkable about these chickens. It was all in the feed and care. If they had been given no more chance than the neighbors' hens, it is doubtful whether they would have laid any more eggs. I dislike to boast, but it is no exaggeration to say that my hens have outstripped everything in this section in egg laying. However, it is only fair to state that this is a dairy community and the people have not yet learned that hens are as profitable as cows. A neighbor who milked 10 Jersey cows last winter kept a careful record of the feed consumed and of the number of pounds of milk given by each cow; also the cost of feed and the cash returns from milk, butter, etc. It was found that he cleared a little less than one dollar a week on each cow's milk. He thinks this not a bad showing.

The writer kept a record of each flock of hens wintered in separate houses last winter. There were from 50 to 65 hens (some were pullets) in each house. Keeping a strict record of all feed consumed and all eggs sold, the two coldest months showed a clear average profit of \$4.20 per week from each 60 hens.

Very few modern poultry houses are to be found here. Nearly all are the old-fashioned houses which are really nothing more than a place in which to roost. Such houses are little better than none. In some instances they are without windows, and the doors are never closed, even in the dead of winter. The hens come and go at will and, of course, they have all they can do to keep from freezing to death. Sometimes they cannot even do that. A short time ago a very enterprising neighbor decided to build a new poultry house. It was to be the kind that is enclosed on one side with wire netting. Nearly every beginner is tempted to try the open-front poultry house, no matter what the climate. I was no exception. After hearing this enthusiastic beginner's plans I hesitated about giving my experience with the same kind of house during the awful winter before last. Everything possible was done (except what ought to have been) at the last moment, to protect the fowls in this "new fangled" open-front house. But the poor things had their heads badly frozen. Their combs and wattles had to be thawed out and "doctored," but in spite of all this those fowls suffered for weeks. No need to say that they stopped laying. A frost-bitten hen laying eggs would be a curiosity, to say the least.

So much has been said about the open-front poultry house of late years that, without having had some experience, we are apt to get the idea that this kind of a house is suitable for cold climates. It may be good enough for large, heavy chickens with small wattles and combs, but for Leghorns the open-front house is a "delusion and a snare" where the mercury goes down to zero every winter.

An open-front house is certainly "all to the good" in summer, but for winter it is no good at all. The curtains will not protect the hens like a solid wall, and a hen must be comfortable in order to be profitable.

I boarded up that house, placed two large windows in it to partly fill the space, and covered all the remainder of the outside with tarred paper to keep out the cold. It had been fairly well built, but the boards had dried in a little and this left enough space for the frosty winter winds to enter. When one is reckless enough to build an open-front house for poultry, some of the small cracks and crevices are liable to go unnoticed. Ventilation is necessary, of course, but frosty winds, blowing through cracks or through a curtain, are not what hens need in the way of ventilation.

Ohio.

ANNA W. GALLIGHER.

(Many users of the open-front poultry house will take exception to the above unqualified condemnation of that style of house. It is true that the Mediterranean breeds require better protection from cold than do the heavier breeds, and yet they are the most active of fowls when given

the opportunity to exercise. Dissatisfaction with open-front houses, however is generally traceable to failure, on the part of the builder, to observe the most essential point in its construction, and that is the making of the rear and end walls absolutely tight. A house of this construction which admits drafts of air through any of the walls other than the front is bound to be drafty and cold, a fact which will not be disputed by any successful user or advocate of the open-front structure.—Eds.)

## PREPARING BEES FOR WINTERING.

In locations where winters are severe and breeding is suspended for several months it is best that brood rearing be rather active during late summer, so that the colony may go into winter with plenty of young bees. In case any queens show lack of vitality they should be replaced early, so that the colony will not become queenless during the winter.

The most important considerations in wintering are plenty of young bees, a good queen, and plenty of stores of good quality. Sound hives and proper protection from cold and dampness are also essential in cold regions.

If, as cold weather approaches, the bees do not have stores, they must be fed. Every colony should have 25 to 40 pounds, depending upon the length of the winter and method of wintering. If feeding is practiced, honey may be used, but syrup made from granulated sugar is just as good and perfectly safe. Never buy honey for feeding that you do not know positively to be free from disease. Winter stores should be looked after early enough so that it will not be necessary to feed or to open the colonies after cold weather comes on. Honey dew should not be left in the hives, as it produces dysentery.

