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## Some Suggestive Experiences With Alfalfa.

THE importance of alfalfa as a forage crop for Michigan is becoming better appreciated by the average farmer each year. Every season brings its fresh object lessons which demonstrate the wide range of adaptability to different Michigan soils and farm conditions which is possessed by this wonderful plant, and more farmers are added to the rapidly growing ranks of Michigan's alfalfa enthusiasts. But while the unqualified successes with alfalfa are becoming more numerous every year, due to a better knowledge of its requirements for success, yet there are still enough partial failures to discourage some of the new recruits among alfalfa growers, hence a discussion of the methods by which success is attained or the causes which contribute to failure in any case is equally important, if not more important, than at any previous time in the history of the alfalfa propaganda in Michigan.

### The Need of Lime.

While our knowledge of the requirements of the crop for a maximum success has been broadened along many lines during the last decade, perhaps the most important of all the needs of the alfalfa crop which have received general recognition during recent years is the absolute necessity of an alkaline or at least a neutral soil which will favor the maximum development of the nitrifying bacteria peculiar to the alfalfa plant. With this knowledge has come the equally important knowledge that a large part of our older Michigan farm lands have gotten into an acid condition, which must be corrected by an application of lime before alfalfa can be profitably grown. But while the application of lime as a soil corrective is not new to agriculture, it is a new practice with us, and we have had much to learn about it, and indeed, still have much to learn before we can deal with the problem of soil acidity with absolutely certain results so far as the alfalfa crop is concerned.

### A Change in Practice.

During the early history of the use of lime in agricultural practice, caustic lime was almost universally used. But with the development of the need of lime as a soil corrective as a preparation for the alfalfa crop, and the development of modern machinery by means of which the raw limestone rock could be finely pulverized, this material, because of its greater safety and convenience in application, has come into general use for this purpose and today a large part of the lime used is ground limestone. The efficacy of ground limestone when used in a proper manner and in suitable quantities has been too thoroughly demonstrated to admit of a reasonable doubt, yet the writer has become thoroughly convinced through experiences covering several years, that it is not the best form of lime to use in all cases, and that the beginner may

be disappointed in his results from its unintelligent use. The pioneers in the use of this form of lime as a soil corrective early learned that rather heavy applications were necessary for immediately profitable or maximum results. Such men as Joseph E. Wing of Ohio, and Ex-Governor Hoard, of Wisconsin, who have perhaps grown this forage crop with uniform success for a longer period of time than any other farmers east of the Mississippi River, advise applying as much as eight tons per acre of ground limestone as a preparation of the soil for alfalfa, and their advice is the result of experience covering a period of many years. But few Michigan farmers have sufficient faith in the proposition to make such a heavy application with its attendant cash and labor cost, even in an experimental way, and applications of ground limestone

last resort and, in order to gain a first-hand knowledge of the best form of lime to use, ordered a mixed car of ground limestone and caustic lime with which to experiment. This was applied in quantities varying from four tons of ground limestone to one-half ton of hydrated lime per acre, and alfalfa was drilled in on a well prepared seed bed in midsummer. Owing to the fact that the weather was very dry the alfalfa was drilled rather deeply and a hard rain at just the wrong time formed such a crust on the surface that few of the plants could get through and the resulting stand was too poor to leave. This was prepared and sown again the following year, and a good stand secured. This was somewhat thinned by a hard winter, but the plants were equally inoculated over the entire field where lime had been applied at

were favorable for midsummer seeding in corn and it was again seeded to alfalfa in the standing corn about the middle of July and a perfect stand secured, which wintered finely, gave two good crops last year and now stands two feet or more in height and very thick over the entire piece. Last year, thinking that we had learned all about the proposition, ground limestone was applied at the rate of two tons per acre to two fields and these were sown to alfalfa in midsummer, the seed being inoculated with a pure culture. An excellent stand was secured, but contrary to our expectation no nodules could be found on the roots of most of the plants last fall. But the stand wintered well and there is scattering inoculation all over the fields this spring but not sufficient to make the first crop a success. But good fortune rather than foresight revealed the apparent reason. We run out of ground limestone before the entire area was covered, and here caustic lime was applied at the rate of 500 lbs. per acre. The surprising result is that on this area there is perfect inoculation of all the plants and the first cutting will give a good yield of hay. The same is true of a strip across one end of the field where an application of ground limestone was applied from the first lot used five years ago as an experiment.

### The Logical Conclusions.

From these experiences we seem to have demonstrated conclusively that an application of ground limestone of not to exceed two tons per acre is not immediately effective in making the soil a fit home for the bacteria peculiar to the alfalfa plant, but that it will be thus effective if applied one or more years previous to the sowing of the alfalfa. We also seem to have demonstrated quite conclusively that the application of caustic lime in amounts as small as 500 lbs. per acre will produce this immediately beneficial result, for which reason we are now making such an application to a field in preparation for alfalfa to which two tons of ground limestone was applied during the winter and worked into the soil this spring.

As a result of these experiences the writer would urge every reader who applies ground limestone to the soil as a preparation for alfalfa, to apply it at least the year before the alfalfa is sown, or in case this cannot be done, apply it in connection with caustic lime, or use caustic lime alone. The ground limestone is a much more agreeable form of lime to use, and its beneficial results will probably be more permanent as it will continue to become available for a longer period of time, but unless applied in considerable quantities it does not appear to at once produce the desired soil condition which is essential to the success of the alfalfa crop. But it is fully demonstrated that with an intelligent use of lime, where needed, and thorough inoculation of the soil which



This Four Acres Yielded 65 Tons of Alfalfa Hay in Four Years.

have been much smaller than this on most Michigan farms where it has been used at all, and with varying rather than uniform success. This is true with the writer, as with others, but this very fact has seemed to lead to a profitable knowledge of the problem which should be of practical benefit to others who have not yet experimented with alfalfa, for which reason it is presented to Michigan Farmer readers at this time.

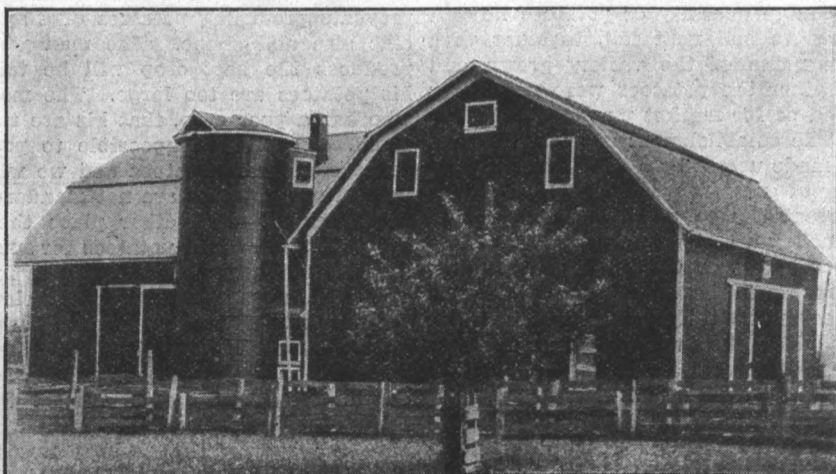
### What Experience Taught.

After making several unsuccessful attempts to get a well inoculated stand of alfalfa without the use of lime, we decided to try liming as a

varying rates and the stand remained for several years. Naturally we came to the conclusion that two tons per acre of ground limestone or a small application of caustic lime was sufficient to secure these results on our soil.

### Theory vs. Practice.

Acting on this theory we applied hydrated lime at the rate of 500 lbs. per acre on land intended for alfalfa the succeeding spring. This land was seeded in oats the following spring and a good stand secured, but it did not prove to be hardy and winter-killed so badly that it was plowed up for corn the next year. Conditions



Storage for Alfalfa Hay and Silage on Farm of O. F. Marvin, Muskegon Co.

will be insured wherever the crop is once successfully established, that this great forage crop can be successfully grown on practically all well-drained Michigan soils and it is significant that every farmer who once succeeds with the crop straightway becomes an alfalfa enthusiast.

**Does it Pay?**

But there will doubtless be many readers of this article who will raise the question as to why they should go to the expense of liming their soil, and the trouble of getting alfalfa established, since clover will answer a better purpose in their crop rotation. If such a reader is getting good stands of clover regularly in his crop rotation he may have found a reasonable answer to his question, although it is by no means certain that even in that case it would not pay him to add alfalfa to his list of crops. To illustrate, we confidently expect to get at least five tons of hay per acre during the season from the two-year-old stand of alfalfa above described, which is two or three times as much as we could expect from an ordinary stand of clover on the same land. But, the reader will say, "This is but a single year and 'one swallow doesn't make a summer.'" Quite true, but we are fortunately able to present herewith proof that the crop has a habit of producing at about double the yield of clover and other hay plants wherever it is well established. The accompanying illustration is from a photograph of a four-acre alfalfa field on the farm of O. F. Marvin, of Muskegon county, sown in the spring of 1908, which during the four succeeding seasons yielded a total of 65 tons of hay, or an average of a fraction over four tons per acre, per year, and this is but one of many illustrations which might be cited to prove the superior production of alfalfa as compared with clover.

It is, however, true that clover serves a place in our crop rotation to which we have not yet found alfalfa adapted, yet clover failures are very common on too many Michigan farms. This fact has been very generally attributed by the owners of these farms to unfavorable weather conditions and mainly to drought. But we have come to believe that it is far more generally due to an acid condition of the soil, or at least to some soil condition not favorable to the development of the nitrogen-fixing bacteria. This description might include a lack of vegetable matter in the soil and poor soil management generally, but generally it will be found that where a brush heap has been burned the clover grows even in a dry season, which is an indication that the failure of the clover is due to other conditions than drought alone. Certain it is that where alfalfa once starts well on soil that contains active bacteria for the formation of root nodules it dies, if it dies at all, from other causes than dry weather in our climate, and we are coming to believe that the same thing is quite generally true of clover, although, of course, clover does not have the wonderful root development which is a characteristic feature of the alfalfa plant where conditions favor its maximum development.

If this conclusion be justified, then every farmer will find it profitable to study the question of soil acidity and the use of lime as a soil corrective, and try it out in an experimental way at least. It is true that much of the best soil in our state will grow both alfalfa and clover with uniform success without lime, and where yields are uniformly satisfactory there is no necessity for the consideration of this problem. But wherever there is difficulty in getting uniformly successful seedings of clover or good stands of alfalfa with good cultural methods and inoculation alone, no more profitable line of inquiry and experiment is open to the farmer thus situated.

**THE OBJECT AND WORK OF THE MICHIGAN STATE POTATO-GROWERS ASS'N.**

The Michigan State Potato Association was organized about six months ago. Those who were responsible for the formation of the organization felt that there was a pressing need for such an Association. They believed that a number of progressive men banded together could, if they worked in harmony, solve some of the many problems confronting the potato growers of this state more speedily and economically than could be done without organization.

One of the first things to be undertaken is the formation of local organizations. In other words, to promote the community plan of organization. There have been three such organizations formed this season and others are contemplated.

The next step is for these local organizations to have some definite, practical work to do. The organizations which have been formed have in each case selected a certain variety of potatoes to be planted for the late crop. Seed of the variety selected was purchased in quantity in each case and delivered at cost to the members of the organization. This will insure a much more desirable lot of potatoes to place on the market next fall than these same parties have had to offer heretofore.

Through the efforts of the local organizations several variety, fertilizer and spraying tests have been started this season. The results of these tests will be available for all of the member of the local and state organizations. There is need of a great deal of this kind of work and if carefully done it will be of great value to a large number of people.

The meetings which the local Associations hold from time to time afford a splendid opportunity for the growers to compare notes. These can be made valuable experience meetings. When the strangeness so often felt between members of such an organization, when it is first formed, has worn off and a feeling of fellowship has developed other weighty problems can be taken up with assurance of satisfactory solution.

While the success of the organization movement depends in a large degree upon the local organizations and the faithfulness of their members, there are certain things which can be done more easily and effectively by the State Association.

One of the first things which the State Association will undertake as an Association in co-operation with the Extension Department of the College, is the securing of a card index of the names, addresses, etc., of as large a list of potato growers throughout the state as can be secured. The acreage grown by each party will also be recorded. These growers will be kept posted as to the activities of the State Association. The establishment of a registration bureau for those who care to take advantage of the opportunity is being considered. Each grower would be allowed to state the probable quantity of potatoes he will have to sell next fall, together with the name of the variety grown and whether the potatoes were grown for seed or for market purposes only.

The establishment of such a bureau if made use of by a considerable number of growers would enable the State Association to place these parties in touch with the buying public. The secretary would then be able to answer such letter as one which he received recently from an Ohio dealer in which the inquiry was made as to where several carloads of potatoes could be purchased.

The Association has under consideration the matter of seed certification. The southern states have been buying potatoes in very large quantities for seed purposes, from Maine.

The introduction of serious new potato diseases into the state of Maine has resulted in a quarantine being placed on shipments from that state into other states without first being inspected and passed upon by the U. S. Government. So far these diseases have not been found prevalent in Michigan. The potato growers of this state can, if they will take advantage of the opportunity, dispose of a much larger quantity of potatoes for seed this season than ever before. If the southern growers can be assured that Michigan potatoes are free from dangerous new diseases it will not be difficult to get them to buy them freely. The National Potato Association has volunteered to record the names and addresses of all growers of certified potatoes. This would afford all growers who are fortunate enough to have their potatoes certified, a very wide publicity. If sufficient interest is shown in this particular line of work it will be started this season. Only those growers who are members of local organizations will be entitled to have their fields inspected.

The State Association will encourage better sorting and grading. When there is but one variety grown in a community it will be much easier to sort and grade well than when a number of varieties are grown. Until the community plan or organization has been adopted by a large number of communities and they have decided upon one variety, and only one, the problem of grading will remain a difficult one.

Some other things which the State Association stands for and which we hope to be able to assist in bringing about, are seed improvement and dissemination; correct cultural practices; better distribution; better transportation facilities; better returns for the growers; better potatoes for the consumers, and greater satisfaction for the dealers.

C. W. WALD,  
Secretary State Potato Assn.

**FURTHER OPINIONS ON THE "COST OF A CROP."**

**Does Not Favor Standardization.**

In your editorial in the issue of May 23, on "Why Know the Cost of Producing a Crop," you say, in commending the Potato Growers' Association: "Some of the work already attempted in certain sections of Michigan by this organization is undoubtedly well calculated to benefit producers, especially the standardization of product, which is the line along which most of the initial work seems to have been done."

In my opinion the only object of the movement, and the only result that can come from this proposal to standardize potatoes, is to reduce the price to be paid to the farmer without reducing the price to the consumer.

It looks like the proposal of jobbers backed by college men and others who have no practical knowledge of the conditions of production. The variation in soil moisture and cultural conditions which no one can control, prevents producing potatoes of a specific size and shape. The man who produces the best crop will be told his potatoes are too large. The man who has a poor crop, that his are too small. It will be impossible to produce "standard" potatoes and we will be told our potatoes are not standard. That over at some other place they are getting standard potatoes for such a price, but they cannot pay that for ours. Potatoes will be bought below the market price, because too large or too short, but will be distributed and sold as good potatoes and no reduction made to the consumers because they vary a little from the standard set by the jobbers to the producers. This proposal is evidently a trick for the commercial profit of

the potato jobbers, at the expense of the producers.—John E. Bell, Lapeer County.

**Thinks Farmers Are Getting Too Much "Help."**

Seeing so much in your paper about the cost of raising an acre of potatoes, I would like to say that Mr. Crum and Mr. Hedrick can't be practical potato growers, or they would not be here in Grand Traverse county, for we certainly could not make anything here growing potatoes if it cost us from \$50 to \$67 per acre to grow them. I think it is safe to say that we average farmers grow them for \$25 per acre here.

Mr. Hedrick's price for planting three acres is exorbitant. He allows seven days' work and charges \$17.50 for it. Any man would easily plant them in two days, by hand, or for \$4, or with a horse planter in one-half day, or for \$3, and his digging item is about as far out of the way, or would be for this section. I have dug and picked up many a day, 500 bushels with five men and one team and digger, which would mean \$14 instead of \$30. But let that be as it may, different localities will have different costs per acre.

I would like to say just a word on the Potato Growers' Association. C. W. Crum's article strikes me as just right. It is made up of middlemen and agents, and so-called county experts. They are all a lot of bosh and a public nuisance, pretending to help the farmers and in reality are working for their own benefit and for the salary there is in it, and we farmers have to put up the money to pay them. Now, brother farmer, don't try to help raise that extra ten million bushels of potatoes, but cut the crop down and raise the price per bushel. Nobody worried about the poor farmer 20 years ago when we had to raise beef for two and a half cents and hogs for three and four cents per pound, and were lucky if we got 20 or 25 cents for potatoes, and everything else in proportion. But times have changed a little and others are now paying the freight.—Geo. W. Arnold, Grand Traverse County.

**Small Crop Brings Loss.**

I had dropped out of the Michigan Farmer class; somehow in the flood of cheap farm papers it had been left out, but I now see that I have missed something, for the very first thing that struck my eye was "The True Cost of a Crop," by C. W. Crum in the April 25 issue. Here is my experience of last year:

Like a majority of farmers I generally plant a "patch" of potatoes for home use, but last year we planted four acres. It was a dead peach orchard recently grubbed out. The net results were as follows:

Total cost .....	\$89.25
Potatoes marketed, 97 bu. at 50c .....	\$ 48.50
Small potatoes (estimated)....	5.00
<b>Total .....</b>	<b>\$ 53.50</b>
Revenue to owner of land.....	17.83
My share of crop.....	35.66
<b>Loss .....</b>	<b>\$ 54.59</b>

The man who owned the land received \$17.83 for the use of his four acres. I rented the land and lost \$54.59; that is, I lost all my hard work and some money besides, but as this is quite often the case I don't know as I should condemn the potato growing on account of this complete and humiliating failure. I might say that I graduated from M. A. C. in 1888. Probably they send better stuff back to the farms now a days.—John C. Stafford, Van Buren County.

**GOOD SEED CORN.**

We still have a limited quantity of Early Maturing Northern Grown Seed Corn and can fill orders promptly. Ask for samples and prices. Address Alfred J. Brown Seed Co., Grand Rapids, Mich., and please mention the Michigan Farmer.—Adv.

LILLIE FARMSTEAD NOTES.

It was a whole week after the big rain before we could do anything on the land. The fields in many places right over tile drains were simply ponds of water. It all went away in time but it left the land hard. It came off dry after the rain and our clay land, some of it, formed a very heavy crust. It came off warm enough for corn weather and we were sowing peas and oats, finishing up, when we ought to have been planting corn. I never sowed oats as late as we have sown them this year and I have said time and again that I never would sow them as late, that if I couldn't get them in earlier that I would put the field into something else, but I have simply broken my good resolution. I had the seed peas bought and mixed with the oats, ready to sow two weeks before. If it had not been for that I should have put this into some later crop, soy beans or lima beans or white beans, something of that sort. I was afraid if I kept the seed peas over for another year that the weevil would get in and their germinating power would be weakened, and so I finally resolved to sow them and take my chances. It may be that we will have proper conditions and abundant time for the late oats to fill so that we will have a good crop, but I do not expect a good crop—they were sown too late.

During the wet weather we put in the time when it didn't rain, building fence and hauling manure. Owing to a re-arrangement of the fields I had to build about 120 rods of woven wire fence before we could turn the young cattle out to pasture. Of course, there has been no hurry this spring because it was so cold that the grass made but little growth. But the warm days simply brought the grass along in great shape and we, owing to the wet weather, got the fence built in time so that we could turn the yearlings out sooner than I expected. The manure, too, needed to be hauled and we didn't get through. Some way we never get through as we ought to, there is so much work to do, but we got one field entirely covered and the rest of the manure will have to wait until after the first cutting of alfalfa and then we will try to get it out as a top-dressing on that.