In wintering bees out of doors the amount of protection depends upon the severity of the winters. Dampness is harder for bees to withstand than cold, and when it is considered that bees give off considerable moisture, care should be taken that, as it condenses, it does not get on the cluster. A mat of burlap, or a cover of burlap with fine shavings, chaff or ground cork on top, makes a good absorbent. The hive may also be packed in chaff, dry leaves or similar material to diminish the loss of heat. A large box without top or bottom set over the hive and filled with this packing material and given a water-proof cover, makes an excellent wintering case. An opening must be left in front so that bees will be able to leave the hive. Some hives are made with double walls, the space being left empty or filled with chaff; these are good for outdoor wintering. The entrance should be lower than any other part of the hive so that any condensed moisture may drain out.

Entrances should be contracted in cold weather, not only to prevent the cold wind from entering, but to keep out mice. There should always be room for bees to pass in and out when weather is warm enough for flight.

With care, cellar wintering is very successful. The cellar must be dry and so protected that the temperature never varies from 40 to 45 degs. F.; 43 F. seems to be about the right temperature. Ventilation must be good or the bees become fretful. Light should not be admitted into the cellar, consequently indirect ventilation is necessary.

Cellar wintering calls for less honey to maintain the proper temperature in the cluster and is therefore more economical. Bees so wintered do not have the opportunity of a cleansing flight for several months, but the low consumption of honey makes this unnecessary.

The time for putting bees in the cellar varies with localities. They are put in before severe weather comes and as soon as they have ceased rearing brood. It may be done at night, when all are in the hive, or on a chilly day.

The hives may be piled one on top of the other, the lower tier raised a little from the floor. The entrances should not be contracted unless the colony is weak. Do not close the entrances with wire cloth, as dead bees will accumulate more or less on the bottom boards and may cut off ventilation. Leaving entrances open makes it possible to clear these away occasionally.

Shiawassee Co.

N. F. GUTE.



**Gilbert Hess**  
Doctor of Medicine  
Doctor Veterinary  
Science

**Hens can't  
lay eggs**

**and grow feathers at the same time**

Feather growing saps all the nutrition of a hen's ration. That's why hens practically stop laying eggs when moulting starts. Given their own time to moult, hens take about 100 days within which to shed the old feathers and grow new ones. But that hits your pocketbook hard, because egg prices are away up high in October, November and December. Change your methods to mine. I force my hens to moult early in fall, make them moult quickly and get them back laying again before winter sets in. To do this I rely absolutely on

**Dr. Hess Poultry  
PAN-A-CE-A**

**Shortens Moulting Period—Makes Them Lay**

My hens get this bracing poultry tonic all year round, so that when moulting time comes along they are fit to stand the severe strain. Just before moulting commences I confine the birds for about a week and put them on half rations to reduce the fat. This dries up the quills right to the ends and it only takes an increase in protein and fatty rations to make new feathers and force out the old ones. Back they go then on Pan-a-ce-a—this tones up the egg organs and brings back the scratch and cackle and compels each hen to lay regularly—just when eggs are at their highest price.

My Pan-a-ce-a is a tonic—it makes poultry healthy, makes hens lay, helps chicks grow and shortens moulting period. The result of my 25 years' experience as a doctor of medicine, doctor of veterinary science and successful poultry raiser. Ingredients printed on every package and certified to by the U. S. Dispensatory and Medical Colleges. Read this money-back guarantee. You buy Dr. Hess Poultry Pan-a-ce-a of your dealer and feed it according to directions. If it does not do as I claim—if it does not pay you and pay you well, I have authorized your dealer to refund your money. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pack \$2.50. Except in Canada and the far West. Never sold by peddlers. Send 2c stamp for my brand-new poultry book—it's a stunner.

### Dr. Hess Stock Tonic

Taken off pasture, put on dry feed and closely confined, your stock are apt to get out of fix during winter. Some are liable to get constipated, dropsical swellings, stocky legs, but, most common and dreaded of all diseases, especially among hogs is worms. Dr. Hess Stock Tonic will keep your stock toned up, enrich their blood, keep their bowels regular and will rid them of worms. 25-lb. pack \$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 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 bath, 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.

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B. P. Rocks, R. I. Reds, and S. O. W. Leghorn eggs for sale. 15 for \$1.25 for \$1.50; 50 for \$2.50.  
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**NATIONAL FIRE PROOFING COMPANY, Fulton Building PITTSBURG, PA.**



## Grange.

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

### THE NOVEMBER PROGRAMS.

#### State Lecturer's Suggestions for First Meeting.

**Song.**  
Washing day helps, by three women.  
**Recitation.**  
Down to date "Question Box" on farm practices. (Members number about the hall and even ask questions for odd numbers to answer).  
**Recitation.** "Brown's Example."  
How can we better social conditions for country boys and girls? by a man and woman.  
**Humorous song.**  
Harvest march, by young people.  
**Fruit exhibit.** in charge of committee who serve it for refreshments at close of program.  
**Closing song.**

#### Suggestions for Second Meeting.

Ten minute song service.  
Current events.  
Recitation, "Keep it Before the People."  
Book review.  
Ironing day helps, by three women.  
Song by quartet.  
Things I would like to see State Grange do, by two men and two women.  
Instrumental music.  
"Surprise feature."

### ONE WAY ONE GRANGE GROWS.

It was "social day" at my home Grange. To call it "social day" is, after all, to give it something of a misnomer; for the program in Ypsilanti Grange, No. 56, is and always has been its big event, and this in spite of a dinner and social noon hour that are nowhere excelled for enjoyment.

As soon as dinner was dispatched, the master called the people to order and, before turning the meeting over to the lecturer, announced that the program committee had raised the question of when degrees would next be conferred by our Grange. He felt, he said, that plans should be made toward doing this at some certain time in the near future, therefore he urged that each member think over the people he knows who would make desirable members, or who need the Grange, and decide upon one to try to secure. This, he said, should result easily in at least ten new members for a class to initiate as a feeder for our regular membership.

There is something in such definite, clear cut planning which goes straight to my sense of the Grange fitness of things. It seems as if it is as it should be. It smacks of doing things. It shows the appreciation which the Grange has of its own stability and value. It denotes a healthy discontent with present conditions of numbers, since all who need the Grange are not yet enrolled as members. It sounds business-like. Rather than sitting down and letting who will come in, the master sends his co-workers out into the "highways and byways" to invite them to come in.

One of our dear old members is fond of saying "Man is a perpetual becoming," so I like to think that the Grange body itself is, also, "perpetually becoming" something more and more. This it assuredly does as it seeks always to touch more lives with its usefulness and thereby takes upon itself a larger sphere of usefulness in its community.

JENNIE BUELL.

### AMONG THE LIVE GRANGES.

**Berrien County Patrons** elected delegates to the State Grange at their recent county convention, choosing O. A. Robinson and wife, of Pipestone Grange, and E. F. Condon and wife, of Twelve Corners Grange.

**Crystal Grange Fair.**—Crystal Grange, of Montcalm county, held its annual fair early in the present month, the affair proving the most successful that has yet been conducted by the organization. The cash premiums awarded totaled over \$20 and were spread over such a wide diversity of products and articles as to awaken the interest of both old and young of all classes. The needlework department was unusually good this year, and the Grange is receiving much encouragement in the holding of these annual exhibitions, from those outside the order.

**Newaygo Pomona** was pleasantly entertained by W. W. Carter Grange early in the month, this meeting being the annual county convention. Six subordinate Granges were represented and a class of nine was given the degree of Pomona. Mr. and Mrs. Houlding, of Ashland Grange, and Mr. and Mrs. H. Zerlaut, of Sitka Grange, were chosen subordinate delegates to State Grange, while Mr. and Mrs. E. Snyder, of Newaygo, will represent the Pomona. The program feature was an excellent paper on "Better

Babies" by Mrs. M. Massey who declared that in times gone by the baby show was a joke without dignity or any serious thought of its real significance. Today we place a premium on "better babies," agreeing that "blue ribbon" boys and girls are as essential on the farm as thoroughbred live stock. Better babies mean better men and women.

**Alger County Pomona** held its autumn meeting with Wetmore Grange, a small exhibition of farm products being a feature. Prizes had been offered by Pomona for best samples of oats and corn and a number of entries were made by members. M. Lagergren won first award in both grains and C. A. Gogarn second. It was a most successful meeting in every way, seven new members being secured. Delegates to State Grange, chosen at this meeting, are Mr. and Mrs. Andrew Johnson, of the subordinates and Mr. and Mrs. C. A. Gogarn from the Pomona.