We got our sugar beets sowed on Saturday before the big rain came on Monday. I took particular pains to keep the ground well packed so that we wouldn't get the seed in too deep, and then it looked as though it might be a dry spell and so I put on the corrugated roller and rolled the field after we had sowed them, prepared, as you will see, for a dry spell. Then the heavy rain came, and I think the ground is packed down the most solid of almost any ground I ever saw that was once mellow for a seedbed. Especially on the clay and the little depressions in the clay portions of the field, the ground was so hard that it didn't seem as if the beets would ever come up. I put a sharp spike-tooth harrow on this field and we went both ways and we had a board across the harrow so that when the man came to the hard places the driver stepped on and put his whole weight on the harrow. In spite of that it is not dug up very well on the clay. But the sand was packed so hard the harrow didn't go in deep enough to disturb the seed and we have killed millions of weeds. The old saying is that there is no great loss without some small gain, and I think we have gained here in killing the weeds. I never had the opportunity before. If it had not been for the heavy rain and we had put the harrow on the sandy places we would have dragged out all of the seed, but the ground was so packed that it didn't disturb it at all. I see this morning, May 21, that the beets are beginning to come up, even

on the hardest clay where the harrow would hardly make a mark. It is a wonderful thing, the power a young plant has to push itself up through a hard surface. I cannot understand it. In many places on the sand you can see the row for a rod now, while on the clay they are just coming up through, but if the warm weather continues it will only be a few days longer before we can cultivate them.

The early sowed peas and the early sowed oats are doing remarkably well. The peas are getting up six and eight inches high, so you can scarcely see any ground at all, and it is the same way with the early sowed oats. They are making a good growth. I do not know very much about growing peas for the canning factory but, of course, the canning men tell me that some years the late sowed peas are a better crop than the early sowed. I really don't expect to get a maximum crop off from the early sowed peas because I never saw any kind of a crop yet where a heavy rain came on soon after they were sowed, before they had time to get above ground, where you had a splendid crop. You lose your stand just as soon as this rain comes for a maximum crop. You may have a good fair crop, but I like to see a crop get nicely started before a heavy rain comes.

We are preparing the land now for alfalfa. I intend to sow about five acres this year. I sent to Mr. Lyman, of Minnesota, and paid \$36 for a bushel of Grimm alfalfa seed. This is the variety of alfalfa so highly recommended by the government and it has been brought about by the great law of the survival of the fittest for the last 30 years. Old Farmer Grimm came from Germany and brought with him "Everlasting Clover" and sowed it in Minnesota. At first much of this was killed out, in fact nearly all of it. He saved that which survived and it has been improving in hardiness ever since so that now it is claimed by the government and by Mr. Lyman to be the hardiest strain of alfalfa. Of course, this is paying a good big price and yet, if it is hardier and there is no danger of its winter-killing, it is money well invested, at least that is what I thought. We are putting on about a ton and a half of ground limestone to the acre, distributing it with a lime sower. Then we harrow it well and mix it thoroughly with the soil and put in the alfalfa. We will sow about a bushel of oats as a nurse crop and then I shall cut the oats for hay and get them off from the field so as to give the alfalfa entire possession when it begins to get hot, dry weather. I am getting more confidence in alfalfa. That which I seeded a year ago looks so nice now in all but one or two little places, that I am really encouraged and believe that we are going to make a success out of growing alfalfa.

COLON C. LILLIE.

CATALOG NOTICES.

"Muck Lands" is the title of a 60-page illustrated booklet published by the German Kali Works, McCormick Bldg., Chicago. It contains valuable information on the fertilization and handling of unproductive muck soils in the growing of the different crops adapted to such lands, and is profusely illustrated, giving visual evidence of the facts set forth. Mention the Michigan Farmer when writing for a copy of this interesting and valuable booklet.

Brown's Seed Catalog for 1914, issued by Alfred J. Brown Seed Co., Grand Rapids, Mich., is the twenty-ninth annual edition of this booklet, which lists a full line of farm and vegetable seeds, poultry equipment, etc. It is well printed and handsomely illustrated. Mention the Michigan Farmer when writing for a copy.

Samson Windmills are described and illustrated in a neat folder sent upon request by the Stover Mfg. Co., of Freeport, Ill. In it are listed a number of specialties, including feed mills, pump jacks, etc., besides the windmill which it illustrates in detail.

Study Your Wheat Before You Harvest It

If the stand and quality are bad you must do better. If they are good it will pay you to make them better. A better fertilizer will do it. The usual wheat fertilizers do not contain enough available

POTASH

See, too, whether your wheat is lodging. Potash stiffens the straw. If there's clover in the wheat, is the stand all you could wish? Many progressive farmers use Potash heavily on wheat followed by clover.

Study Your Wheat at Thrashing Time

If the ratio of grain to straw is too low, if the kernels are shrunken, your ground lacks Potash. Potash makes long heads well filled with plump, hardy grains.

Use a fertilizer with 6 to 8 per cent. available Potash, instead of 1 to 2, and balance the phosphoric acid of the bone or phosphate.

Tell your dealer now that you want such a fertilizer this fall. Write us today for our free book, "Fall Fertilizers." Ask us for prices on Potash Salts. We will sell you any amount from one 200-lb. bag up.



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PROFITABLE READING.

It is a question if the readers of the Michigan Farmer have ever considered how much they have been benefited by the various improved implements they have obtained by reading the advertisements. By that means you are advised of the latest inventions.

If we recollect aright, among the first advances in that line was the mowing machine. What an improvement over the back-breaking hand scythe. That is just one illustration. Go down the list in your own recollection, noting the changes.

Possibly you may go over your potato fields hauling a barrel or two of water, with a little poison added. If you will write to Leggett & Brother, 301 Pearl Street, New York, they will send you free booklet showing how the bugs may be killed by applying the poison in the dry state with a small hand machine, two rows, as fast as you walk, or on large acreage by horse power, doing four rows, doing away with the water, saving material and time, with the very best results.—Advertisement.



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"Am well pleased with the 'Sal-Vet' which I am feeding to my herd of Hampshire hogs. Since having access to 'Sal-Vet' they look better than they ever did before and on less feed." W. A. WARNER, Elk City, Kansas.

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# Live Stock.

### CARE OF WORK HORSES.

The horse, like the man, has but one stomach, somewhat smaller in proportion than man's, considering the comparative weight. The stomach cannot be made to hold rations for a long period, like that of the steer, and it must have food at short intervals for the sustenance of the animal. During the working season, the diet of the horse should be such as is easily digested, for the periods of rest are short and the digestion should be well finished before it is necessary for the horse to do hard labor. The roughage used in connection with the grain feeds should be free from dust or moldiness. Bright timothy hay is one of the best feeds for horses, and alfalfa or clover, if clean, make splendid, nourishing feeds. Oats and corn, in proportion of two of oats to one of corn, form a fine grain diet. Fourteen pounds of oats and 12 pounds of good timothy hay will serve a 1,200-pound horse one day when the work is heavy. If light, a less proportion will answer. Corn and bran, or bran and shorts, are fine feeds but cost more than some of the others that answer the purpose. The value of corn and bran is in the smallness of the bulk required and in the ease with which it can be digested, thus preventing any fermentations, which cause colic and other such troubles that should be guarded against, especially during the working season. Such feeds are important for the rest periods are short and the horse has but little chance for digestion before the next work hour comes.

The matter of water is of as much importance to the horse as it is to the driver, yet the latter drinks often while his team goes from morn till noon without it. The horse should be watered early in the morning before feeding, then give the roughage and follow this with the grain rations. Then, before going to work, water again. The same course should be pursued at the noon hour.

At night the feed should be heaviest, though not so heavy as to cause the horse to overload his stomach. Rest of this organ after digestion, is very essential to the health and power of endurance. Turning the horse on pasture during the work season is wrong. Grass has a tendency to weaken by causing looseness of the bowels. Dry feeding is always best during the working season. If turned out for a day at the end of the week it will be sufficient.

A matter that is sometimes overlooked, or is not given the attention that it should receive, is the harness. The collar and backband are frequently the causes of a great amount of pain and discomfort to the animal. Galled and lacerated shoulders caused by ill-fitting collars, are too common and are a source of much distress to the horse. Yet such disfigurements are entirely uncalled for and could have been prevented if proper precautions had been taken in fitting the collar to the horse's neck. If a horse shows irritation there is certainly a cause for it, and the humane driver will see that the cause is removed.

Rest is just as essential to our horses as it is to ourselves, and no time will be lost, so far as the total amount of work is concerned, by giving the team a breathing spell frequently when they are hard at work, and especially when the weather is hot. Kindness, also, will always pay in the treatment of horses. Naturally the horse is a sensible and sensitive animal. He knows just as well as his master when he is mistreated and he is just as quick to resent it. Nothing

is to be gained by abusing a horse. Treat him as you treat yourself and he will repay you by giving you his best strength. Give him a light, airy and clean stall that is properly ventilated. It will add to the animal's health and comfort, and thus better prepare him for work.

Indiana. C. H. WHEATLEY.

### WINTERING SHEEP WITHOUT HAY.

While attending the mid-winter meeting of Breeders of Improved Live Stock, in conversation with the editor of the Michigan Farmer, I told him that I was surprised that so many sheep and lamb feeders doubted the advisability of using ensilage for the feeding of this kind of stock, and that we at Ingleside Farm were feeding fattening lambs, store sheep and breeding ewes almost entirely on ensilage, and he requested that after the close of the season, I let him know my conclusions.

Our hay crop last year was very poor—not enough, in fact, to feed the horses through the winter, after supplying the sale and show sheep through the fall. We are in the habit of feeding at least a double deck of lambs and a car of steers, and find that it takes at least that number, together with the dairy cows, breeding sheep and horses to produce the amount of manure needed and keep the regular help employed through the winter.

In looking over the situation we made up our mind to put nearly all the corn in the silos, buy our grain and depend on ensilage and oat straw for the coarse feed, not only for the steers but also for the sheep and lambs.

For years our neighbor feeders, such as Amos Welch, Emery and Ed. Townsend, and other extensive lamb feeders, had depended largely on ensilage for their fattening lambs, but I had always been somewhat afraid of its long continued use for the ewes and store sheep, but after feeding it the entire winter twice a day, with a light feed of oat straw or bean pods at noon, I think it is the cheapest ration we can use. We do think, however, it requires a more careful and watchful feeder, and had we the hay, we would prefer feeding a lighter feed of ensilage night and morning and alternating a good heavy feed of hay and oat straw at noon. The straw left every other day would just about supply the bedding needed to keep the pens in a clean condition, and the hay and straw together would supply the dry matter needed to counteract the acidity of the ensilage.

In the April number of the American Sheep Breeder appears a very fine article on "Silage as a Sheep Feed," from the pen of Prof. W. C. Coffey, giving the results of his experiments at the Illinois Experiment Station, as well as figures from other stations. This article, as is always the case with the writings of Prof. Coffey, is worthy of careful reading. Prof. Coffey does not advise the use of silage for the entire ration, but comes to the conclusion that its careful use is entirely safe and cheapens the cost of the feed used. In this conclusion I can heartily agree and surely its use enables the average farmer to increase the amount of stock of all kinds fed, as well as to bridge over an occasional year of the shortage of hay.

I think for a large portion of the winter our sheep consumed at least three pounds per head per day, and some of them perhaps even higher.

Even the young lambs will begin eating the ensilage when three or four weeks old.

Ionia Co. H. E. POWELL.

### PREVENT STOCK FROM EATING DEAD BODIES OF CLOVER-LEAF BEETLE.

From time to time there appears a small, grub-like creature that feeds on clover, a greenish, soft-bodied grub, the immature form of the clover-leaf beetle. It feeds usually at night on red-clover, alsike, alfalfa, and sometimes on white-clover and mammoth clover. Fortunately, nature has provided an agent which is likely to appear during excessive outbreaks of the pest, in the form of a fungus disease which destroys the grub, first impelling the dying insect to crawl up to the top of a grass spear and curl its body around the point. Here the grub dies and its body remains clinging there afterward until washed off by the rains. The appearance of the fungus disease has usually been almost simultaneous with the coming of the grub so that the loss from the clover-leaf beetle has been almost negligible thus far.

Now if this were the whole story we would be content to let well enough alone, but unfortunately the dead bodies of the grubs when killed by the fungus disease are poisonous to stock, usually not sufficiently poisonous to produce death, but often toxic enough to produce serious illness. It is therefore suggested that during the present outbreak of the grubs, stock be restrained from feeding on grass bearing such dead grubs (which will be found curled around the tips of grass spears), until after the weather has washed off their bodies and again made the forage safe.

Mich. Ag. Col. R. H. PETTIE.

### LIVE STOCK NEWS.

It is expected that the Illinois legislature will enact a hog cholera serum control law. This is the hope of Dr. O. E. Tyson, Illinois state veterinarian. "Such a move as that made by the United States Live Stock Sanitary Association in urging state control of serum makers not licensed by the federal government should win favor from all state authorities," says Dr. Tyson. "Hog growers who purchase serum from unlicensed manufacturers are in many cases merely buying poison for their hogs. If purchasers of serum from private manufacturers would first examine the label on the bottle and determine whether it is potent serum made under government license, they would save themselves tens of thousands of dollars and also thousands of hogs."

There is a lively demand in the Chicago market for choice little yearling stock steers for grazing, and unprecedentedly high prices have been paid recently, for offerings have been small, most owners preferring to keep them for grazing on their own farms. Purchasers of well-bred cattle weighing around 600 to 700 lbs. figure it out that if they obtain from 250 to 300 lbs. gain in weight on pasture this summer, the cattle will make a profit by next fall, even should they sell below the first cost. This demand has come largely from Indiana, Illinois and Ohio, with some buying from stockmen of Michigan, Wisconsin and Pennsylvania. Very little demand exists for fleshy feeders, and the greater part of these cattle go to killers. The advance in prices for the lighter steers adapted for fattening and the decline in prime heavy beefs bring the extremes of cattle prices much nearer together than earlier in the year. An expert in cattle reporting in the Chicago stock yards said the other day: "It is practically only a dollar spread in prices now for medium to prime beef steers, since the bulk of the crop going below \$8.35 per 100 lbs. is only of a class suited for feeders, and where killers get any considerable quota of purchases below \$8.25, it is due to the fact that they possess too much weight to make them attractive as feeder purchases."

Springers in the Chicago market are in fair country demand, only the best ones being wanted, and such cows go for \$75@85 per head. Buyers are afraid to buy aged cows, fearing reactors in the tuberculin test, and ordinary and medium cows sell usually to slaughterers.

# Dairy.

CONDUCTED BY COLON C. LILLIE.

## SOY BEANS FOR HAY.

Would you be so kind as to give me some information about raising soy beans for hay? Do you think they are all right for that? Also, can you give some information regarding vetch for forage and hay?

Shiawassee Co. J. J. E.  
Both soy beans and sand vetch make good hay. Soy beans should be planted in the spring after the ground becomes warm, say right after corn planting, from the twentieth of May to the fifteenth of June, depending upon the season. You could plant them as late as the first of July and they would get far enough advanced so that you would get very good hay out of them.

There are two ways of planting them, in drills 28 inches apart and cultivating them, in which case you will need about three pecks of seed to the acre, or you can sow them broadcast with the drill the same as you do wheat, then you will want about a bushel and a half to the acre. Probably the safest way is to put them in drills, though if the season is favorable you can grow them much cheaper by putting them broadcast because you don't have to cultivate them. Cut them when the pods are nicely developed, cock them up before they get too dry, and cure them in the cock as you would clover hay.

Sand vetch should be sown early in the spring if you want to use it for forage. Usually it is better to sow this, the winter vetch, in August or September, with rye. If you sow the spring vetch in the spring it ought to be sown early and with oats, because the vetch has a reclining stem and will lodge badly, in fact it will run right along on the ground unless sown with some other crop which will hold it up. If you sow the spring variety with oats it should be cut when the oats are in the milk and made into hay the same as you would clover hay. If you sow the winter variety in August or September with rye, it should not be cut until the next spring when the rye is at the right stage of maturity to make into hay. In either case it is cured much the same as clover hay and make fairly good hay that stock relish and will do well upon. You could use eight or ten pounds of vetch seed per acre and about a bushel of rye or a bushel of oats. Both of these plants ought to do well on your land, which is inclined to be sandy. Vetch is a soil improver because it is a legume and has the power through the bacteria on the nodules on the roots, to draw free nitrogen from the atmosphere. Rye and vetch are very often sown together for a cover crop and for green manure. They cover the land during the winter time when it is liable to wash and then the next spring this is plowed under as a green manure. This is a splendid way of improving light sandy soils. There is no reason why it cannot be grown, and in fact it is grown on good soil and harvested for hay. I purchased the winter variety this year and sowed it with a mixture of peas and oats and rape for a hog pasture. The idea is to get as many plants as one can to give variety to the feed.

### MORE INFORMATION ON CONCRETE SILO.

I am interested in V. P. Smith's method of building a silo and would like more information regarding it. I would appreciate it if he would answer the following questions: 1. What part of cement to sand did he use to make the concrete wall that is below the ground? 2. How thick

did he build the wall? 3. How thick the wall above the ground? 4. How did he reinforce his wall above the ground? Some recommend wire or band iron. 5. Where did he get his iron frame and doors? 6. How many barrels of cement would it take to build a silo 10x30 feet? J. K.

With regard to my article on silo building, in the Michigan Farmer of May 2, and to give more explicit information, I herewith give answers to J. K.'s questions in the order he asked them:

1. One part cement to six parts of ordinary bank gravel.

2 and 3. First 13 ft. mostly below ground, six inches thick. Next 16 ft. to top of silo four inches. After using this silo one year I decided to go deeper. To accomplish this I dug down on outside of silo three and one half feet, putting in a wall about five feet long, two feet high, one foot wide at base, tapering to four inches at top. This was built solid against the silo wall on opposite side of the concrete entryway walls and drive bank to prevent any possibility of the silo being crowded over or settling. I then tore out bottom of silo and dug down carefully with a rounding shovel and with the butt end of a shingle I scraped out the sand immediately under wall. I put on a coat of cement plaster (one part cement to two of sand) about one-half inch thick, extending down about six inches. I allowed time for each ring to set before digging deeper. Deepened silo six feet in this manner, making it 35 feet in all.

4. For reinforcing I used one No. 9 smooth old fence wire, laid in wall every eight inches, every third wire being attached to three-quarter-inch rods crossing silo door, these rods being two feet apart. Perpendicularly I put in one rod of three-eighth-inch iron each side of door, also joining ends of cross bars.

At top of wall I used five strands of wire to prevent spreading and to hold the strain of pavilion cement roof. I used woven-wire fencing to reinforce roof.

5. Silo door frame is solid concrete. I built a door frame, or form, of pine boards. Bored holes for the cross bars and door fastenings before setting frame up, nailed strip of lumber on inside of door frame, or form, of desired thickness to provide for groove in cement necessary to admit ends of doors to fit flush with inside of silo walls.

To make doors I used two thicknesses of inch lumber with tarred paper between. Horizontal boards fit into cement grooves in silo wall and lap two inches onto inside of door below. Perpendicular pieces lap two inches onto door above.

6. For this silo, including concrete roof two inches thick and entryway walls leading from basement to silo, I used about 18 barrels of cement. The total cost of silo, including my labor, was \$125.

If building again I should build on a good base near top of ground, then proceed to deepen silo, plastering on ground as per previous method.

Allegan Co. V. P. SMITH.

### SUMMER MEETING OF MICHIGAN JERSEY CATTLE CLUB.

The summer meeting of the Michigan Jersey Cattle Club will be held at the home of H. B. Wattles, Troy, Mich., June 11, 1914. All Michigan Jersey breeders are cordially invited to attend this meeting. Mr. Wattles' place is located on the Flint division of the Detroit United Railway, Stop 26. Breeders intending to attend this meeting please notify Mr. Wattles by mail, or otherwise, so that he may make necessary arrangements.

A. P. EDISON, Secretary.

The Lansing Vitrified Tile Silo, manufactured by the J. M. Preston Co., Lansing, Mich., is fully illustrated and described in a 20-page art catalog sent upon request to the above address. It contains detailed descriptions of the special features of this permanent type of silo.



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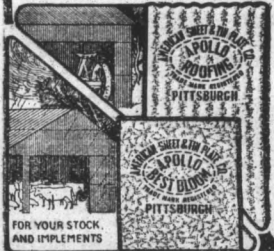
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## Poultry and Bees.

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It is an easy matter to make a self-feeder for the poultry house and yard which will save much labor, and at the same time give the fowls a chance to balance their own ration. I use a feeder at all times of the year, but it is especially necessary in the winter and when the birds are kept in small runs without opportunity to forage.

The feeder is constructed of half-inch pine lumber, being a box some four feet in length, two feet tall and a foot or so in thickness. The bottom is put on with a slant, sufficient to allow the feed to settle towards the front. This is set up on legs about four inches from the floor. The legs at the back are three times as long, on account of the slanting bottom. The top is fitted with a hinged cover. Inside are compartments with openings in the front of the feeder. As many as desired may be made. A trough projected from the front some four inches, being one and one-half inches in depth. I also have a strip project over the edge of the trough some three-quarters of an inch to prevent waste of food. For cleanliness and lasting qualities the bottom of the trough should be tinned.

### Compartments for Different Foods.

The openings at the front may be of any size desired. I have three about six by eight inches and one smaller. Those used for ground feed, such as dry mash and beef scrap, are covered with three-eighths-inch wire mesh, and the ones used for oyster shells, grit, charcoal or clover with one-half-inch mesh. In the summer when dry grains are fed from the hopper, narrow strips of wood may be tacked across the openings to prevent the grain from coming into the trough too freely. It is desirable to separate the feed trough into compartments corresponding to the openings, though this is not absolutely necessary. A box four feet in length is about right for four compartments. A larger box could be used for a greater variety of food, or two of them. I like two for each pen, that there may always be an abundance of hopper food available.

If one does not wish to make a box with slanting bottom, any square box can be fitted up, simply by putting in a slanting board to push the feed toward the front. After two or three have been made, doubtless certain variations will suggest themselves to the builder, that may better suit individual tastes and needs. The feeders I am using at present are quite different from the first one I made.

It is but the work of an hour or two to build one of these feeders, but the saving in feed and added cleanliness will mean dollars to the poultryman. New Hamp. C. H. CHESLEY.

### GREEN ONIONS FOR THE YOUNG POULTRY.

When preparing green onions for the table, or for market, we always save the tops for the young poultry. It is surprising to see how quickly the little chicks learn to eat this pungent vegetable, even when they have free range where other green stuff is plentiful. It is the same with young turkeys. Goslings and ducklings seem to relish onions, when mixed with some kind of a mash. Young chicks and turkeys eat chopped onion-tops, greedily, after they have become accustomed to them, without anything being added.

At first we always mix the onions with a little rolled oats or bread crumbs, until they have acquired a

taste for the onions, which is not long, for, as stated above, they learn very quickly. However, onion-tops will not take the place of the regular grain ration. For the benefit of beginners, it should be stated, here, that the green tops of onions are fed as a sort of tonic, or to take the place of other green stuff; sometimes both. And we have heard it said that the odor of onions would drive away vermin. We have often noticed that young poultry, especially turkeys, were always more thrifty when onions played a part in their daily ration. Last season we planted an extra bed of onions for the poultry to be used at times when onions were not wanted for other purposes. We use a pair of shears for cutting the onion-tops small. Once a day is none too often to feed green onions, when chicks have free range; when they cannot have free access to other green stuff they should have onions twice a day at least. ANNA W. GALLIGHER.

### LOSS OF FEATHERS ON NECK AND HEAD.

Will you please tell me what makes my hens lose their feathers around the head and neck? What can I do for them? Newaygo Co. F. T. S.

There are two chief causes for the loss of feathers from the head and neck, feather eating and depluming mites. The latter is undoubtedly the chief cause, and often leads to the former habit.

These mites live on the epidermal debris at the base of the feathers and cause the feathers to break off at the surface of the skin. These mites will also be found around the rump of the fowl, where the feathers are also lost.

For the control of these mites the following ointment is good: Flowers of sulphur, one dram; carbonate of potash, 20 grains; lard of vaseline, half ounce. The flock is usually infested by the introduction of one or more birds having the mites. It will spread quite rapidly through the flock.

The feather eating due to this mite is caused by the irritation they cause the birds. They will start picking their own feathers, and later the feathers of others. The ordinary habit of feather eating can be checked by making the hens work for their feed and furnishing them a well-balanced ration.

Well-bred queens are good for two full years' work, and the great majority for the third year. A queen hatched in the early part of the season, so that the year of her hatching she does much breeding, is aged and very uncertain her third summer. Hatched in mid or late summer she will complete that year, all the next, and make a good colony for the next honey season after that, when she ought to be superseded. Do not expect a queen to do more than two hard summers' service. Many will be good for longer, but enough will not to make it unprofitable to risk keeping longer.

### BOOK NOTICE.

Regardless of the fact that there is an unlimited amount of poultry literature, the chicken enthusiast is always ready for some more. He will not be disappointed with "Success with Hens," a book by Robert Joos, for it is full of useful hints for both expert and amateur. The book has a very practical tone to it, the 55 chapters giving full directions for the hatching and brooding of chickens, incubation, feeding and housing, increasing the egg supply, cure of diseases, the marketing of eggs and fowls and everything pertaining to the care of hens. It is published by Forbes & Co., Chicago, Ill. Price \$1.



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# Horticulture.

## PESTS OF THE SMALL FRUIT PLANTATION.

The small fruit grower does not have the continual fight with insects and diseases that the grower of tree fruits does, because his season is shorter. He has, however, pests which bother him and make the returns he gets fully earned before he gets them.

The grower of strawberries has few insects and diseases to contend with and in most cases the spraying of the strawberry patch is a thing which is not considered, because good crops can be grown without it. Specialists in strawberry growing say, however, that it pays to spray the patch at least twice about the blossoming time. Besides controlling the strawberry leaf spot or rust and the leaf roller, the spraying adds tone and vigor to the plants, and for this purpose spraying would be profitable. The usual sprayings should be made just before the blossoms open, and again in about ten days. Bordeaux mixture and arsenate of lead, or Paris green, are the best sprays for this purpose.

### Burning Over the Strawberry Patch.

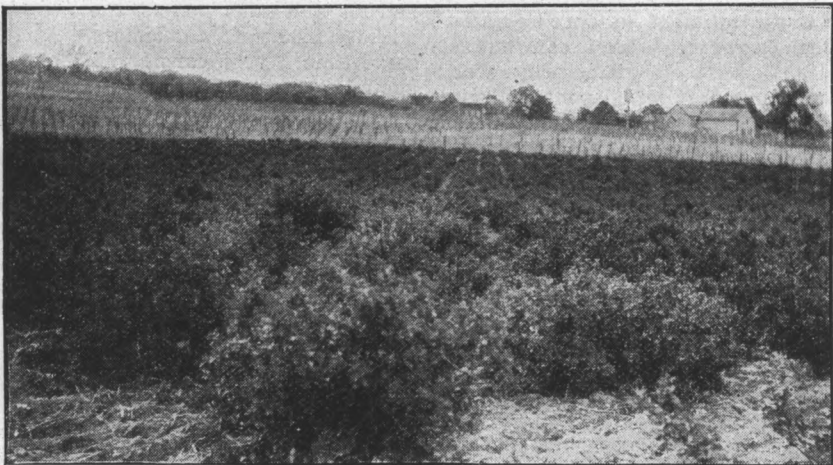
One practice which is of value in controlling the pests of the strawberry plantation is the burning over of the patch after fruiting. The tops should be mowed off and allowed to dry and then when the wind is right

perience stated above. Those having this root trouble might well experiment with lime for its control.

### Raspberry Anthracnose.

The raspberry and blackberry growers have several diseases to contend with which are hard to control. The most common of these is the anthracnose or raspberry scab. This affects most seriously the black raspberry and in some localities the growing of this fruit has been discontinued on account of this disease. The trouble is of a fungus nature and forms grayish white blotches on the cane which are somewhat sunken. These spots destroy the cambium layer or the sap wood of the cane, and in that way restrict the circulation of the sap. It is the most common cause of the berries drying up just before ripening time. There are no satisfactory remedies for this trouble and spraying has no effect on it. Preventative measures are to cut the old canes out immediately after the crop is harvested, good cultivation, and fertilization. On account of this disease it is not advisable to keep a black raspberry patch longer than seven to eight years. This disease also attacks the red raspberry and blackberry, but is never as serious on these fruits as on the black raspberry.

Orange rust is troublesome on blackberries and black raspberries,



A Well-Kept Gooseberry Plantation.

and the material is thoroughly dry, burned over quickly so as to avoid burning the crown of the plants. The straw mulching left to keep the berries clean and to prevent evaporation of moisture, will facilitate the quick burning. It is advisable to loosen this mulching up a few days before burning so that it will dry out well. If there is no mulching on the patch it may be advisable to add some straw to assist in the rapid burning. If the leaf rollers have been present, spray the patch again after the growth has started.

### White Grubs.

The white grubs of the May beetle which often cause injury to strawberry patches, can not be controlled except by hand digging. Sod and old manure are favorite breeding places for them, so it is not advisable to set a strawberry bed in sod ground or to use manure made before the first of August. The grub does its greatest damage in loose, loamy soils. It is not often bothersome on soils of a clayey nature.

What is called the black root has been the source of considerable trouble to many strawberry growers. Some of our best growers have found that the application of lime to their soils prevented this trouble to a great extent and kept the roots in healthy condition. There is considerable controversy regarding the effect of lime on strawberries. Some say that it is injurious, while others give the ex-

perience stated above. Those having this root trouble might well experiment with lime for its control.

The raspberry and blackberry growers have several diseases to contend with which are hard to control. The most common of these is the anthracnose or raspberry scab. This affects most seriously the black raspberry and in some localities the growing of this fruit has been discontinued on account of this disease. The trouble is of a fungus nature and forms grayish white blotches on the cane which are somewhat sunken. These spots destroy the cambium layer or the sap wood of the cane, and in that way restrict the circulation of the sap. It is the most common cause of the berries drying up just before ripening time. There are no satisfactory remedies for this trouble and spraying has no effect on it. Preventative measures are to cut the old canes out immediately after the crop is harvested, good cultivation, and fertilization. On account of this disease it is not advisable to keep a black raspberry patch longer than seven to eight years. This disease also attacks the red raspberry and blackberry, but is never as serious on these fruits as on the black raspberry.

Occasionally various chewing insects attack the raspberries and the blackberries and in case they do, a spraying of arsenate of lead at the rate of two pounds to 50 gallons of water or Paris green, using five ounces to 50 gallons of water, with about a pound of slaked lime added to it to keep it from burning the foliage will check them.

### Diseases of Gooseberries and Currants.

Most of the troubles of the gooseberry and the currant can be controlled by spraying. These are mainly the currant worm, mildew, aphid, San Jose scale and the European fruit scale. The latter two can be controlled by the dormant lime-sulphur spray, and the others can be controlled by spraying with Bordeaux mixture and Paris green. When the leaves are expanding, and again when the fruit is about one-fourth grown. For the aphid, tobacco extract should be used before the leaves curl. The commercial to-

bacco extracts are best for this purpose and should be diluted according to the directions the makers give.

The cane borer is quite often troublesome in gooseberry and currant patches. These borers work in the pith of the canes and in that way kills them. When pruning in spring, canes with black centers should be cut back until the healthy pith is reached. The borer always works downward and if not taken care of, will work into the crown of the plant and ruin it entirely. Wilted foliage usually indicates the borer and affected canes should be cut out.

## TROUBLE DEPARTMENT.

### Cherry Trees Fail to Bear.

I have some seven-year-old cherry trees, large trees that are covered with blossoms every spring, but only have a quart or two of cherries on them. They also grow very rank.

Leelanau Co. J. O.

When trees blossom and fail to bear, the blossoms may not be sufficiently self-fertile and have no other trees around to fertilize them, frosts may get them or the trees blossom so fully that the blossoms are weak and therefore do not properly fertilize. One can readily tell whether the source of the trouble is the first two mentioned, or not, and can plant companion trees or protect from frost, as the case may be. To rectify the trouble with reference to over-blossoming, the tree will require pruning, and the pruning should be such that quite a few blossoms buds are thinned out. As the cherry bears its fruit on short lateral spurs on the older wood, a clipping back of the past season's growth would do no good, but a thinning out of the head of the tree so that considerable of the older wood is taken out would be necessary. The thinning out should be done evenly throughout the top of the tree, for if all of it is done in one part that part will mostly be benefited while the others will not be much affected. This is not a sure method of getting the blossoms to set in cases like this but it has often rectified the trouble.

### The Old Asparagus Bed.

I have an asparagus bed set out about 60 years ago. It has been a good bearer until the last few years it has gradually borne less. Can you tell me any treatment to help it? I always covered it thick with straw when I stopped cutting it, and salted it good in the spring. J. A. D.

After an asparagus bed as old as yours lacks in vigor from some cause, it is rather hard to bring it back. The asparagus is a gross feeder and needs much fertilization and in addition to the annual treatment you give it a good application of barnyard manure, preferably in fall, would be advisable.

Probably the chief cause of the condition of your asparagus bed is some insect or disease which you have not noticed. The asparagus rust is becoming quite serious and in some cases serious enough to entirely ruin the patch. The symptoms of this trouble of the rusting or dying back of the tops during the summer. The best method of control is dusting the bed with flowers of sulphur early in the morning while the tops are still wet with dew, and about three weeks after the cutting has been stopped.

Asparagus beetle also causes considerable trouble. The beetles feed on the tender shoots, and the larvae feeds on the leaves and tender bark. Allowing poultry to have access to the bed, dusting freshly slaked lime on the plants in the morning when the dew is on, or allowing some of edges of the bed and spraying them with arsenate of lead or paris green, are the various methods of control suggested.

While endeavoring to bring the bed back to good vitality it would be best to cut it for a short time only. By so doing you give the plants an opportunity to strengthen the root systems.

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### CURRENT COMMENT.

On May 29 the Michigan Supreme Court rendered an opinion in which the 1913 amendment to the act providing for the support of the Michigan Agricultural College was declared void. This action releases for the use of the institution the funds derived from the federal government, the use of which was restricted by the act of the Legislature and which have been unavailable for use while the case which has just been decided was pending. A full account of the events leading up to this complication was published in our issue of April 4, and the refreshment of the reader's memory will require but their brief recapitulation here. Briefly stated, the Agricultural College receives federal aid to the extent of \$120,000 per year, upon the accepted requirement that it be expended in the teaching of agriculture and the mechanic arts. State aid to the college was granted in the form of specific appropriations until 1901, when the Legislature passed a law providing for an annual appropriation of one-tenth of a mill on each dollar of the assessed valuation of the property of the state for that purpose. With the increased attendance and demand for extension work more funds were needed and the Legislature amended the law, increasing the annual tax to one-sixth of a mill, but with a clause added during the closing hours of the session through the influence of a few members of an important committee of the House upon the pretext that the college was duplicating the work of the University in its engineering department, providing that "no part of this or any other appropriation shall be available in case a sum in excess of \$35,000, from any and all sources, shall be expended in any one fiscal year for the support of the Mechanical and Engineering Department." After careful deliberation and upon the advice of reputable counsel, the State Board of Agriculture, charged by the constitution with the administration of the college, declared their intention to limit the use of state funds for the said department to \$35,000, making up the needed balance from the federal funds available for the purpose. When the Auditor General estimated that a total of \$35,000 had been used in the conduct of the Engineering Department, he refused requisitions for federal as well as state funds, upon which the Board petitioned the Supreme Court for a writ of mandamus to compel the payment

of funds upon these requisitions, thus bringing the case before the court to be decided on its merits.

The opinion, which was written by Judge Ostrander, holds that the Legislature exceeded its constitutional power in attempting to control the Agricultural College funds derived from the federal government, and that the act is for this reason void. As a consequence the federal and other funds which would accrue to the institution under the old law are made available for use, but the amount of state funds available will be the one-tenth mill tax provided under the old law, instead of the one-sixth mill provided for in the amendment.

Under the heading "The Standardization of Crops," of "Further Opinions on the 'Cost of a Crop,'" will be found two communications in which the writers express derogatory opinions regarding the possible usefulness to potato growers of the Michigan Potato Growers' Association recently organized in this state. In one of these communications the opinion is expressed with all sincerity that such work as has been undertaken in the matter of standardizing the potato crop will prove to be detrimental rather than beneficial to the growers of this staple cash crop. These opinions are given prominence in this issue for the reason that we believe them to be expressive of the views of a large contingent of Michigan farmers who are engaged in this branch of farming, and because a subject of such importance to producers should be publicly discussed from all angles in order that public sentiment may be crystallized in a manner which will accrue to the greatest good of the greatest number of interested producers.

In another column will be found an article written by the secretary of the Michigan Potato Growers' Association, in which the aims and objects of that organization are set forth. It will be conceded, we believe, by any fair-minded reader that the accomplishment of those aims and objects would prove beneficial, rather than detrimental, to the potato growers of the state. The one item of broadening our market by developing a trade in southern seed stock is of no small importance, while the advantages which would accrue along other lines from an effective organization of growers would not be inconsiderable.

So far as a standardization of the crop is concerned, the contention that a standard fixed by the dealers might be to the disadvantage of the grower may be well taken, but this should neither be the object nor the result of an organization of growers. A comprehensive organization of growers could certainly fix their own standards so far as varieties are concerned, and by a study of cultural methods could help the membership of the organization in the matter of controlling quality much more effectively than it is accomplished by individual growers under present methods. Standardization of product, so far as possible, has been beneficial to growers in every line to which it has yet been applied and there would seem to be no good reason why the potato crop should be an exception, so long as it is brought about by and under control of the growers themselves.

The Smith-Lever co-operative agricultural extension law, which was passed by Congress at the present session and received the President's signature last month, has been before the country so long and commented upon so frequently that many Michigan Farmer readers are more or less familiar with its provisions. This law provides that each state in which an agricultural college is designated shall receive as a basic fund from the fed-

eral government \$10,000 annually for agricultural extension work, or, in the words of the act, "the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise." In addition to the \$10,000 received by each state without further obligation on its part, the law provides for liberal additional appropriations, to be distributed in the proportion that the rural population of the state bears to the total rural population of the country, provided that the states, or their lesser municipalities or individuals within the states, duplicate the additional amount appropriated by the federal government for like use. These additional appropriations will be increased by a half million dollars annually for the country, until the total federal appropriation for this purpose shall reach \$4,850,000 annually, as will be the case in 1923 and thereafter.

To avail themselves of this liberal aid in the advancement of scientific agriculture the states or their people will be obliged to make liberal provision for the duplication of the federal funds, but the law wisely provides for an original and perpetual basic appropriation of \$10,000 for each state without such obligation, which will permit a trial of the kind of demonstration work contemplated which should test its popularity and inspire enthusiasm for its enlargement as practical results may warrant.

### The Organization of a Successful Bean Growers.

If the details of a successful plan can be satisfactorily worked out, an effort will be made during the present year to organize the bean growers of the state by a representative of the Office of Markets of the U. S. Department of Agriculture. The object of the organization to be attempted will be to improve the marketing conditions for this important Michigan crop to the benefit of the grower; to more successfully combat the fungous diseases which are annually shortening the average yield of beans, and to promote the more general use of beans as human food, thereby increasing the market demand for this staple foodstuff.

This would seem to be one of the most promising fields for the organization of growers, for the reason that about 70 per cent of the bean crop of the United States and Canada is produced in Michigan, and it is a safe assertion that Michigan bean growers have not in the past been well satisfied with marketing condition as applied to this crop. As is well-known to the bean growers of the state there is a strong organization of bean handlers known as the Michigan Bean Jobbers' Association, and there has been a general feeding among growers that the purpose and work of this organization has been inimical to their best interests. This has been an entirely natural result from their observation of the trend of the bean market in recent years, which has generally started at a reasonable figure, but quickly sagged when the bulk of the crop came onto the market, only to again rise at the close of the season when the bulk of the crop had passed from first hands. It appears, however, that this long, downward curve to the market has been as dissatisfying to all but a few big speculators among bean handlers as to the growers themselves, since most of them have been obliged to move their beans during the low period when the free offerings have taxed both their resources and the capacity of their plants. This condition of affairs led to the advancement of a proposition by the progressive president of this organization that growers and dealers

get together and see if some plan could not be evolved which would remedy this unsatisfactory market condition. Hon. James N. McBride, President of the State Association of Farmers' Clubs, took the initiative and called a meeting of representative growers, dealers and experts, who met with a committee of the jobbers in February of the present year. Little was accomplished at this meeting except to add impetus to a propaganda for the use of clean seed, in which dealers and growers were mutually interested.