**Sparta Entertains Kent Patrons.**—The Pomona Grange of Kent county recently held an enjoyable two-day meeting with Sparta Grange, the visitors being royally entertained. The business side of the meeting consisted mainly of the election of Pomona delegates to State Grange, J. W. Spangenburg and wife, of Sparta Grange, being chosen. There were many valuable program features, among which may be mentioned the illuminating address on "What Life Insurance Means," by C. H. Bramble, secretary and manager of the Grange, life insurance company; a splendid talk by O. E. Balyeat, superintendent of Sparta schools, on "Agriculture in the Public Schools," which included something of the history of farming as a science. During the course of his remarks he asked the co-operation of the farmers in securing a teacher and installing a course in agriculture in the schools of Sparta. This has been successfully done in more than 20 high schools of Michigan. Mrs. Preston, of Kinney Grange, read a paper which had been written by Mrs. Linn Wilder, the victim of the gas explosion at Kinney the afternoon before. The account of the sad accident cast a gloom over the assemblage as Mr. and Mrs. Wilder were personally known to many present. A committee was appointed to express the sympathy of the Pomona Grange for the bereaved husband and parents of the young woman. At the open session State Master Ketcham talked to an audience of over 300 on "The Opportunities of Today," limiting his discussion largely to the opportunities extended by modern agriculture. The programs included many literary and musical numbers of merit, and there was a fine display of bread, needlework, map drawing, corn, potatoes and seeds, cash prizes having been offered to boys and girls making the best showing of these several products.

### COMING EVENTS.

#### Pomona Meetings.

Charlevoix Co., at Peninsula Grange hall, Thursday, Nov. 13. Regular biennial election.

## Farmers' Clubs

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

#### Associational Motto:

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

### CLUB DISCUSSIONS.

**Fruit Growing.**—The presence of David Woodward, the veteran fruit grower of Clinton, was a feature of the meeting of Columbia Farmers' Club at the home of Mr. and Mrs. Ed. Donaldson. After the elaborate dinner Mr. Woodward took up the subject of fruit growing which, according to his youthful appearance at the age of 89 years, has given him an even greater profit in health than money. "If you don't like fruit growing don't try it," said Mr. Woodward, "for when it needs attention you must not plant corn or even go to church. The San Jose scale, which is a sap sucking insect, is fast destroying unsprayed fruit trees, and no wonder, when it is known that a healthy pair will produce 200 every 30 days which in turn keep up the scale census by a multiplied total of about 4,000,000 in a single summer. I am finding that an oil spray is more effective than the lime-sulphur solution, because it will spread around the limbs and twigs whereas the lime-sulphur does not extend itself. This is for the dormant spray. For the later ones I use lime-sulphur and, of course, arsenate of lead poison. This year I sprayed five times. The early damp weather made the apple scab troublesome and I sprayed twice in August for the side worms, which were bad. The Woodward orchard has about half a crop, or two carloads, this year, and will sell at \$2 per bushel box or \$4 and \$5 per barrel, most of them direct to consumers at Indianapolis, Ind. All are picked and packed now, having cost \$150. Twelve of the 15 people employed were women at \$1.50 per day as I find not many men good for anything even at \$2.50 per day. My experience has not been all success. For instance, two years ago I lost 11 young trees and last year 48 young trees by a root rot that nobody knows anything about—not excepting our agricultural college. In planting new trees I would set no Baldwins and few Spies. There are many better apples than Baldwins and the Spy is late coming into bearing. Steele's Red or Canada Red is a favorite with the public and the Grimes Golden outranks all

for quality. Of the newer varieties the Delicious will prove a leader, but I am going to graft my King David to better varieties. A red variety must be red, so thin out the tree tops and let the air and sun do their work. Thin the apples after the June drop or you will have small fruit, and none next year." This being the annual fair meeting a very creditable showing of corn was made, but most seemed to be waiting for the produce show.

**Hold Thirteenth Fair.**—The Washington Center Gratiot County Farmers' Club held their thirteenth annual fair at the home of Mr. and Mrs. C. N. Curren, October 9. There were about 175 people registered. The displays were very fine, every department being well filled, there being over 200 entries. The poultry tent was well filled, also apples, grains, jellies, fruits, vegetables, etc., were all worth mentioning. The fancy work department was very much appreciated. The chicken-pie dinner with all of the trimmings was served by six young ladies and two men, to about 175 people, who did justice to it all. After dinner Orville Bowers took several photos of all who were there. This ended a day well spent and every one seems to take more interest in the fair meeting each year.—Cor. Sec.