Later, the co-operation of the newly organized Department of Markets was enlisted by the gentlemen who first took the initiative in the matter, and last month a representative of that department, who is a well-known Michigan man, met with practically the same men who were present at the former meeting for the purpose of getting all possible information bearing on the situation, with a view of promoting an effective organization of bean growers.

In the event that a workable plan can be evolved, an effort will undoubtedly be made to organize the bean growers in some 25 counties of the state where the bean crop is an important factor of production. With as accurate statistics of production as can be gathered by the Department of Markets, a committee composed of representatives of these county growers' organizations from each county would be in a position to advise the growers of the state intelligently on the question of marketing the crop in a manner which would largely eliminate the speculative feature from the market and thus benefit the growers without injury to consumers. At the same time a very considerable benefit should accrue to growers from the other activities above mentioned, if the plans for effecting an organization of Michigan bean growers are successfully consummated.

### HAPPENINGS OF THE WEEK.

#### National.

At Connellsville, Pa., Sunday, a locomotive left the track and killed five persons and injured two others.

A fast train on the Michigan Central was wrecked 17 miles south of Lansing, Monday morning. With the exception of the engine and the tender, the entire train left the track. A broken rail is blamed for the accident. No one was injured, due, it is believed, to the use of steel cars.

The vote of the Senate on the canal tolls repeal measure will likely be taken this week.

It is now expected that the present session of Congress will adjourn on July 15.

Home consumption of foodstuffs in this country is fast overtaking production, so that the amount of domestic food products going out of the country is growing smaller and the quantity coming in is increasing, according to figures compiled by the bureau of foreign and domestic commerce.

F. E. Chafin, the prohibition party leader, has presented the national committee of the party with a 60-acre park at Clinton, Mo., to be used for educational purposes along prohibition lines.

Vice-president Marshall, in an address at Charleston, W. Va., urges religion as an effective means of combating labor evils.

#### Foreign.

On Friday, May 26, the steamship Empress of Ireland, while proceeding up the St. Lawrence river, was rammed by the collier Storstad, and in a few minutes went to the bottom in 25 fathoms of water, carrying down 969 persons. Only 209 bodies have been recovered by Monday, and of these less than a hundred had been identified. It is expected that many of the bodies will never be recovered because of the strong outward current at the point of the accident. The collision occurred during a fog. The blame has not as yet been attached to either of the boat crews, however, a royal commission will make a careful investigation into the cause.

By reason of his military successes of late General Carranza, chief of the rebel forces of Mexico, assumes the office of president of the whole country. (Continued on page 595).



# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

**MICHIGAN FARMER**  
AND **LIVE STOCK**  
PUBLISHED WEEKLY  
**JOURNAL**  
ESTABLISHED 1843.

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

## How the Fairies Befriended Tim.

By EMOGENE L. MANCHESTER.

IT may have been the beauty of the morning, or the clearness of the water, or perhaps both, that tempted the Queen of the Fairies to launch her little craft upon the waters, for as you probably know, Fairyland is located in a fern-clad dell on the side of that very hill from which the brook flows. It is said, once upon a time when the weather was so hot and dry that the cows and sheep were dying of thirst, the good fairies gathered all the dewdrops of the woodland and rolled them into one clear, sparkling stream, which has flowed down the hill and across the meadows ever since.

In order to guard the secret of its source, the Queen established her Court at the very beginning of the stream, so that no harm might come to the Mystic Brook, as it was called, by the good people all about. For you must know that there are wicked fairies, who would laugh and dance with glee to see the poor cows and sheep dying with thirst.

The little craft in which the Queen floated down the brook that balmy morning was a beautiful shell lined with the rosiest pink and cushioned with the richest velvet-green moss, and the sails were spun from spider-web threads which sparkled and gleamed in the sunlight. Four glistening gold-fish were harnessed to the small chariot-boat by the slenderest strappings, and two pair of soft silken reins guided the shining steeds wherever the Queen might wish to go.

Down the stream she sailed, past the violet dotted banks, until she came in sight of the hut where poor little, crippled Tim Crowner lived. Away beyond she could see the mansion known as "Grey Towers," which was owned by a stern old man, who lived all alone except for his servants and he was said by them to be very cross and surly. As the Queen's glance rested on the miserable hut with crippled Tim in the doorway, an expression of pity came over her beautiful face, but when she caught sight of "Grey Towers" in the distance, her expression quite changed, and with a gay laugh she stood upright upon the moss-green cushion and threw a kiss straight toward the crippled Tim.

If Tim heard the laugh, he probably thought it was the glad note of some bird songster; and had the sun not been shining so brightly on the Mystic Brook, he might even have seen the Queen herself, with her halo of golden hair held in place by a jeweled crown, and he might have caught the shimmer of her gauzy wings, which looked for all the world like those of an exquisite butterfly. But Tim heard instead the shrill voice of Mrs. Crowner and saw the beautiful fields and glad sunshine in which he could not run and play like other boys.

The Queen turned her little steeds toward home and waving her wand over them, was soon traveling rapidly up stream. She journeyed so quickly that in a short time she reached the entrance to the royal palace, which was so large that it would hold as many as a thousand fairies all at once. Passing through long passageways of

mother-of-pearl, she went directly to the throne room. Here she paused beneath a splendid blue-bell that grew straight and strong. Without delay she rung a silvery peal so tinkling and clear that the fairies came trooping in from all directions.

When they had assembled the Queen spoke:

"I wish to tell you," she said in a sweet, high voice, "of my travels this morning down the Mystic Brook. The sunshine was so bright and the birds and flowers so gay, that I thought all the world must be happy too, but I was mistaken, as even Fairy Queens are, sometimes.

"Over by the hut of Margaret Crowner, there was a little crippled boy, in whose life there is so much cloud and sadness that very few of the yellow sunbeams can struggle through into his lonely, hungry heart. Away beyond the little hut, stands the great mansion on the hill, with its cross, old master, who cares for nothing but his money.

"Snowflake," she continued, "I desire you to take a band of seven fairies and go this very night to 'Grey Towers' and see if you can find a soft spot in the heart of its crabbed own-

er. Snowdrop," she said, turning to Snowflake's twin sister, "take the same number of assistants, go to the cabin of crippled Tim, and find out what will make him happiest on earth."

The fairies were so overjoyed with the prospect of making a poor, lonely little boy happy, that they could hardly restrain their impatience for nightfall. But it finally came, as most things do if we wait patiently.

Snowflake and her companions found the master of "Grey Towers" sitting alone in his library, with his face buried in his hands and an open letter upon his knee. She fitted so near that she could read the letter. It really was not rude for the fairy to do this, as she had to find out what was troubling him if she wished to make the old man happy.

The letter was dated five years before. It read:

Dear Father:

Please forgive me now, for I am dying. Take my poor, little crippled baby boy and love him for my sake. You and he are all alone in the world now, except for each other. My baby and my love are all I have to send you.

Your Daughter,

Ruth Curry.

The old man groaned. A servant

came to the door to inquire if he could be of any service and his master answered his kindly inquiry so harshly that the fairies stole sadly out into the silvery moonlight and flitted homeward. Snowdrop had reached the palace first and was telling the Queen that she and her band had found Tim asleep in a miserable bed, with his cheek wet with tears, and a sob in his throat. Below stairs they could hear Margaret Crowner berating her husband for wanting to keep Tim now that times were so hard and he could do little work, declaring that she herself would send him back to the orphan asylum from which he came.

The Queen looked troubled but as Snowflake told her story, that troubled look vanished and she fairly beamed with delight.

"I see it all," she cried eagerly, "the master of 'Grey Towers' is relenting his harshness and hungering for his grandchild, and he shall have him, for the little fellow is not as far away as the old man thinks." Here the Queen clapped her hands together. "Sunbeam, Sunbeam," she called, "go to the master of 'Grey Towers' as he sleeps and whisper in his ear that he will find all the potatoes he wants for the spring planting of his broad acres down at the Crowner hut by the Mystic Brook; and then, my dear, go to Margaret Crowner, who is sleeping also, and tell her to tell the first one who comes to buy the potatoes, how unreasonable her husband is, and how anxious she is to be rid of the burden of the crippled orphan child.

The next morning there was a regular fairy picnic down the Mystic Brook, for one and all wished to see Tim discovered by his grandfather. There was such chattering and such laughter that the Queen was obliged to wave her wand over the entire party, so as to make them silent and invisible as far as mortal eye was concerned, but still capable of having as good a time as ever in their own fairy fashion.

This time the party moored their little crafts and went over by the hut under the hedge of Bouncing Betties that grew there in the shade. They saw the old man drive up and heard him inquire for potatoes. They laughed and nudged each other when he grumbled at the price Margaret Crowner asked, and fairly danced with glee when the old woman burst into a fit of wrath at his remonstrations and poured forth a tale of woe about the hard times and the added burden in their family.

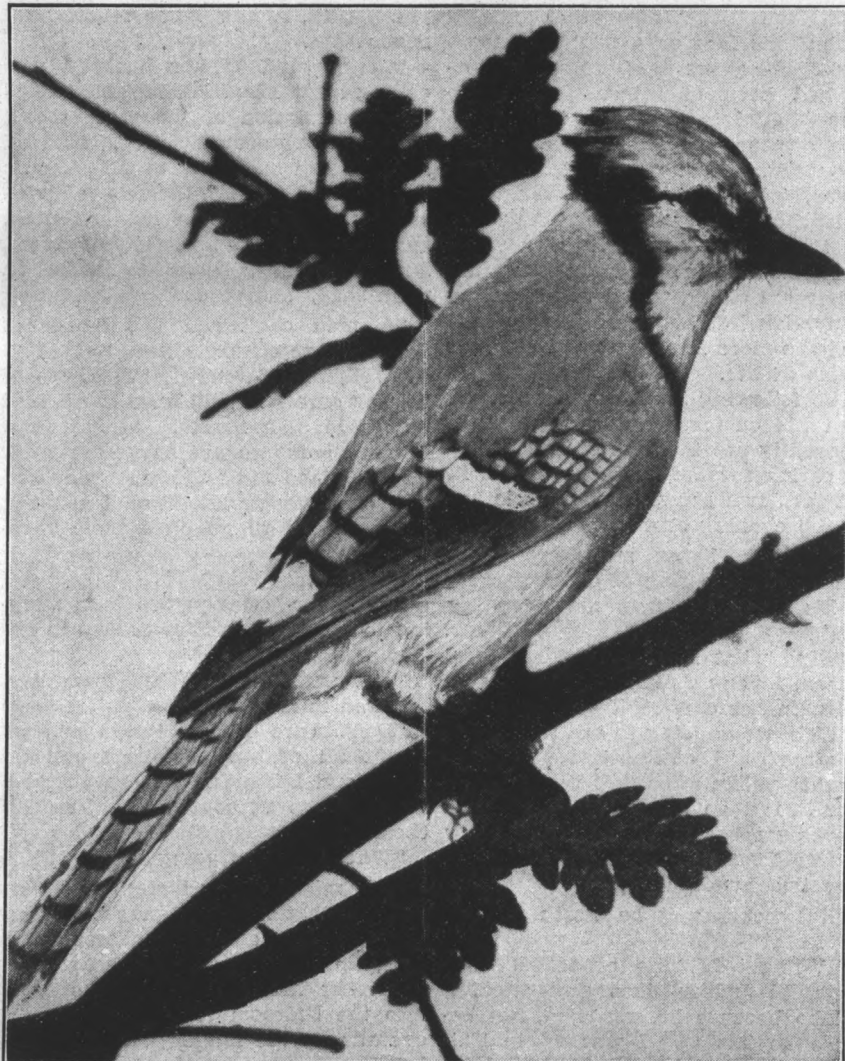
Just at that moment Tim came to the doorway and stood sadly leaning on his little crutch. They saw the old man start with surprise and heard him ask in a trembling voice, "Where did that boy come from?"

"Clear from Boston, Sir," she whined, "an' it's only a mere penny we get for his keep."

"And his name?"

"They call him Timothy Curry there. Folks hereabouts call him Tim Crowner because he stays with us an' it's good to him we've been, Sir."

"I'd know those eyes and that smile anywhere," the man murmured with



The Blue Jay has a variety of calls, ranging from his harsh scream of "Jay, Jay," to a subdued and somewhat varied warble that is decidedly musical, especially at a distance. He imitates the calls of the red-tailed and red-shouldered hawks and is able to mimic many sounds. To Michigan boys and girls he is well known.



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misty eyes as he climbed from the buggy.

Even the fairies paused in their gambols of delight when the old man tenderly lifted the crippled boy upon the seat by his side. They saw him give the old woman a handful of coins and then with one arm around the little fellow, he drove slowly up the long dusty white road toward the "Towers."

That night Snowflake went once more to the stately mansion in obedience to the Queen's command. She found Tim sleeping sweetly in the pretty room which used to be his own

dear mother's and she heard the great doctor down in the library tell his grandfather that "the little fellow could be helped, and probably cured."

Neither Tim nor his grandfather ever dreamed of the fairies as being the cause of their happiness, nor did Margaret Crouner's husband attribute to them the gift of the roll of money Tim's grandfather sent him, but the fairies themselves are amply rewarded by seeing the crippled boy growing strong and well and in observing the stern, harsh look in his grandfather's face gradually softening into one of loving kindness.

## When Distance Lent Enchantment.

By WILLIAM G. BROOKS.

**Y**ES, and there's the sheep shed to roof, and the south field to drain, and a new floor for the horse barn," and Elwood Judson paused, apparently waiting for his wife to attempt to disprove the formidable strength of his statements.

"And there's 80 rods of new fence to buy, and the windmill to fix," he continued. "It's the expenses here that just about eat up everything we take in."

"Oh, yes, that may be true," replied his wife as she closed the oven door on her fast browning pies, "and yet if you was to buy a farm somewhere else I imagine you'd find something there calling for money."

"Maybe so, but we could take our time and hunt up a farm that just suited us."

"Why, El," argued Mrs. Judson, "you've lived here for more than 50 years. We began housekeeping in the old wing of this very house. It seems to me that we could change over this farm to suit us easier than we could move to another."

Mrs. Judson realized the futility of contending against the will of the ostensible head of the household. She felt that if he had definitely settled matters in his mind arguments would no more change him from his course than the snowflakes that floated against his face on a winter's trip to town. For years the farm selling fever had been of intermittent recurrence. Of late, however, these periodic attacks had been increasing in frequency, until now, like Poe's grim haven, "the dirges of his song one melancholy burden bore." And she quietly worked at her baking while her husband continued the operation of harness oiling, which uninteresting occupation left his mind free to deal with the more important and complex affairs of life.

The following Saturday he returned from his customary trip to town in apparently not the best of spirits. After caring for the horse he strode in and sat down before changing clothes for the evening chores.

"Eliza," he began, and there was a sort of metallic ring of determination in his voice, "I have made up my mind."

"Why, what about?" inquired Mrs. Judson, feeling a familiar sinking sensation in her chest.

"Well, we're going to sell the farm," he stated. "Troutline has petitioned for that public ditch he's been talking about. It'll go through all right, for about everybody seems to be in favor of it. That ditch'll cost this farm over two hundred dollars."

"But wouldn't it be worth that to the farm?"

"It might be," he conceded. "But when El Judson does any ditching it'll be because he wants to, not because he has to. I was up in Tetlow's office today, and he's sure he can sell the farm for me for eight thousand dollars. I put it in his hands and he has until the middle of next month to sell it."

Mrs. Judson returned to her work

in the kitchen. Again she realized the hopelessness of opposing her husband's plans. Opposition would only strengthen him in his purpose, just as the tree that resists the gales in the open field develops a stronger root system than the tree in the sheltered forest.

A change might not be so bad after all. And yet, here was where her married life had begun. Here her children were born. She stood in the doorway and looked out over the familiar landscape. She remembered setting her first hen thirty years before in a box at the side of that old smokehouse. And that lilac bush, then a mere mass of tangled roots, she had planted that same first spring. It had perfumed the whole back yard every May for twenty-five uneventful years. She bore in mind a multitude of moving pictures of the noisy children that used to play beneath that old Baldwin tree. The limb where Ruth and Ralph had tied their swing had been broken by a far back February sleet, but the tree was the same tree, and to all appearances good for another generation. Ralph came back every Christmas, and Ruth and her family drove over almost every month, and each time said, "the old place was home to her yet." Still, a new home might have advantages.

"Tetlow and I," her husband was calling after her, "Tetlow and I fixed up a description of the place that'll sell it pretty soon, I fancy. Had no idea we had such a farm till after he got through. 'Level fields of rich loam, twenty acres of heavy timber, splendid sugar camp, running water, large buildings, beautiful shade, on main road,' and so on."

"A man can't sell a farm every day," she rejoined.

"Well," he defended, "Tetlow said he was sure he could have it all fixed up inside of a month. At any rate, I hain't going to put any more work on the place until the matter is settled one way or another. I've made up my mind to go on a little vacation."

"Vacation? Where?"  
"Why, for years you've been wanting to go down to Elm county to see Jim and Lilly."

"Jim and Lilly! Why, that's two hundred miles!"

"Don't care if it's two thousand. About all of our cousins are down there, and I imagine we can put in a month there without wearing any of them out."

"When are you going to start?"

"We might as well start in a day or two, that is, if I can get Ben or Caleb to look after the chores while we are gone." And energetically gathering himself together he went into the bedroom to put on the blue overalls for the milking and hog feeding.

It was the first protracted visit that Elwood Judson had ever made, and it was the first time that Mrs. Judson had been on the cars in twenty years. Jim and his family and a score of

other relatives gave them an enthusiastic welcome, and until the novelty of the experience wore off they really had the time of their lives.

"Wish you folks could bring yourselves to buy a farm down here with us," remarked Jim one day at dinner at about the end of the second week of the visit.

"Good country down here," acknowledged Mr. Judson, "but it seems a little hilly to anyone that has lived fifty years up in Bennett county."

"You're not exactly sure about selling?" inquired Jim.

"Yes, practically sure. I wrote Tetlow the first of the week, and he replied that he had two or three buyers on the string, and that he was going to do business with some of them before long."

"You haven't looked around for a new farm yet?"

"No, not much. I guess we'll hunt up a farm that suits us back where we came from. When we was in town yesterday I went in to see that big real-estate company that claims to handle so many farms all over the state."

"One of the biggest real-estate agencies in the state," boasted Jim.

"I had quite a talk with them. I told them that I'd prefer a farm in Bennett county, and they said they had business connections with land agents in every county in the state. I told them what kind of a farm I wanted and about how big, and they said they'd have a list for me to look over in a few days."

The Smith & Tingle Real Estate Agency was as good as its word. A week later Mr. Smith spread before Mr. Judson a list of farm bargains in Bennett county of so attractive a character as to make any man proud to be a native of so fat a land.

"Now, here's about what you want," began the head of the firm, "one hundred acres, clay loam soil, every acre ready for the plow—"

"No, that wouldn't do," interrupted Mr. Judson, "you know, I've got to have a good-sized wood lot and a maple sugar camp. Always been used to them, and I want about a hundred and twenty acres for somewhere in the neighborhood of eight thousand dollars."

"Oh, yes, well, let's see. Here's a hundred and twenty acres for eighty-five hundred. And, let's see—it has a sugar camp and plenty of timber. Seven miles from town."

"I wanted one closer to town."  
"Yes, I know it, and I tried to find one, but our representative in Bennett county said there were none except this one within ten miles of town for less than one hundred dollars an acre."