**Discuss Game Laws.**—The Hartland Farmers' Club met at the home of Mr. and Mrs. H. W. Clark. All were pleasantly welcomed by the host and hostess. One hour was spent in partaking of dinner, then the time had arrived for the program. Music was furnished by the Burgess Orchestra, and in addition several fine instrumental selections were rendered. Roll call was responded to by some with quotations and some by early reminiscences. A good literary program was rendered. Prof. Rice made a suggestion that the president appoint someone to look up the law concerning the license for hunting. The Club then adjourned to meet with Mr. and Mrs. Whitehead in Hartland the first Saturday in November.—Miss Mary E. Oopen, Cor. Sec.

**A Meeting of Unusual Interest.**—The September meeting of the Maple River Farmers' Club was entertained at the beautiful home of Mr. and Mrs. E. N. Waugh. Club members and invited guests considered it too rare a privilege to let pass by, so all whose duties possibly could allow, united in making the meeting at the home of Mr. and Mrs. Waugh one of unusual interest. Some came in automobiles and carriages, and others on the electric car line. After alighting from the car at the Bennington road and going a distance of about one-half mile west, one comes in full view of the pleasantly situated and beautiful Waugh home. C. T. Cook called the meeting to order. Rev. C. H. Hanks conducted devotional exercises, which were followed by roll call and reading of the minutes by the secretary. Then the program was taken up. A. B. Cook told of his trip to Dakota by automobile, and the lessons he learned. His talk was enjoyed by all. Mrs. A. B. Cook took us on her trip to Dakota, and interestingly told us about the farm houses she passed while en route. Mrs. J. F. Billhimer also spoke and added to the program of the afternoon. "General Improvements" was the subject most ably handled by W. A. Seegmiller. But with all the beautiful maples and evergreens that surround the Waugh farm and the general neatness and good taste in the interior of the home, the situation and instruction was not so easy as it otherwise might have been. However, his talk was instructive and thoroughly enjoyed and brought out a lively discussion. The meeting closed with a song, and the company assembled on the lawn where a sumptuous dinner was served.

**Discuss Three Important Topics.**—A most happy and instructive meeting of the Burton Farmers' Club, of Shiawassee county, was held at the home of Mr. and Mrs. Albert Schultz, Wednesday October 1. After the usual form of opening, several topics were taken up and discussed, among them being one on Michigan's new milk and cream law by George Tauth, who said in part: "Milk is the most healthful of foods and should be clean. Since these new laws only demand better stable ventilation, cleaner quarters for the cattle and cleanliness on the part of the milker and the utensils used for the milk, there should be a demand by both producer and consumer that they be strictly enforced." Mrs. G. C. Potter spoke very broadly on the decline of the country church. "If there is a decline in the country church, one of the causes may be that the parents have gone to the city to educate their children; also that the young people may have gone to the city for work. And since so many of the renters are foreigners, the farmer's place is not taken in the country church. Then, in northern Michigan the lumber business has so declined that churches have had to be abandoned. Sunday automobile riding may be another cause of church decline in some communities, though as yet it has not affected this one. Those who formerly attended church do so after they own an automobile, while those who formerly did not, do not attend church now. Then Sunday visiting may be another cause of non-church attendance. Many country people have lost the church-going habit. Time was when everyone attended church. Now through indifference and unbelief, many are staying away." "The most important things in a girl's education," Mrs. Hammond read a paper full of good things on this topic. In part she said: "It isn't so necessary for a girl to have a college education, for she may acquire much of value to her through reading of the best books, papers and magazines. She should be trained to appear at ease at any social function. She must be developed along all domestic lines, that she may make a better wife and mother. Good mothers strengthen a nation and good things follows a strong nation."—Blanche S. Potter, Cor. Sec.

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Will run on distillate and gasoline; but kerosene costs less than half as much as gasoline. Besides, kerosene contains more heat units than gasoline. Result—more power—steadier power—at one-half the expense of fuel. Comes to you all ready to run feed grinders, separators, pumps, saws, electric light plants, etc. All sizes in stock ready to ship.

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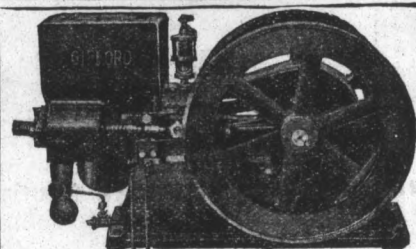
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Do you want to save money on your every-day footwear? I will tell you how. For information to readers of this paper, drop me a postal.  
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At once a few men, who are hustlers, for soliciting. No experience necessary. The work is dignified, healthful and instructive. In writing give references and also state whether you have a horse and buggy of your own. Address  
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**T**HE infinite advantages and manifest economies of large, unrestricted automobile production must be clear and evident even to those who have neither experience nor conception of what governs, controls and limits a manufacturing institution. It is a certain and established fact that the largest automobile producer can readily get his manufacturing costs far below the "average" and thus undersell the "market."

Each year Overland value has increased—

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Each year the Overland output has been enlarged—and it is the greater production that makes feasible an increased car value at a reduced price.

Our output for 1914 is 50,000 cars, which is the world's largest production on this type of car.

And every Overland value increase is just as visible, just as conspicuous and just as actual as the material reduction of our selling price. While other manufacturers refer you to more comfort, more grace, sweeter running motors and other invisible and more or less imaginary incidentals, we give you in addition to more comfort, grace and beauty, increased value that is substantial and tangible.

Look at the newest Overland.

The wheelbase has been increased to 114 inches.

*But the price is lower than ever.*

The motor is more powerful. It has been increased to 35 horsepower.

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The tires are larger—33 x 4 in. Q. D.

*But the price is lower than ever.*

The equipment includes such costly additions as electric lights all around—head, side and tail—even under the dash.

*But the price is lower than ever.*

The body is designed with full cowl dash and finished in Brewster green with lighter green striping and trimmed in polished nickel and aluminum.

*But the price is lower than ever.*

Then there are Timken bearings; a \$40 jeweled Stewart Speedometer (set so that it can be read from the driver's seat) an electric horn, deeper upholstery, and an 18-inch steering wheel.

*But the price is lower than ever.*

And so we could go on, almost indefinitely, giving new additional features—new value increases—one after the other.

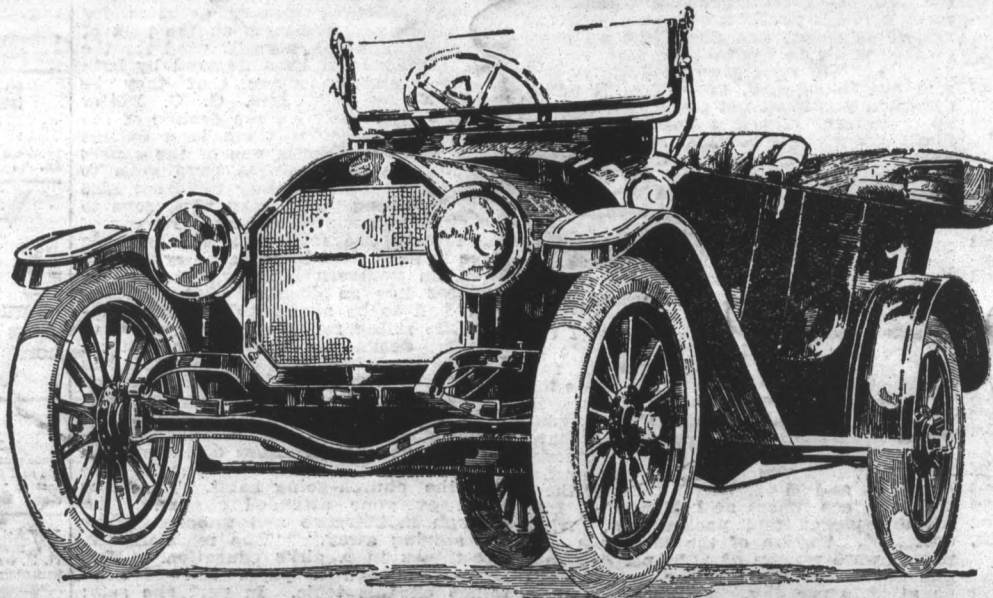
You had better see this car before you buy. Any one of our dealers will be glad to give you full details and a thorough demonstration.

There is an Overland dealer right in your town. Look him up today. We advise prompt action for in seven days after our 1914 announcement we had immediate shipping orders for over 5,000 cars.

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Electric head, side  
tail and dash lights  
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Brewster green body  
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nickel and aluminum  
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Deeper upholstery  
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and boot  
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