"Well, read the whole description of that place."

"All right. Number twenty-eight. One hundred and twenty acres, slightly rolling, burr oak and sugar maple soil, splendid corn and hay land, running water—"

"That's about what I want. Been used to a stream for the stock to run to in the summer."

"—good buildings, aristocratically located in a noble maple grove, bank barn, splendid orchard, fields all thoroughly drained except ten acres of permanent pasture, and that will be drained within six months."

"That's just about what I'm looking for," admitted Mr. Judson. "That's the kind of farm I've always wanted. That'd strike the woman mighty favorably, too. I'll look it over when I get back."

"You didn't intend to buy until you sold your farm?"

"I'll buy whenever I find a place that suits me. I can sell the old one quick enough. Fact is, I'd rather like to have a place to move to as soon as the old one's sold."

"Well," resumed Mr. Smith, "it seems there's an offer of eighty-four

hundred for this farm, this number twenty-eight. The price is eighty-five hundred. We have until the fifteenth—why, that's tomorrow—to sell it at the eighty-five hundred dollars. Otherwise the fellow that offered the eighty-four hundred gets it."

"It's just about what I want, but it don't give me time to run up and look it over."

"No, it don't. And I never advise any man to buy a farm without seeing it. Yet, you know the country up there pretty well."

"I know about every farm up there about as well as I know my own apple trees."

"H'mph. Too bad the times so short. From the description that farm's about what you want."

"Couldn't been made to order much better."

"Well, now, I'll tell you what I'll do, and I never did it but twice before in my life; if you care to pay me one hundred down on the place I'll wire our representative that we've sold it, and that, you know, will knock the other bidders out. And you can go and look over the farm, and if it isn't according to the description, or if it has some drawbacks that are not mentioned, I'll see that you get your money back without any haggling. I'll give you a contract to that effect. The hundred down simply goes on the agent's commission."

It was risky. It was unbusiness-like. But Elwood Judson did it. He was in a hurry to have the matter settled. He had not been away from home many days before he discovered that life for him would be a rather dismal affair anywhere except among the familiar landmarks of Bennett county. He was homesick for the level fields and dark loams where he had toiled until gray haired.

His wife appeared slightly more cheerful that evening when he broke the news to her. And yet—and yet—"aristocratic maple grove" sounded nice, but down in her heart she knew that she'd be satisfied with the old lawn with its five spreading sugar trees where she had sat through many and many a summer afternoon knitting stockings for little feet that were crawling, squirrel-like, along the branches over her head.

The next day they returned to the old home. And on the following morning Elwood Judson drove off to town. Smith & Tingler had told him that their representative, his old friend, Mr. Tetlow, would finish the business for them. Mrs. Judson stood by the window for some time after he had disappeared around the corners. The truth was she was feeling homesick while in her own sitting-room. She realized that she was not wildly enthusiastic about a "rich clay loam." The fields of the old farm were attractive enough to suit her. And neither did the "splendid buildings" hold any charm for her. She was satisfied with a plain old two-story house, with a garret full of ancient trunks that were packed with old dresses and little dresses, wee shoes, tin horns, faded copy books, the sacred driftwood from many a long-ebbed tide.

It was six o'clock when her husband returned. But then, he'd had considerable business to attend to. He stamped through the kitchen into the sitting-room, and flung his hat and coat on the couch.

"Well," began Mrs. Judson, "you got everything settled?"

"Yes, I guess so," he replied somewhat indifferently.

"What did you do?"

"Aw—I let a job for our share of that ditch."

"And didn't you buy the farm?"

"Why, yes, I guess I did." His cheeks were red. His eyes seemed to be trying to look stern while his mouth insisted on trying to grin.

"Where was the farm?" Naturally

she wanted to know more about their future home.

"It was this one. Them agents were selling me my own farm. Well, the trip was worth more'n a hundred dollars, anyway. Is supper ready?"

PLANTING FOR THE BIRDS.

BY BESSIE L. PUTNAM.

"When we plant a tree, we are doing what we can to make our planet a more wholesome and happier dwelling place for those who come after us, if not for ourselves."—Oliver Wendell Holmes.

In Carrick, Pa., "Birdhaven," it has been for some years the habit of a wealthy citizen to give each spring 400 trees for planting, in connection with an equal number of bird houses to be placed by the school children. If we would have birds with us, we must supply food for them.

The mulberry is a favorite, especially as it furnishes fruit for several weeks, and this at a time when the small fruits of the garden might otherwise prove provokingly tempting. Then there are the wild berry bushes, which furnish a delightful shelter for nesting as well as for food. The tidy farmer may object to seeing the tangled bramble along the side of his premises, but the thrifty raspberry bush should not be an eyesore, especially when it supplies the birds so nicely.

Besides the mulberry and sweet cherry, there is the mountain ash, which tempts the ruffled grouse to our doors in mid-winter, when the food supply is scant. The black haw is another winter luxury. It is a joy to add to the comfort of these songsters, and while making earth more beautiful through the trees, we are at the same time making it more enjoyable to birds.

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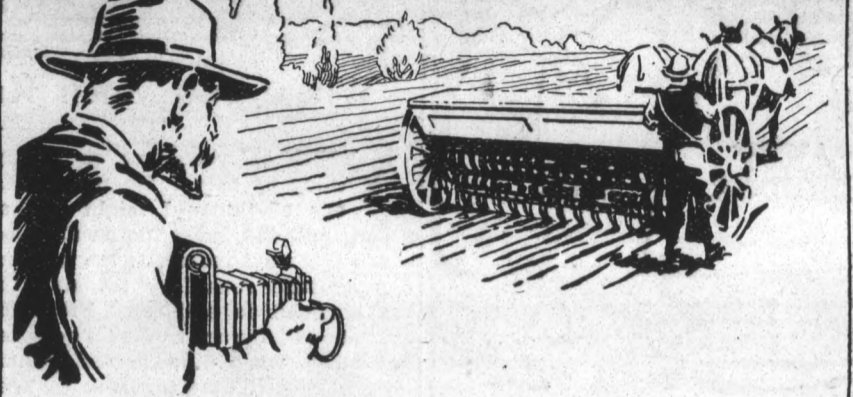
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# Woman and Her Needs

## At Home and Elsewhere

### Where Too Much Knowledge is Dangerous.

**A**MERICAN people never do anything by halves. There are dozens of things I might cite as proof, but the most noticeable, because the most recent, is the present-day attitude regarding teaching the sex question to children. From the attitude of 25 years ago, yes, even ten years ago, when mothers and fathers thought the right thing was to keep their children, especially girls, in complete ignorance of all matters pertaining to sex, we have swept to the other extreme, and the 12-year-old girl of today knows more than her mother did when she married.

Educators and physicians seem to have gone mad on the question, and a large percentage of editors have joined their ranks. Some of the so-called best magazines have gone to such extremes on the matter that one hesitates to leave them lying around loose. Books and plays discuss the problem (?), with a frankness that is never short of brutal, and quite as often salacious. Everyone, except a few conservative parents, is making such frantic efforts to advise the growing generation that if any boy or girl who can read is today ignorant of all the facts of life it is because the parents have kept them locked up at home and burned up all the reading matter left at the door.

We are told that all this is done to safeguard our young folks. Wisdom is to be their armor and ignorance can mean only disaster, say the apostles of the new teaching. Perhaps they are right, but I wonder? The girls who were growing up 25 years ago found ignorance and innocence a sufficient protection, and to my mind it would work as well today. Surely the boys and young men of today are as chivalrous as were their fathers and older brothers. And the decent young man of 1914 is going to protect the other fellow's sister, even though she be ignorant, just as thoroughly as did the man of the 90's. It is not the ignorant girl who has cause to fear, it is the over-wise young person who frankly meets the man on his own ground. He argues, and quite rightly, that she knows what she is about, and why should he regard her as a weaker vessel, to be protected.

Personally, I deplore the extreme to which the movement has gone. It is very well to tell the children the truth when their minds are ripe for it, and you may know when that time arrives by their questions. But this is one case, where a little knowledge is far from being a dangerous thing. Rather, it is the safest thing for young people in the adolescent stage. So much attention to the subject can not but arouse the wrong instincts, and turn the mind upon a subject which should be unknown for years to come. It is quite modern, but to me horribly shocking, to hear 14-year-old girls discussing quite frankly with boys things which their mothers would hesitate to talk over with one another.

So far the proposition to teach sex hygiene in the public schools has met with little favor in Michigan, a fact for which I am sincerely grateful. I want my children to know the truth, but when it is told them I prefer to have it done at home, not in a class by some teacher who may or may not give the subject the proper moral tone. If all teachers were wise and good it might be all right to have

them instruct our boys and girls along every line. But unfortunately a lamentable percentage of them are half-baked striplings who nothing of life themselves by actual experience. And still others have not the healthy moral tone which should accompany such teaching. That there are many, many teachers much better fitted to instruct the young than some of the

parents, does not alter the fact that there are others who could only do harm if they got beyond the three R's and over into the realm of Life.

The pendulum is bound to swing back again. It always does. And then between the foolish attitude of those parents who tell lies when the truth is sought, and the vicious tendency of the others who tell a great deal more than is necessary, we will strike the happy medium of sane, wise instruction. **DEBORAH.**

### A Few New Laundry Wrinkles—By Anna Rutherford.

**T**HERE are many reasons why Tuesday is a better day for the weekly washing than Monday, as many housekeepers are beginning to see. Not the least of the reasons is that many women who have to do their own laundering find the work irksome and trying immediately after Sunday. The "Sunday clothes" need to be brushed and put away and perhaps the extra tableware, and there are usually many catch-up jobs to be done because of the intervening rest day.

Then one can leisurely gather up the laundry on Monday for next day, mend what is best done before the washing, remove stains from children's garments and table linen—it is always best to mend such articles if needed before putting in the wash—and soak the most soiled clothing over night.

One tablespoonful each of salt, ammonia and spirits of turpentine to each gallon of water in which colored clothes are soaked, will set the colors. Soak them an hour or two before washing.

The following is a very satisfactory way to bleach laces, handkerchiefs, etc.: First wash and rinse them thoroughly. Then prepare a bowl of strong soapsuds and make very blue with good bluing. Rub soap on the article, cover with the water and stand the bowl in the sun. At intervals stir the things around and change the water once or twice. Leave in the sun for a day or longer. When sufficiently whitened rinse and hang out to dry.

Fruit, coffee and tea stains are easily removed from white material before putting in the wash, by soaking in cold water.

Raw starch is as good boiled, and more easily prepared. It will not stick to the irons if made in the following way: Mix with just cold water enough to dissolve it, then take one-fourth cup of cold water, fill it up with boiling water and stir it into the dissolved starch. It will be hot but not cooked. Dip collars, cuffs, etc., in the usual way, wring and roll up for about ten minutes.

Starch that will make black lawns and organdies look like new and not show on the surface, can be made with black dye. Dissolve the dye as you would for coloring, bottle and keep for use as needed. Make the starch quite thin and mix in a little of the strained dye.

Hanging out the clothes is very objectionable to women who have weak eyes, because of the reflection of the sun on the white garments, but this trouble may be relieved and many headaches avoided as well, by wearing a pair of dark glasses. Sometimes garments are needed and must be ironed at short notice. Instead of sprinkling, spread the article on a Turkish towel that has been wrung

out of warm water, roll up for a few minutes, when it will be in excellent ironing condition.

Do not cover your ironing board with an old wool blanket which holds moisture and makes the clothes hard to iron dry. An old cotton quilt makes an excellent cover, with one thickness of canton flannel over it, drawn tightly, and over this one thickness of smooth muslin.

### AT HOUSECLEANING TIME.

From time immemorial the poet has been telling us what are the "signs that spring has come." Way back in the song of songs we read that we may know it for "the time of singing birds has come and the voice of the turtle is heard in the land." Each craftsman knows spring is either here or on the way, by signs peculiar to his own trade. The magazine editor knows it when odes to April begin to arrive. The sporting editor recognizes the symptoms when base ball fans begin to clamor for detailed accounts of the doings of the team. Father knows it when hints for spring togs ripen into positive demands, and the housewife knows it when the housecleaning bug gets into her veins.

Just what subtle influence connects soapsuds and scrubbing brushes with earth's awakening who could say? But the connection is there in spite of columns of advice telling how much better it is to do a little cleaning every week in the year than to have one grand upheaval each spring and a slight shock in the fall. Women will have housecleaning festivals, when they revel for a couple of weeks in suds and scrubbing powders and fresh paint and varnish and new paper. They enjoy having everything in confusion and disorder so that they can rush in and bustle about and bring things to rights and then sit down and say, "See what I have done." Houseclean, they will, so let them do it in the easiest way.

It is useless to say clean one room at a time, for half the fun of housecleaning lies in having everything torn up at once and eating off the top of the stove in the kitchen, because all the tables are piled with dishes and boxes. If we could restrain ourselves, however, it would be easier on the nerves to have the disease only in a mild form and confine ourselves to one room a day. Say it is the bedroom, we all know every garment must be taken out to the line and left in the sun and fresh air for the day, woollens carefully gone over and packed away in moth proof receptacles, the walls brushed down, if not to be papered, and shelves washed and wiped dry. But how many of us take the trouble to burn a disinfecting candle in the room to rid it of germs or possible moths and other pests? Carpets must be taken outdoors

**Mrs. Caustic**—"Yesterday Annie asked me if I believed any girl ever died for love, and I said, 'Yes, lots. They marry and then work themselves to death for their husbands.'"

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and thoroughly beaten, and it is much easier to lay them on the grass and beat them than to hang on a line in the good old way. Beat on both sides and sweep off all dust. They may be brightened and freshened by laying them on a clean floor and scrubbing with a suds made of good white soap and ammonia, then rinsing off thoroughly with clean, warm water. Of course, they must be dry before they are laid again.

Varnished surfaces should have as little water and soap applied as possible. If there are soiled places around the door lock, wash off with a weak suds, then polish well with paraffin oil and turpentine. This mixture, a pint of oil and ten cents worth of turpentine, makes one of the best polishes for varnished surfaces. It covers up scratches, and if well rubbed renews the gloss. As it is only 20 cents a pint it is much cheaper than the patented polishes. Woodwork and furniture which have had the right care through the year will need no other cleaning than a good polishing with this preparation.

If you have lace or net curtains there is but one way to launder them properly. Shake out all dust, then soak for two hours in tepid water, after which wash carefully by squeezing between the hands, in a suds made of any pure soap. When the last suds is quite clean, rinse through two waters and starch in thin, clear starch. If the curtains are ecru, dip in coffee, which has been strained through two thicknesses of cheesecloth, before starching. There is but one way of drying such curtains, and that is by stretching. It is impossible to hang them up and ever get them into shape again. If you cannot afford one dollar for curtain stretchers, stretch them on your quilting frames. If you have none, pin carefully to the mattress of the spare bed, or lay an old sheet on the grass to guard the curtains from possible grass strains, and stretch the curtains over this. The sheet can be held to the ground by means of little sticks driven in, and the curtains pinned down to the cloth.

The easiest way to clean the windows and mirrors is with a cloth wrung out of slightly diluted ammonia, followed by a vigorous polishing with a dry cloth. There are many patent cleaners which are nice, but they usually leave a dust which must be cleaned up. Of course, the woodwork must be washed and the sills scrubbed with soap and water.

Brass and gilt articles may be cleaned by wiping off with a clean cloth dipped in not too strong vinegar. Nickel is easily cleaned with any of the scouring powders on the market. Whiting makes the best sort of silver polish, and is fortunately cheap. Ten cents worth would last two or three years in the ordinary household.

**THE LETTER BOX.**

**Girls, Learn to Work.**

Household Editor:—Having read the article regarding young girls helping their mothers.

I am nearly 20 years of age and have always helped my mother in everything, and today I can do anything in the house. I must do it, for a while ago I had the misfortune of losing my mother, and I was left with five men to take care of, to cook, bake, wash, iron, mend, sew, scrub and clean. Besides, I take care of the chickens. Now wouldn't it have been much harder for me if I had not learned these things before?

Now, girls, start right in and learn. It is never too early to learn. Don't say, "Well, I'm not going to get married yet, so it's not necessary for me to learn. It is better to learn when you are young, for then, no matter what happens, you can do your work.

Regarding paint and powder. If girls would not use so much they would look a great deal better.

I don't believe in wearing these

tight garments. I see many girls and young ladies wearing some so tight that I would be ashamed to wear them. There are lots of styles that are suitable to wear. Skirts in tunic effect, etc.—A Reader.

**What Shall the Home Do?**

Household Editor:—In the April 25 number of the Michigan Farmer, you published a letter on "The Modern Girl is Fighting the Good Fight," written by "Reader." I am a teacher and I want to ask your correspondent to state clearly just what it is that is expected of the school.

A boy shocks his parents by using profanity. The school is to blame for not teaching him better. He smokes cigarettes. He learned it at school and his teachers are blamed. His shoulders are round and his chest narrow. The school takes the blame. The girl chews gum, uses slang, and paints and powders, and the school should prevent it. And yet, the pupil is in school six hours per day for five days in a week. The teacher must not criticize clothing, manners, morals or mentality except in the mildest, most indirect way, at the risk of his professional life.

I want to know a few things. I want "Reader," or someone else, to tell me what is the home going to be responsible for? Is it an out-of-date institution that has lived down all of its functions except that of furnishing raw material for the schools? I want to know the responsibility of the church. It never admits its failures, but saddles them off on the school. Is its function only raising missionary money and holding conferences? Is it, like the home, a "defunct" institution leaving its legitimate part of the world's great work to the school?

I have taught for 15 years, and speaking for myself, I know I speak for the great majority of teachers when I assert that we are everlastingly teaching decency, morality, honesty, cleanliness, sanity, even more, Godliness, for all of these are attributes of Deity.

Candidly, Household Editor, I am tired of all this inane twaddle about the shortcomings of the school. Let fond papas and mammas turn the searchlight upon their own feeble efforts at home and the things they will discover will astonish them.—W. C. W.

**HOME QUERIES.**

Household Editor:—How can I keep the cellar from smelling damp and musty?—Newcomer.

It is almost impossible to keep a cellar perfectly sweet if fruit and vegetables in quantities are kept in it. Absolute cleanliness, dryness, ventilation and sunshine are helps. Have all shelves clean and absolutely dry. Look over the vegetables and fruit frequently and remove all that have started to decay, whitewash the cellar and air it out every day. Keep dishes of unslaked lime sitting around to absorb the moisture and renew them as soon as the change in the appearance of the lime shows you that it has taken up as much water as it can. "Eternal vigilance" is the price of a clean, sweet cellar.

Household Editor:—I would like to ask through your paper how to clean a mattress.—E. G., Sand Lake.

Of course, the best way to clean a mattress is with a vacuum cleaner. Failing this valuable assistant, take the mattress out on the grass on a sunny day and beat both sides with a carpet beater until no more dust will rise. If the cover is dirty it may be scrubbed with a suds made of good white soap, scrubbing a little space at a time and rinsing immediately with clear water and a clean cloth. Of course, the mattress must be thoroughly dried before returning to the bed.

Household Editor:—Will you please give amount of goosedown required for quilts?—Mrs. O. L. F.

The down from 25 or 30 geese will be about the right quantity.

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# Markets.

## GRAINS AND SEEDS.

June 2, 1914.

**Wheat.**—With news still favorable to the selling side of the market, prices have been unable to hold to last week's level, although the decline is small and the trade seems to have remarkable recuperative powers, due probably to the fact that there is little cash wheat on hand. Conditions continue favorable for developing the excellent stand into an almost perfect crop except in a few districts where the Hessian fly and black rust have appeared. Primary receipts are larger than a year ago on account of the promising harvest. At this time in 1913 No. 2 red wheat was selling at \$1.07½ per bu. Quotation for the past week are:

	No. 2	No. 1	White.	July.
Wednesday	97	96½	87½	87½
Thursday	97¼	96¾	88	88
Friday	97	96½	87¾	87¾
Saturday	.....	.....	.....	.....
Monday	96¾	96¼	87½	87½
Tuesday	96¾	96¼	88	88

Chicago, (June 2.)—No. 2 red wheat 96¼c; July 87c; Sept., 85½c.

**Corn.**—Last week's values have been maintained. Notwithstanding the fact that the new crop is getting a good start in most of the important corn districts, it is becoming apparent that the supply of old corn is hardly sufficient to take care of the demand until the new crop is harvested. Rain has relieved some sections, particularly Kansas, of injury from lack of moisture. One year ago the price for No. 3 corn was 58½c per bu. Quotations for the past week are:

	No. 2	No. 2	Yellow.
Wednesday	Mixed.	73	74½
Thursday	73	74	74½
Friday	73	74½	74½
Saturday	.....	.....	.....
Monday	73	74½	74½
Tuesday	73	74½	74½

Chicago, (June 2.)—July corn 69¾c; Sept., 67¼c; Dec., 58½c.

**Oats.**—Although some sections have suffered from lack of rain the general condition of the oat crop is so promising that prices found a lower level this past week. Demand runs about normal. The price here a year ago was 42c per bu. for standard. Quotations for the week are:

	No. 3	White.
Wednesday	Standard.	44½
Thursday	44	43½
Friday	43½	43
Saturday	.....	.....
Monday	43½	43
Tuesday	43	42½

Chicago, (June 2.)—July oats 40c; Sept. 38½c.

**Beans.**—Business is small and dull. The local board of trade quotes immediate and prompt shipment at \$2.05; June \$2.07 per bu. Chicago reports steady prices. Pea beans, hand-picked, choice, are steady at \$2.20@2.25; common \$2@2.15; red kidneys, choice \$3.25@3.35.

**Rye.**—This cereal is higher. No. 2 is quoted at 67c per bushel.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows. Best patent \$5.30; second \$4.90; straight \$4.50; spring patent \$5.10; rye flour \$4.40 per bbl.

**Feed.**—In 100-lb. sacks, jobbing lots are: Bran \$28; standard middlings \$28; fine middlings \$32; coarse middlings \$31; cracked corn \$32; corn and oat chop \$28.50 per ton.

**Hay.**—Prices rule steady; offerings limited. Carlots on track at Detroit are: No. 1 timothy \$16.50@17; standard \$15.50@16; No. 2, \$14@15; light mixed \$15.50@16; No. 1 mixed \$13.50@15; No. 1 clover \$13@13.50.

New York.—Market a little higher. No. 1 timothy \$22@23; No. 3 to standard \$18@21.50.

Chicago.—Market is steady and demand fair. Choice timothy quoted at \$18@18.50 per ton; No. 1 \$15@16; No. 2, \$13@14.

**Straw.**—Steady. Rye \$8@8.50; oat straw \$7@7.50; wheat straw \$7@7.50 per ton.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Market is firm at prices ½c higher than last week. Extra creamery 25½c per lb; firsts 24½c; dairy 18c; packing stock 15c.

Chicago.—The market is ruling firm and the business extends to all goods. Prices are ½@¾c higher than last week. Extra creamery 26½c; ex-

tra firsts 25@26c; firsts 22@24c; seconds 20@21c; packing stock 17@18c.

**Elgin.**—Market is firm at 26¼c per lb., which is ½c higher than last week.

New York.—The market is steady at an advance of 1½c over last week. Creamery extras 27@27½c; firsts 25½@26½c; seconds 23@24c; packing stock 17@17½c.

**Eggs.**—Market is active at prices ¾c higher than last week. Current receipts of fresh stock quoted at 19¼c per dozen.

Chicago.—Market is steady at prices averaging ¼c higher than last week. Good northern stock is selling well. Miscellaneous lots, cases included 16@18½c; ordinary firsts 17¼@17¾c; firsts 18¼@18¾c.

New York.—Receipts have been heavy and quality only fair. High-grade stock in good demand. Prices about ½c higher than last week. Fresh gathered extras 22½@23½c; firsts 19½@20½c per dozen.

**Poultry.**—Liberal offerings and slow demand made market easy. Prices on springs and hens are about 1½c lower than last week. Live—Springs 17c; broilers 30@32c per lb; hens 15@17c; geese 14@15c; ducks 17@18c.

Chicago.—Unusually heavy receipts caused a decline of 2c in prices on fowls. Broilers and other poultry remain about the same. Quotations on live are: Fowls, choice 13½c; old roosters 10c; broilers 1½@2 lbs. weight 30c; 1@1¼ lbs. weight 26@28c; under 1 lb. not wanted; geese 10c; ducks 13c; spring ducks 18@20c.

## FRUITS AND VEGETABLES.

**Potatoes.**—Old potatoes steady although trading is slow. Quotations 75@76c per bu. in sacks. At Chicago the market was active and fancy stock was absorbed at strong prices. Fair quality stock also sold at fair prices. Receipts are light. Good Michigan round white quoted at 70@80c per bushel.

**Strawberries.**—A few cases of Michigan berries which were water-soaked by the rains of last week, were received in Chicago and sold for \$1.50 per case.

## WOOL.

This market continues firm and active. Buyers show an increased eagerness to obtain supplies and prices are gradually climbing upward. Shearing has started in the fleece states and the dealers are right upon the ground to take the clip as soon as the farmers will sell at prices that are usually satisfactory to the seller. The quality of the wool this year is excellent and since there will be a shortage handling it is likely to prove profitable. Conditions abroad are similar to those here. London sales advanced prices while Australia sellers are asking more for their fleeces. In Boston, Mich., fine unwashed is quoted at 23@24c, while the other grades rule from 25@27c.

## GRAND RAPIDS.

Southern Michigan strawberries will be offered here this week and the strictly home-grown berries will follow soon, with prospects now of a fine crop. Cherries also give promise of a big yield. The lettuce and radish season with the glass farmers closes this week, and cucumbers are now in order, with tomatoes to follow. The lettuce crop has been large with prices fairly good. Not many radishes are raised under glass. Egg dealers are paying 17½c. In the poultry line live chickens are bringing 14 to 14½c; broilers 25c. Dressed hogs are worth around 10½c. Grain and hay quotations unchanged.

## DETROIT EASTERN MARKET.

Considering the season, the market showed a fair degree of activity on Tuesday morning. Variety of offerings is small. Potatoes are up to \$1; lettuce around 40c for common and \$1 for head; spinach 25@30c per basket; hens offered at 85c@1; loose hay is coming in sparingly and rules at the old prices of \$15@18 per ton.

## THE LIVE STOCK MARKETS.

### Buffalo.

June 1, 1914. (Special Report of Dunning and Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle 135 cars; hogs 90 d. d.; sheep and lambs 26 d. d.; calves 1100 head.

With 135 cars of cattle on our market here today and Chicago reporting 19,000 and a lower market there, all cattle here today weighing above 12000 sold strong 25c, and in some

instances 35c lower than last Monday. I notice our paper quotes these heavy cattle from 15@25c lower, but there has not been a load of cattle weighing above 1200 sold here today that did not sell fully 25c per cwt. lower than last Monday. The market was slow and dull from start to finish, but at the close about everything was sold. Female stuff and light butchering cattle did not suffer near so much. The decline on the best butchering grades was from 10@15c per cwt.

Receipts of hogs today were light compared with past Mondays, about 90 double decks on sale. Lower prices all over the west today forced our market 10@15c below Saturday's sales, everything selling at \$8.40 outside of a few selected handy weight hogs, and the pig weights ranged from \$8@8.10, as to weight and quality. Roughs were extremely dull and sold from \$7@7.25; stags \$6@6.50. Late market was very dull, and with a few going over unsold, outlook is not very encouraging for the near future.

The market was active today on handy lambs and sheep. Prices are steady with the close of last week. Choice handy clips selling mostly at \$7.85@8. We look for steady prices last of week with moderate receipts.

We quote: Choice clip lambs \$7.85@8; heavy lambs \$7@7.25; cull to fair lambs \$6.50@7.75; yearlings \$6.50@7.25; bucks \$3.50@4.50; handy ewes \$5.25@5.50; heavy do \$4.50@4.75; wethers \$6@6.35; cull sheep \$3.50@4.50; veals, choice to extra \$10.25@10.50; fair to good \$8.50@10; heavy calves \$5.50@7.

### Chicago.

June 1, 1914. Cattle. Hogs. Sheep. Receipts today ..19,000 37,000 14,000 Same day 1913..21,505 44,924 21,622 Last week ..42,501 131,844 76,476 Same wk 1913..47,566 121,731 86,554

Cattle were in such small supply for Monday today that prices were maintained, although buyers were in no hurry to purchase, with early trading largely in fat butcher stock and handy little fat steers. Hogs were about steady, although the top price was \$8.07½, the market firming up after early weakness. Hogs received last week averaged 237 lbs., or three pounds more than a week earlier. Sheep and lambs are in such small supply today that sellers are trying to get a little higher prices for the best class.

Cattle were in moderate demand last week as a general rule, with the bulk of the beef steers selling at \$8@9 and choice to fancy heavy beefs taken at \$9@9.35, the top being 5c higher than a week earlier. The common to fair class of light steers brought \$7.40@8.20, while a medium class brought \$8.25@8.60, with good lots at \$8.65@8.95. Hot weather curtailed the consumption of beef and caused buyers to turn more to steers of light weights that were fat, with handy little yearlings prime favorites. Good to prime yearlings sold at \$8.60@9.25, with sales all the way down to \$7.85@8.25 for the commoner yearlings, which were discriminated against by the packers and smaller butchers. Discrimination continued severe against dairy-bred cows, many of which are coming to market, with promise of still larger receipts. For butchering cows and heifers there was a good sale on the whole, however, sales ranging at \$5.30@8.90 for ordinary to prime grades, while cutters sold at \$4.70@5.25, canners at \$3.50@4.65 and bulls at \$5.50@8. Milch cows had to be choice to attract much attention from buyers, the range of prices widening out, with the best higher and the poorest neglected and lower. Usually, sales were made at \$60@90 per head. The season of the year has arrived when cows on grass come into milk, and from now on forward springers and milkers will be discriminated against. Calves moved off briskly during the first part of the week, with heavy calves quoted at \$5.50@8.50 and light vealers at \$9@10.50, but later the market became slower and lower, with the best calves selling at \$9.50. The stocker and feeder branch of the market displayed considerable animation because of the big decline in prices, with sales at \$6@8.50 and late top for weighty feeders \$8.15. Texas grass cattle are moving freely, going chiefly to southwestern and Missouri River points. The cattle market closed irregularly lower for lots not especially desirable, with the best calves at \$9.50, while stockers and feeders sold 35@50c under the recent high time.

Hogs were depressed a good deal in prices on different days last week by more liberal receipts, with a Monday run of 53,189 head and a drop of fully 15c for the day. On following days receipts were much smaller, and at

times rallies in prices occurred, but the undertone lacked firmness, and it was easier to put prices down than up as a rule, as after Monday eastern shippers were apt to operate rather sparingly. Another weakening factor was found in the fact that on different days the big packing concerns received large supplies of hogs direct from western markets, which rendered them quite independent, and many hogs were left unsold at the day's close. The principal bullish feature of the market lies in the greatly reduced receipts in the markets of the country as compared with last year and year before last. Recent receipts here have averaged 238 lbs., which compares with 243 lbs. a year ago, and probably further gains in average weight will be seen in coming weeks. Late in the week big breaks in prices left hogs selling at \$7.70@8.10 for rough heavy to prime light shipping lots, it being mainly an \$8@8.05 market. Pigs sold at \$7@7.90. Prices were the lowest of the year, the top for hogs a week earlier having been \$8.50.

Sheep and lambs are not being marketed in especially large numbers, and it is a changing season, with a lack of choice live muttons and too generous offerings of grassy and low-dressing goods, causing a widening out in prices. Spring lambs of choice quality are still offered too sparingly, and some lots have sold for \$10 per 100 lbs., but packers usually refused to go over \$9.50. At the close of the week spring lambs sold at \$8@9.75 with culls at \$6@7.75. Clipped flocks sold as follows: Lambs \$5.50@8.20; yearlings \$6@6.75; wethers \$5.25@6; ewes \$3.50@5.25; bucks \$4@4.50. Feeding shorn lambs were valued at \$5.50@6.10. Ewes suffered a bad break, closing 50c@1 lower than a week earlier. Shorn lambs broke 10@25c, but springers advanced 25c. Wethers had a moderate decline.

Horses sold all right early last week in spite of a big Monday supply, but trade became much slower later, and part of the trading was at a lower scale of prices. Chunks sold at \$175@250 per head, according to weight and quality, with few going near the top, while good to prime heavy drafters brought \$240@300, and one fancy gray gelding sold at \$350, but few sold above \$275. A pair of Iowa bays that weighed 3,500 lbs. brought \$570, and farm geldings sold at \$280@320 a pair, while some nice weighty farm mares brought \$400 a pair.

## CROP AND MARKET NOTES.

(Continued from page 597).

is in good shape, being a little dry on top. A large tract of government land will soon be thrown open to homestead in this county. Eggs 15c; butter 17c; cream 20c.

**Dodge Co.**—We have had considerable rain this spring, and the soil is in good condition for spring planting. Alfalfa is about a foot high; wheat is growing very rapidly, and oats in good condition. Pastures are good, and stock looks fine. Farmers are busy planting corn. Fruit trees are in blossom, and no winter damage to trees is reported. There are not many orchards being set out this spring. The pig crop is very good. Market prices: Eggs 18c; butter 25c; wheat 78c; corn 62c; oats 33c; hogs \$7.40; spring chickens 16c per lb.

**Cass Co.**—There have been some cold nights, with frosts touching potato and tomato plants, but the fruit seems to be unhurt. The bulk of the corn is planted with a good acreage, and first plantings are coming up well. Wheat, oats, meadows, pastures and alfalfa are fine. The pig crop is short in this section. There is lots of young poultry. Wheat 83c; oats 38c; corn 66c; hogs \$7.80; hay \$8; potatoes \$1.20 per bu; butter 25c; poultry 13c; eggs 16c.

**Dixon Co.**—We have had several good rains this month. A severe windstorm the last of April blew out a great deal of the wheat, and as a result more corn is being put in. The pig crop is light, due to cholera and shortage of feed. The fruit crop is better than the average.

### North Dakota.

**West Central Otse Co.**—The ground is getting dry and the crops need rain. Wheat and oats are doing fine, though there was not much oats grown this spring. Corn planting is about done, and early plantings are coming up nicely. Early potatoes and gardens were damaged considerably by frost. Apple prospects are good at present, but only a few orchards are sprayed. There were not many orchards set out this spring. Alfalfa is looking fine, and the first crop is about ready to mow. Pastures are good, but need rain. The pig crop is reported to be about the same as usual. Corn 65c; wheat 83c; eggs 15c; cream 20c; butter 25c; hogs \$7.85.

**THIS IS THE LAST EDITION.**

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

**DETROIT LIVE STOCK MARKETS.**

Thursday's Market.  
June 4, 1914.

**Cattle.**  
Receipts 794. Market steady to 10c lower than last week.

We quote: Best heavy steers \$8.25 @ \$8.75; best handy weight butcher steers \$8 @ \$8.50; mixed steers and heifers \$7.75 @ \$8.25; handy light butchers \$7 @ \$7.50; light butchers \$6.75 @ \$7.25; best cows \$6.25 @ \$6.75; butcher cows \$5.50 @ \$6; common cows \$4.50 @ \$5; canners \$3 @ \$4.25; best heavy bulls \$7; bologna bulls \$6.25 @ \$6.75; stock bulls \$5 @ \$6.50; feeders \$7.25 @ \$7.75; stockers \$6.50 @ \$7.50; milkers and springers \$4 @ \$8.

Bishop, B. & H. sold Sullivan P. Co. 1 cow wgh 1140 at \$5.50, 2 steers av 820 at \$7.75, 1 bull wgh 870 at \$6.25, 10 cows av 997 at \$6, 1 steer wgh 970 at \$7.50, 4 butchers av 800 at \$7.25, 8 cows av 966 at \$6.25, 2 steers av 960 at \$7.50, 1 bull wgh 910 at \$6.25, 3 do av 1147 at \$6.50, 3 steers av 1007 at \$8.15, 3 cows av 1290 at \$6.50, 23 steers av 1215 at \$8.35, 1 bull wgh 500 at \$5.50; to Ratner 2 bulls av 1010 at \$6.25; to Horne 4 cows av 1022 at \$5.50; to Parker, W. & Co. 2 cows av 1020 at \$5.75; to Armstrong 2 do av 785 at \$4.25, 5 do av 966 at \$5.50, 2 do av 1000 at \$5.50, 7 do av 891 at \$5.35; to Rattkowsky 2 do av 1080 at \$6.15, 2 do av 1160 at \$6.15, 2 do av 960 at \$6, 2 do av 810 at \$6.25, 3 do av 857 at \$6; to Bresnahan 2 stockers av 715 at \$6.25; to Beach 7 do av 487 at \$6.50; to Hammond, S. & Co. 2 cows av 920 at \$6.50, 3 bulls av 1080 at \$6.60; to Heinrich 24 steers av 796 at \$7.90; to Thompson Bros. 2 bulls av 890 at \$6.25; to Newton B. Co. 11 steers av 780 at \$7.40; to Beach 1 feeder wgh 870 at \$6.75; to Converse 2 cows av 775 at \$5.65; to Mich. B. Co. 9 steers av 966 at \$8.25, 1 cow wgh 900 at \$4.25, 1 do wgh 1060 at \$6.25.

Roe Com. Co. sold Watts 3 steers av 957 at \$8.20; to Bresnahan 5 heifers av 734 at \$7.50; to Rattkowsky 2 bulls av 795 at \$6.25, 1 do wgh 1440 at \$7.25; to Hammond, S. & Co. 4 cows av 1017 at \$6; to Horne 3 do av 860 at \$5.35; to Grant 2 do av 910 at \$6.25, 8 do av 966 at \$6.15; to Goose 1 bull wgh 1460 at \$6.60; to Kamman B. Co. 3 cows av 1043 at \$6.50, 5 steers av 774 at \$7.75, 22 do av 835 at \$7.75; to Mason B. Co. 2 bulls av 1045 at \$6.50; to Bresnahan 5 steers av 774 at \$7.75.

Haley & M. sold Mason B. Co. 2 cows av 1260 at \$6.75, 1 bull wgh 1280 at \$6.70; to Converse 2 cows av 645 at \$5.85, 7 stockers av 500 at \$6.95; to Watts 1 cow wgh 1090 at \$7, 2 do av 910 at \$7.15; to Sullivan P. Co. 1 bull wgh 1020 at \$6.50; to Mich. B. Co. 20 steers av 914 at \$8.10; to Black 3 do av 823 at \$7.75; to Chamberlain 17 stockers av 480 at \$7.

Spicer & R. sold Sullivan P. Co. 1 steer wgh 1260 at \$8.25, 1 cow wgh 980 at \$6.60; to Strong 2 stockers av 675 at \$7.50, 11 do av 556 at \$7, 12 do av 433 at \$7.25; to Rattkowsky 1 cow wgh 850 at \$5.75, 1 bull wgh 1140 at \$7.25, 1 do wgh 1420 at \$6.75, 1 do wgh 1180 at \$6.75; to Kull 2 butchers av 805 at \$6, 1 heifer wgh 650 at \$7.25; to Mason B. Co. 20 steers av 1004 at \$8.20; to Hirschleman 4 do av 925 at \$6.50, 7 do av 863 at \$8; to Goose 1 bull wgh 1900 at \$7, 1 do wgh 1960 at \$6.50; to Rattkowsky 4 do av 1007 at \$6.60; to Mich. B. Co. 2 do av 675 at \$6, 2 heifers av 775 at \$7.75, 17 steers av 925 at \$8, 1 cow wgh 1150 at \$6.50.

**Veal Cales.**

Receipts 887. Market steady to 25c higher. Best \$10 @ 10.50; others \$7 @ 9.50.

Haley & M. sold Kull 2 av 155 at \$9.50, 9 av 165 at \$9.50; to Newton B. Co. 9 av 155 at \$10; to Shapiro 6 av 155 at \$10.50.

Spicer & R. sold Shapiro 4 av 155 at \$10, 2 av 145 at \$10; to Thompson Bros. 3 av 150 at \$10; to Parker, W. & Co. 10 av 122 at \$9, 1 wgh 220 at \$8, 6 av 135 at \$8, 55 av 160 at \$10.

Roe Com. Co. sold Mich. B. Co. 5 av 120 at \$8, 14 av 160 at \$10; to Rattkowsky 24 av 160 at \$10; to Ratner 9 av 150 at \$10.

Weeks sold Lowenstein 15 av 150 at \$9.75.

**Sheep and Lambs.**

Receipts 1189. Market 10 @ 15c higher. Best lambs \$7.85 @ 8; fair do \$7 @ 7.50; light to common lambs \$6.50 @ 7; fair to good sheep \$4.50 @ 5; culls and common \$3.50 @ 4.50.

Bishop, B. & H. sold Mich. B. Co. 31 sheep av 115 at \$5; to Kull 16 lambs av 80 at \$7; to Sullivan P. Co. 8 spring lambs av 45 at \$9, 10 lambs av 59 at \$9, 6 sheep av 120 at \$5, 4 do av 95 at \$4, 90 lambs av 65 at \$7.75, 7 spring lambs av 65 at \$10; to Nagle P. Co. 50 sheep av 135 at \$4.50, 252 lambs av 78 at \$7.85; to Harland

7 spring lambs av 55 at \$9.50, 14 lambs av 56 at \$9; to Newton B. Co. 113 lambs av 75 at \$7.75, 11 do av 88 at \$4.50; to Hammond, S. & Co. 97 sheep av 125 at \$4.75; to Thompson Bros. 4 sheep av 125 at \$5; to Fitzpatrick Bros. 41 do av 78 at \$4.65, 27 do av 80 at \$4.50, 14 lambs av 75 at \$8, 36 do av 70 at \$7, 32 do av 73 at \$7.50; to Barlage 37 sheep ave 80 at \$4.

Roe Com. Co. sold Barlage 4 sheep av 111 at \$4.75, 4 spring lambs av 80 at \$8, 13 sheep av 120 at \$4.50, 3 do av 95 at \$4.75.

Haley & M. sold Newton B. Co. 7 spring lambs av 65 at \$9, 4 sheep av 145 at \$4, 28 do av 115 at \$5.

Spicer & R. sold Parker, W. & Co. 9 sheep av 115 at \$5.25, 10 do av 108 at \$5.25.

**Hogs.**

Receipts 5136. Pigs \$8.15; others \$8.20 @ 8.25.

Roe Com. Co. sold Sullivan P. Co. 460 av 195 at \$8.25.

Spicer & R. sold Parker, W. & Co. 815 av 190 at \$8.25.

Haley & M. sold same 227 av 200 at \$8.25.

Bishop, B. & H. sold Hammond, S. & Co. 2510 av 195 at \$8.25.

**LIVE STOCK NOTES.**

The Illinois Live Stock Commission reports a decrease of 132,643 cattle, 688,354 hogs and 82,892 sheep in that state during the last five years. The tenant system in Illinois, characterized by short-term leases of farm lands, is held partly responsible for the diminished interest in cattle raising, and a rapid increase in dairying in the state is a second cause for the meat-cattle shortage. The calves are sold for veal, and do not grow to maturity as is the case with the beef producing breeds. The decrease in the hog supply is in a measure due to the prevalence of hog cholera, and in the hope of combating this plague and the use of unlicensed serum of doubtful potency, the commission is preparing rules and regulations to govern the sale and distribution of hog cholera serum and virus. It is expected that these regulations will provide for a deputy state veterinarian, Dr. O. E. Dyson, in administering serum and enforcing sanitary regulations, displacing the veterinarians who have been playing on the fears of hog raisers to promote their own business.

Action has been taken by the board of directors of the International Live Stock Exposition in eliminating the three-year-old carlot cattle classification after the 1914 show, and unquestionably the passing of the three-year-old class will meet with general approval in the production of show peeves. Feeders have found it unprofitable to finish the aged cattle and compete against the tidy yearlings and two-year-olds for the grand championship honors, says General Superintendent Bernard H. Heide, and the heavy beeves are unpopular with the buyers of show cattle for the Christmas holiday trade. In recent years the heavier the steers the poorer favor, they met with in the auction ring because of their having too much fat and waste.

The Chicago hog market has suffered some big breaks in prices recently on account of exceptionally liberal receipts, considerably over 53,000 hogs showing up on a recent Monday. The prices reached the lowest level of the year, and numerous stockmen decided that it was best to wait for reactions before sending in their matured swine. Taking a broad survey of the future prospects of the hog market, it hardly seems possible that prices will fall so low as to prevent owners from obtaining substantial profits in fattening their holdings, for the large shortage is undisputed. Even on the recent declines, prices stood much higher than in other years at corresponding dates, 1913 and 1910 excepted. Receipts of hogs in 11 markets this year show a falling off of 360,000 head from the corresponding period last year, and of 1,859,000 from the same time two years ago.

Prof. H. O. Allison, in charge of the experimental feeding at the Missouri Agricultural Station, says cattlemen in that state have had a bad season, since corn and silage were both of poor quality, and corn costs them higher than feeders pay in other states. They lost a considerable amount of money feeding cattle in most instances, and this season, with thin cattle costing higher than ever, there is a general disposition to let the light cattle alone.

Sudden changes of the weather to hot and sultry spells are disastrous to big, heavy hogs crowded too close together in cars, and many dead hogs have been removed from cars arriving in the Chicago stock yards. With hogs selling at present high prices, every dead hog means quite a loss to owners, and too much care in this

matter is impossible. Besides allowing hogs plenty of room, cars should be well cleaned and a bedding of sand or cinders placed on the floors of the cars.

Low priced hogs are not expected this summer, as there is quite a shortage in the supply throughout the corn belt states, and for the season so far western packing shows a large falling off from the pack of a year ago. Stockmen who are so fortunate as to be the owners of healthy, growing young hogs should make them good before sending to market, and it is always a good plan to endeavor to get them marketed when it is not extremely hot weather. Reports from Iowa are that spring pigs are doing well, and where the usual numbers of sows were bred, a good pig crop is reported, but in a number of localities cholera cut down the numbers of breeders last year. Taking the country as a whole, the pig crop is not an extremely large one, and it is far from keeping pace with the growth in population.

With wintered flocks of sheep and lambs mostly marketed, while very few spring lambs are ready for moving to market, owners of live muttons are obtaining extremely high prices. Many inquiries are made for feeders, but scarcely any are offered for sale.

Horses were offered in moderate numbers last week and sold better on the whole, recovering much of the decline of the preceding week. Many transactions showed advances of about \$5 per head or more, with farm mares going at \$190 @ 240, the best going to northern Wisconsin. Farm geldings sold in pairs for \$270 @ 375. Chunks sold singly at \$165 @ 250, according to weight and quality, expressers at \$220 @ 250, wagoners at \$185 @ 235 and drafters at \$250 @ 300 for the better class. Choice animals were not plentiful.

The desire among former feeders of cattle to change over to feeding sheep and lambs is increasing because of the dearth of stock steers, and buying orders in the Chicago market for feeder lambs has far exceeded the offerings.

(Continued from page 588).

try. He has already begun the selection of a cabinet, has made Saltillo the capital, and expects to be at the head of political affairs before the mediators at Niagara Falls, Canada, reach an agreement on terms of settlement. Plans are now being made by the rebels for the capture of Mexico City.

Many persons and companies of Tampico, Mexico, have paid the ransoms demanded of them by the rebel troops for sparing lives and property during the recent bombardment and capture from the federal forces. Citizens, business houses, Spaniards and dignitaries of the Roman Catholic Church constitute the classes of whom demands have been made, and unless payment is made by a certain date a death penalty is promised. The victims are closely guarded. Efforts to intercede on the part of those who are unable to meet the sums called for have been without avail.

A strong effort is being made by the department of state at Washington to get the rebel constituency of Mexico to become a partner in the peace conference at Niagara Falls, Canada, but thus far the effort has been in vain. General Carranza holds out against the invitation and continues to push his military activities as fast as possible. He apparently hopes to gain such a footing that he can command the respect of the nations and thereby strengthen his position.

The Moro outlaw, Alameda, and 300 of his followers have peacefully surrendered to the United States authorities in the Philippines. The leader was an old foe of the Spaniards before the occupation of the islands by the United States.

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The Saginaw Silo has been the leader in solving the silo problems of the farmer. Marked improvements have been added to the Saginaw Silo because experiments showed that they were necessary in the manufacture of a silo that would give lasting silo service.

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And this year, as never before, we are urging silo buyers to buy the Redwood Silo. The same ideal that has made the Saginaw Silo first in the hearts of silo owners is behind our efforts.

Redwood gives you permanence—does not rot or decay. Redwood is not affected by moisture. The Saginaw Redwood Silo is always air-tight. Redwood is free from pitch. This makes it fire-resisting. Coupled with Redwood we give you in the Saginaw the famous Saginaw Steel-Built construction. Redwood for permanence and steel for testing strength that defies destruction. Siloed yellow pine has many Redwood qualities. This material with Oregon Fir and Yellow Pine are also furnished in Saginaw Silos.

Get our book No. 117 on silos. See Saginaw Agent in your county.  
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**FARMERS**—We are paying good premium 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.

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**BOUGHT**—Bears, Foxes, Minks, Ducks, Guinea, and all kinds of birds and animals. William J. Mackensen, Box 394, Yardley, Penna.

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**FOR SALE**, whole or part, 320-acre Southern Michigan farm, 55 a. fine looking wheat. Immediate possession. Otto S. Schairer, 214 Dewey Ave., Swiserve, Pa.

**WANTED**—to buy a farm of 60 to 100 a. near Detroit, from owners only, give full particulars, lowest price in first letter. Address, Ed. Feige, cr. 60 McLean Ave., Highland Park, Mich.

**WANTED** farms from owners for sale. We have direct buyers. Send description. Magazine, particulars free. Western Sales Agency, Minneapolis, Minn.

**\$4500** 60 a., 9-room house, large basement barn, fruit, 15 a. clover, good soil, near Hy. town, Detroit 40 mi. Other farms. The Ypsilanti Agency Co., Ypsilanti, Mich.

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

**CUMBERLAND PLATEAU FARM FOR SALE**—40 acres fertile land in crops, 200 acres timber. 300 young Apple, Pear, Plum and cherry trees. New 50x60 bank barn. No cold winters, no hot summers. Ritter, Annadell, Tennessee.

**I Want** 30 to 100 acres, some timber, lake privilege, any county South or East of Lansing in Southern Mich., give description, location. Must be cheap, no buildings. E. F. Winemiller, R. 8, Pontiac, Mich.

**FARMS FOR SALE**—Pig or little—listen to this one. 2 acres grove; good seven-room house; bank barn with hip roof, practically new; root house holds 1000 bushels; other outbuildings; 40 bearing apple trees; clay loam soil, no better in Michigan; well fenced, drained. Price \$4500, worth double this price. Come and see it now. L. A. McCARTHER, Pt. Huron, Mich.

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**THE FAMOUS CALIFORNIA LANDS.** San Joaquin Valley. Irrigated. Farm a grow alfalfa, walnuts, peaches, apricots, cherries, grapes, almost everything. Write for information. **J. D. TOWAR,** East Lansing, Michigan.

**225 Acres \$600 Required 16 Cows Included**

Sixteen cows are offered as a special inducement for immediate sale; then the 25 acres of wood and timber when marketed will pay half the purchase price; in one of the best dairying counties of New York; pasture for 25 cows, fertile, productive fields; 2-story 10-room residence, barn for 27 cows, horse barn, several other buildings worth more than price asked; good orchard, convenient to school, store and creamery; \$2800 is the exceptional price, only \$600 cash needed; read full details and traveling directions, page 18, "Strout's Farm Catalog 37", just out, biggest and best ever issued; 128 pages accurate, helpful information regarding crops, market, railroad, climate, etc., and describing with pictures hundreds of money-making farms throughout 20 states; write today for your free copy; it will save you time and money. **E. A. STROUT FARM AGENCY,** Station 101, Union Bank Bldg., Pittsburg, Pa.

# Farm Commerce.

## Shall We Market by Parcel Post?

**P**ARCEL POST is making good. Every month there is a substantial increase in the amount of matter sent, and the service is extending into new channels daily. The ultimate reach of the system under rational guidance is difficult to contemplate. Because of the unexpected uses to which it is being put no one dares to conjecture just where it will fail to serve the American people.

While the farmer appreciates the value of the parcel post system because of the ease with which goods can be gotten to him, his greatest expectations were connected with the possibility of marketing the products of his farm through the post office. But does the experience of those who have tried justify the statement that the parcel post is succeeding at this point? Will the farmer have to be content with the use he gets of the parcel post in ordering goods from the city, or is the hope of a better method of marketing certain products being realized?

### Failures and Successes.

It is true that many have tried and failed. Their shipments did not get through the mails without accident. Improvised containers frequently fell short of the demands made upon them when crowded into tumbling mail bags. But in spite of these failures the business has grown. The superintendent of the parcel post department at the Detroit post office has just informed the writer that the growth of the parcel post business, as pertains to the shipment of farm produce to the cities, is constant and rapid. It is even now reaching large proportions. Some have failed, but the larger proportion of the shippers have succeeded, and their success is causing those who failed to investigate and learn the reason for shortcomings.

But failures and successes have both been educationally important. They have clearly shown the things that should not be done and the things that should. They emphasize the importance of careful packing, of following the requirements of the postal department, of being particular about correct addressing and adding the name and post office of the sender, of marking the packages with the words "Eggs," "Perishable," "Fragile," according to the contents thereof, etc. The experience of all shippers further lays stress on the need of a strong, light box that can be adjusted to a variety of uses—suited to the shipment of eggs entirely, or to the handling of a variety of products, like eggs, butter, lard, fruits, meat, etc.

Then, too, men are coming to realize the advantages of the mixed order. Where a city housewife orders a little of several different kinds of products the aggregate makes a considerable shipment, but of such character that it is used up by the one household in a few days. This requires frequent shipments, keeps fresh stock on hand, and obviates the higher rate caused by the shipping of small quantities, besides it does away with the distribution among one's neighbors.

### Everybody Has a Chance.

This experience leads us to repeat that there are pertinent reasons why the farmer should not decide against the parcel post system of getting certain of his products to the consumer. The system is thoroughly organized. In the country the rural routes reach out to every farm; while in the cities the delivery autos go to every house

on any street that a parcel may be addressed to, making a service that is complete in its comprehensiveness. Goods can be started from the farm home and delivered at the door of the city residence. This advantage is very important, since the farmer, when he is busy, cannot afford to drive to town with a few dollars worth of produce in order to keep his customers satisfied, as his time may be worth much more when given to the work of the farm; but he can pack the goods and leave them for the rural carrier to collect. This is one advantage that the parcel post has over other systems, which the farmer must take into account.

### Suiting the Service to the Demands.

A second reason for considering the plan is that the government is proceeding carefully to suit the service to the requirements of the people. We have already seen how the weight limit has been increased from 11 to 20, and now to 50 pounds for the first two zones, and from 11 to 20 pounds in the zones beyond the second. We have also noted the changes in packing and the alteration of methods in handling the packages above 20 pounds which are now taken as express and do not go into the mail bags. Then, too, the government has designated ten cities, of which Detroit is one, where a special effort is

being made to see what can be done in the way of getting farmers to send produce direct to city consumers. When it has been shown that the plan is feasible, (and the experience thus far justifies the statement that it is), then this service will be made universal throughout the country. It is also declared that the limit will be increased to include packages of still greater weight in a short time.

### Other Advantages.

Besides the above reasons there is the insurance provision which enables the sender to have the safe delivery of the goods insured by the payment of a nominal charge of five cents for all parcels valued up to \$25, and ten cents to those valued up to \$50. Then, too, the collection-delivery service between money-order post offices enables one to make certain that the goods sent will be paid for or returned. This service costs ten cents for parcels not to exceed in value \$100, and this ten cents charge also insures the same parcel to a sum not to exceed \$50.

It is not anticipated that the parcel post plan of marketing will jump into the forefront at once. The change will be gradual—an evolution. Both consumers and producers will become educated to its advantages by experience. Producers will find new customers through serving old ones well. They will learn the best containers to use, the best kinds and varieties of products to produce or grow to satisfy their patrons, the correct method of packing, the proper time to ship to avoid delays by reason of holidays, etc. And when they become accustomed to the new order they will wonder again and again how "inconvenient" it would be to return to the old.

## A Co-operative Shipping Association.

**A**BOUT a year ago, the writer contributed to these columns, an article on the Litchfield co-operative creamery. One progressive step leads naturally to another, and the home of this successful co-operative creamery would seem a fitting place for another experiment in co-operation. This second experiment is, indeed, interesting, and gratifying in the extreme, to all who believe more of the profits of farming should go to the producer. The history of the Litchfield Shippers' Association is as follows:

In April of last year, the association was organized and incorporated under the state laws. One thousand dollars' worth of stock was assessed, one hundred members holding shares of ten dollars each. One-fourth of this amount, or two dollars and fifty cents for each member, was called in, for the purchase of grounds on which to do business, scales, etc. Five directors have complete control of the business of the association. These directors hire a manager and a secretary-treasurer. These officers are paid by a tax of five cents on every hundred of live stock shipped. An additional two cents is levied, as a contingency fund, to cover losses and defray other incidental expenses. This seven cents constitutes the only charge, except freight rate and commission. All business is done on a strictly co-operative basis. Shipments are made for non-members, at a slightly higher rate. So far, the shipment of live stock has constituted the principal business of the association, although straw, hay, oats, and potatoes have also been shipped.

In giving a brief history of the organization and workings of this co-operative shipping association, a word of praise is due the leaders in the movement. The organization was not affected without opposition from influential quarters. The local newspaper and some of the leading local business men fought the proposition to

the last ditch. The farmers knew what they wanted, however, and what is more, they knew how to get it, and all opposition was in vain.

The members of the organization have taken a long step in the right direction, and are doing much to solve the perplexing problem of giving to the producer the proper returns for his labor. At least one middleman is eliminated, and his profits go directly to the men who have produced the wealth. The step would not be difficult in any community, if the farmers would only unite and work together. It is disunion which makes farming an uncertain calling in many respects. The farmer is at the mercy of the seasons to a large measure, and of necessity, must always be. But in regard to adequate market prices for his products, he can better his condition by co-operation. This method gives to the producer something like his just share without raising the cost to the consumer, which is already too high. The following quotation from one of the directors of the association, in reply to the question as to whether he considers the experiment a success will form a fitting conclusion to this article:

"You ask if I consider the idea a success. I say most decidedly so; in fact, it is the only way and should have been started many years ago. This and our co-operative creamery jog along side by side, and mean more to the farmer than anything he has had to do with in all the past. More business and new members are coming right along."

Hillsdale Co.

J. A. KAISER.

## Crop and Market Notes.

### Michigan.

**Delta Co.**—It is very dry here, and forest fires are doing lots of damage. Winter grains and meadows came through the winter in good shape. A good many fruit trees are being set out. There is a considerable amount of hay in the farmers' hands, selling

at \$13@15 per ton. Spring pigs are in good demand at \$6@10 a pair. Eggs sell at 20c per dozen; butter 25@30c; potatoes 60c per bushel.

**Ottawa Co.**—The pig crop is about as usual, and no serious losses are reported. On account of the increase in the dairy business, farmers are gradually giving up raising sheep, for which reason the lamb crop is much smaller than last year. The average price of wool is 22c. There will be a slight increase in the amount of corn and beans that will be planted this spring. The condition of wheat and rye is above the average, and that of meadows and pastures about normal. Oats are badly damaged by wire-worms and unfavorable weather conditions. Fruit prospects are fair where spraying is practiced; where not done scale is killing the trees. Eggs 17c; butter 25c; hogs 8c; wheat 93c; oats 40c; corn 65c.

**Mecosta Co.**—The usual amount of spring crops are being put in, but there will be a less acreage of beans, and more corn and potatoes planted. About the usual amount of sheep are raised, wool bringing from 17@22c. Apple prospects are fine; peaches are a failure; plums poor; pears and cherries fair, and berries light. Cows are bringing \$50@65; young horses vary in price from \$150@250.

**Lapeer Co.**—Many losses of spring pigs have been reported, but the lamb crop is up to the average. Many sheep were sold off last fall; the price offered for wool is 21c. The usual acreage of oats has been put in, but on account of the cool weather is not looking good. Rye looks splendid; pastures are poor, stock being kept off until later. Under favorable conditions meadows will do well, but some clover was killed out last winter. Fruit trees blossomed full. Some spraying was done. Wheat 92c; oats 39c; rye 60c; eggs 18c; butter 21c; good cows \$60; pigs \$3@4 each.

**Hillsdale Co.**—Oats, wheat and all grasses are doing fine, with prospects of a good crop. Owing to the heavy rains, but little corn has been planted. Fruit came through the winter in good shape, but many orchards are injured by scale, small fruits being badly affected. Eggs 19c; butter 18@30c; oats 37c; wheat 93c.

### Ohio.

**Hancock Co.**—Owing to the backward season, no corn has been planted yet. About the average acreage of spring grains are being put in. Many farmers lost nearly all their spring pigs, but lambs are doing well. Wheat and rye were damaged some by the recent wet weather. Prospects are good for a large hay crop. Spring sowed clover and pastures are looking good. Fruit prospects are good, but not much spraying is being done and not many trees set. Wheat 92c; corn 94c per cwt; oats 37c per bu; rye 55c; barley 45c; butter 20c; eggs 18c; chickens 13c; cattle \$6.50@7.50; hogs \$8.

**Clermont Co.**—The pig and lamb crops are about the average. Hogs are in good condition. Wool is selling at 22c. Wheat and rye are looking fine, and meadows and pastures are in good condition. There are prospects of a fair fruit crop, but little spraying is done. About the usual amount of oats will be sown, the average amount of corn planted and a large amount of tobacco raised. Butter 25c; eggs 15c; hogs \$8.50.

**Guernsey Co.**—Many sheep men sold off their flocks last year, therefore the production of lambs and of wool has decreased. Wool brings 21@22c. More than the usual acreage of oats and corn will be grown. Corn planting was delayed on account of the cold, wet weather. Wheat is fine, rye poor, hay and pastures promise well, but need rain. There are good fruit prospects, and the majority of the trees were sprayed. Eggs 15c; butter 16c; hens 14c, live; dressed 25c.

**Sandusky Co.**—Farmers have been much delayed on account of cold, wet weather, and oats were late, with a poor stand, while very little corn is in, but planting will be finished within the next two weeks. There is a good lamb crop, but a shortage in the pig crop. Meadows and pastures are in good condition. Fruit prospects are poor and no spraying is done. It is estimated that 200,000 young trees, mostly peach, have been set. Wool 20@23c; hogs \$8.10; corn 95c per cwt; oats 39c; eggs 17c; butter 18c.

**Ashtabula Co.**—May has been cold and wet, and farmers are behind with their work, as oats are not all sown, and very little corn and potatoes are planted. Orchards are about all sprayed, as we have a compulsory spray law here. There is a poor outlook for fruit. Many orchards have been set out in the peach belt. The pig and lamb crops were small. No wool has been clipped yet, owing to the cold weather. Meadows, pastures and winter grains are the best in years. Butter 18c; eggs 17c; beef, dressed 8@10c; chickens 14@15c; oats 40c; po-



tatoes 60c; hogs, live \$8.50; veal, live \$8.50; wheat 95c.

**Shelby Co.**—Corn planting has just started, and there is a fair acreage to plant. Oats are looking fairly well. Wheat suffered quite a little, but pastures and meadows are looking good. There are about half the usual number of spring pigs. Fruit prospects are poor, as the buds were all frozen last winter. Eggs 17c; butter-fat 23c; hogs \$8.10; wheat 90c; oats 37c; corn 93c per cwt.

**New York.**

**Genesee Co.**—The pig and lamb crops are about the usual size. There is quite a large acreage of peas for the cannery. About the usual acreage of other crops was put in. Wheat, rye, meadows and pastures are in excellent condition. There will be few peaches, but apples promise to be a fine crop. Spraying is somewhat neglected; no new orchards are being set. Dairy butter 25c; creamery 30c; hogs \$8; eggs 18c; spring chickens 25c; lambs 16c; wheat \$1; oats 45c; potatoes 65c; beans \$2@2.15; loose hay \$11@13.

**Pennsylvania.**

**Crawford Co.**—Meadows and wheat look fine, and pastures are good. Most of the oats are in, but very little corn is planted. It is thought the apple crop will be good, but the peach crop is uncertain. Farmers are behind with their work on account of so much rain up until the middle of May.

**Perry Co.**—Pigs and lambs are not as plentiful as in former years. Wool brings 17c per pound. Less oats were sown than usual, and about the average acreage of corn will be planted, but it will be late, as there is still some plowing to be done. Wheat and rye are not doing well on account of so much rain. Grass is slow in growing, but is a good stand. Fruit of all kinds is expected to be plentiful. Very few orchards are being set out, but better care is being given to old orchards than formerly. Eggs 17c; butter 20c; chickens 12c; fat cattle \$6@7; wheat 95c; corn 85c; oats 55c; potatoes \$1.10.

**Indiana.**

**Elkhart Co.**—May has been a good growing month, and wheat and rye promise a good crop. There is a very poor stand of clover. Farmers are raising more corn and less oats than last year. Cherries and plums will be a light crop. There were quite a number of new orchards set out this spring, but not much spraying has been done. Corn 65c; oats 35c; wheat 91c; rye 57c.

**Laporte Co.**—Corn planting was finished last week under good conditions. Pastures are good, and cows are doing well, while all stock is improving fast. Potatoes will not be planted until June. Wheat and rye are heading out, with prospect of a good yield. Chickens are doing well. Eggs 18c; butter 30@35c; creameries are paying 27c for butter-fat. Hay is scarce and high.

**Illinois.**

**Champaign Co.**—Average pig and lamb crop; only few sheep raised, and very few kept for wool. Normal acreage of corn and oats being sown. Wheat, what little there is, looks good; meadows and pastures unusually good. Very hard rain packed the ground about May 10; ground working hard now and needs shower. Oats do not look extra well; corn seems to be all coming and is a good stand except where water stood after the big rain of May 10. No spraying is being done. We will have the usual amount of fruit; no fruit section here. Eggs 16c; butter 25c; corn 63c; oats 36c; hogs \$7.75.

**Lincoln Co.**—This section is in all its glory; has had a fine rain, good for all crops. Wheat looks fine; corn is mostly up fine. Pastures are getting good, although some of the grass died from the draught last year. The corn acreage is low in this part, having no cornstalks on the land last year, most of the land was sown into wheat. Not much doing in the line of fruit. Eggs 18c; butter 20c; hogs \$7.80; corn and wheat 80c; per bu.

**Wisconsin.**

**Wausahara Co.**—The pig and lamb crops were about an average. Wool brings 18c per pound. There is very little wheat grown, but rye, meadows and pastures are in good condition. There are not as many fruit blossoms as usual, and no spraying is done. Butter 28c; cheese 14c; wholesale price of eggs 16c; potatoes 55c.

**Missouri.**

**Polk Co.**—Pig crop smaller than usual; lamb crop normal. Oats an average crop seeded, and in prime condition. Peaches and apples promise almost a full crop. Berries short on account of few plants that survived drouth of 1913. Eggs 15c; butter 16c; no wool selling at this point.

**Vernon Co.**—The weather is fine for growing crops; wheat and oats are headed out and look to be the best ever raised here. Corn is all

planted. Grasses, especially alfalfa, are looking fine. There are some few pigs in the country. There will be some fruit of all kinds. Stock cattle \$4@6; hogs \$8; hens 13c; spring chickens 20c; butter 15c; eggs 17c; cows \$50@80. Horses and mules of good grade are high.

**Barton Co.**—Corn is all planted and about half cultivated. We have the finest prospect for wheat we ever had. Oats look well, but need rain. Gardens are fine, but small fruit killed out badly on account of the long drouth. Peaches will be about half a crop, and apples almost a failure. Some hogs are being shipped at \$8; butcher cattle are bringing \$6; corn-fed steers \$7.85.

**St. Louis Co.**—The weather is very hot, roads are dusty, and all growing crops are in need of rain. Wheat is good in some places, but some is being plowed under for corn. The fly has done damage in some fields. Rye is being cut. Cherries and raspberries will be a large crop.

**Kansas.**

**Cloud Co.**—A dry spell of weather is here, but wheat looks well. Oats not so very good; pastures poor; the wild native grass has not started yet this spring and may be about all killed by the drouth last summer. The hog crop is good and pigs are doing as well as usual in a dry season. Most of the fruit is killed by the late cold spring. Putting up first crop of alfalfa is the main work for the present. It is up in fine shape and is a fair crop as to quantity.

**Marion Co.**—More oats sown than usual, also wheat and rye, sown last fall, all very promising for a crop, but we need rain soon. The pig crop is small; not many sheep here; feeders are bought in fall, fed and marketed. Fruit prospects not very good. No spraying done. A great many fruit trees were set out last fall. A great deal of kaffir to replant; corn doing fairly well, but has been a little too cool this month to grow it, and it is a little backward. First cutting of alfalfa being cut; it is a good crop. Hogs \$7.80; corn 82c; oats 48c; eggs 15c; butter 18c; old hay \$12 per ton; new \$10; no fat cattle and few fat hogs.

**Dickinson Co.**—A very favorable spring for growing crops. Wheat in splendid condition and heading out, though slight damage from Hessian fly is reported in some fields which were early sown. Corn a fairly good stand. Oats looking well. Alfalfa will be a heavy crop the first cutting. Potatoes and garden fine, but damaged a little by late frosts. Cool weather all month. Pastures good and stock doing well. Farmers are in the corn fields with weeders. Large numbers of chicks raised this spring. Eggs 16c; butter-fat 20c.

**Finney Co.**—Wheat fields are looking fine, plenty of moisture in the fields. There will be plenty of apples, plums and cherries, which are our principal fruit crops here; maize, fetterita corn and cane are our main spring crops. Alfalfa is also fine and ready to cut, (May 18). Everyone having an orchard is spraying; our wild grass is the "short grass," it is fine and stock looking well. Butter 20c; eggs 17c; chop \$1.60; wheat \$1 per bu; hogs \$7.75; very few cattle selling, and very high; lots of calves and pigs here, but very few sheep and lambs.

**Nehama Co.**—Wheat, rye, meadows and pastures look very good. A large acreage of alfalfa was sown, and old alfalfa has made a fine growth, and will soon be cut. There was a large acreage of oats sown. Fruit prospects are good, peaches and cherries are fine. There was not much spraying done, and only a few new orchards put out. The pig crop is only half the average, and the lamb crop only fair. Wool is 21c per pound, and a good crop. Corn is all planted, most of it is up and looks well. Corn 78c; wheat 76c; oats 45c; fat cattle \$6@8.25; hogs \$7.50@7.75; hens 12½c; cream 22c; butter 25c.

**Nebraska.**

**Pierce Co.**—We have had plenty of rain, and it has been quite cold and damp for May, but we have prospects of good crops. Oats look fine, corn is coming up well, though some fields are bothered with cutworms. Pastures look fine; quite a lot of alfalfa is being sown. Cattle and horses look good. Hogs \$7.80; oats 34c; corn 57c; butter 22c; cream 22c; eggs 16c.

**Scotts Bluff Co.**—The pig crop is good, and pigs are growing nicely. There is a good acreage of spring grain, but little corn will be put in. Beet planting is about finished, and potato planting has begun. Grain, pastures and meadows are better than usual at this time of year. Fruit trees wintered well, with a good crop in prospect. Water has been started in the irrigation canals, and ground

(Continued on page 594).

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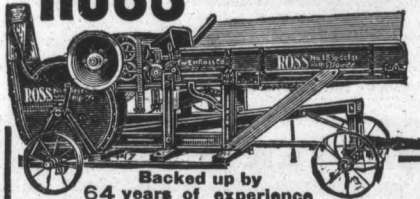
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## Farmers' Clubs

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."

### THE FARMERS' CLUB AND COMMUNITY WELFARE.

In several rural communities of this state the local Farmers' Club, in cooperation with other organizations, and with the aid of interested citizens outside the Club membership, has become a social center of the community in a far broader sense than is the ordinary Farmers' Club or similar organization. In these cases the Club has worked in conjunction with the country church, or perhaps the country school, in a quiet and unobtrusive way at first, but none the less effectively in raising the plane of the social life of the community. Generally this work has started through assuming the direction of a Fourth of July celebration, or mayhap some other holiday fete, but has later assumed a far broader scope and a more important place in the community life. One of the beneficial manifestations of this broader work consists in the establishment of educational lecture courses during the winter season, the broadening of the Farmers' Club Fair to make it a community event of importance, often with athletic games and sports to interest the young as well as the older people of the community, and in some cases the movement has gone so far as to include the establishment of community playgrounds or parks for the playing of games, the holding of community events, etc.

We have planned to devote some space to the description of this kind of work in Michigan communities which has started in the local Farmers' Club during the present year, and would be glad to have the corresponding secretary of every Club in the state which has done anything along this line report same for publication in this column. A series of short articles descriptive of community welfare work of this kind which has been accomplished by the local Farmers' Clubs in different sections of the state would prove an inspiration to the Club workers of other communities, and perhaps to the members of other organizations having similar opportunities along the same line. May we not hope that not only Club officers but Club members as well, may interest themselves in this matter and see that such publicity is given to any work of this kind which may have had its inception in the organization with which they may be affiliated?

### YEARLY PROGRAMS.

#### Washington Center Club.

The 1914 printed program of the Washington Center Farmers' Club, of Gratiot county, follows the same general lines of those which have preceded it and those which have been previously described in this column. It is, however, an exceptionally tastily printed booklet with green tinted covers and printed with a shade of green ink which harmonizes with the color of the cover. On the cover page appears the Club name and location, the date for which the program serves and the date of the organization of the Club, which was 1898, and the announcement of the date of the meetings, which are held on the second Thursday of each month. The back cover is devoted to a list of the officers of the Club and the names of its executive committee. On the inside pages appear the programs for the

monthly meetings, one to each page. The farms of the members are named and the farm name appears, together with that of the host and hostess in each case. An announcement of the hour at which the meeting will be called appears at the head of each program, afternoon meetings being held in May, June and July, and all-day meetings for the balance of the year. A special order of business adapted to the needs of each meeting is printed in connection with each program. Roll call is responded to in a variety of ways, the manner for each meeting being announced in the program for the month. The programs as printed are quite complete, assignments of music and recitations being made as well as for papers and discussions. In the latter case the questions are announced and some member is named to lead the discussion. The question box is made a feature of each meeting and every program is closed as well as opened with music by the Club. At the close of each program appears an appropriate question, expressing something of the thought of the general subject or trend of the program. Special feature meetings are: A temperance meeting in February; a "Corn Special" in April; Children's Day in July; a basket picnic in August, and a Club Fair in October. One or two timely questions are announced for discussion at each meeting. A novel feature of this yearly program is the fact that for two of the three months in which the half-day meetings are held, the questions are adapted to discussion by the ladies and lady members are announced as leaders. This doubtless insures a more complete program than would be possible by leaving this duty to the men during the busy haying and harvest season. Altogether this program is a model of utility and attractiveness, as might be expected from a Club which has had long experience in the use of yearly printed programs in its routine work.

## Grange.

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

### GRANGE HABITS.

With the advent of many new Granges in the state, there come questions upon good of the order. All such questions sustain the conclusion that it is wise to begin right. The only way to be able to begin right is to learn how from the experience of others.

There are a few fundamentals that should be recognized by everyone. If a Grange sets itself by these foundation principles at the start its course will be straight. One of these that should be inculcated in a new Grange from the beginning is that of opening early enough to close in time for members to reach their homes not later than midnight. No farm family can profitably withstand the depletion of late hours regularly for a series of years. A Grange should plan to be a constructive factor, not a destructive force even in the physical life of its members. Therefore new Granges need to husband very carefully their hours of calling and closing. Begin right, continue right. The "8-9-10 plan" is admirable for evening Granges; that is, call at 8:00 p. m., begin program at 9:00, and close at 10:00. This leaves it optional with members to remain later for social features.

Another habit to emulate is the observance of the lecture hour at every meeting. The order of business calls for it. The lecturer has been solemnly enjoined to prepare for it. The members may easily be led to understand from the outset that each will

be expected to contribute toward the program when asked to do so. Few will refuse or fail if the sentiment of the Grange as a whole is one of expectation that everyone will respond. It is a matter of habit—habit of the Grange quite as much as of individuals.

Hand in hand with the above named habit should go that other very important one of expecting that every lecture hour will furnish matter for serious consideration as well as humorous and entertaining features. Granges lose immeasurably that do not establish this habit early in their careers.

The practice of dispatching business by assigning much of it to committees before it is brought before the Grange for final action, is another excellent habit that is better learned early than by long or sorry experience.

There are many seemingly unimportant practices that readily grow into undesirable habits if allowed a foothold in the new organization. For instance, failure to enter or leave a closed Grange in proper form; failure to rise when voting, also when making a motion or speaking in Grange, and failure to address the Master in doing so; discussing a subject before it has been brought before the body by way of a motion; failure to control the time of the business portion of the meeting so that it will not infringe upon the lecture hour; and—greatest of all—neglect of the spirit of cordiality and thought-taking fraternalism.

Little things, these? Yes, but one way or the other they work for the weakness or strength of a new Grange.

JENNIE BUELL.

### AMONG THE LIVE GRANGES.

**Work and Education.**—Gratiot Pomona Grange held its quarterly rally with North Wheeler Grange, Saturday, May 9. Although it is the busy time of the year for farmers there was a very good attendance of grangers and visitors. After a well-served dinner a very full and happy company was called to order to listen to the program which Worthy Lecturer Cora Carter had prepared. Music by Yourys orchestra. Paper, "Man's work fifty years ago and now," Mrs. Klees. The writer presented a scholarly account of the improvement in methods of performing man's work in the last fifty years. "Woman's work fifty years ago and today," by Edward Titus. Pomona does not care to go on record as endorsing all the opinions set forth in this paper. After a short executive session to consider the matter it was decided to spare the writer's life if he would promise never to do it again, and the program was resumed. Address, State Speaker O. D. McClure. The speaker told of his own schooling in the lumber camp, the hard school of experience, and later in college. He believed the weal of woe of future generations lay in the hands of the middle classes and what that class will be, ethically speaking, will be determined largely by the ideals and standards which we set before our youth of today. He took a mild rap at our present system of education and a hard rap at those who are opposed to education at all. Music by N. Wheeler Grange.

Paper, "In Memorium," was read by Mrs. Howe. Readers of the State Health Bulletin will find the entire paper in the next issue. Recitation, Bro. Ford. Music, Yourys orchestra. Bro. Parks was called on for a recitation. He said that a lady who was quite capable of fulfilling her threat said that if he ever recited "The Midnight Murder" again she would throw him out of the window, but in its stead he gave several recitations that were much liked by his audience. The meeting closed with a question box. The fifth degree session was held in the schoolhouse, Bro. Klees presiding.

### COMING EVENTS.

Charlevoix Pomona Grange meets with Boyne River Grange at the town hall in Boyne Falls, Thursday, June 11. State Master J. C. Ketcham will give the principal address.

Kent County Pomona Grange will meet with Paris Grange, June 10. Fruit culture will be the leading subject for discussion, all of the phases of fruit growing will be considered. State Master Ketcham will address the meeting.

# Veterinary.

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

**Miscarriage.**—I have a cow that dropped her calf three months too soon; would you advise me to keep her? J. L., Grand Rapids, Mich.—If your cow aborted the result of an injury, then she might not have a similar experience if you bred her and kept her. If she is the only one of your herd that has aborted and it is the result of contagion, she should be disposed of to someone who is familiar with the facts and will treat her. Kindly understand that there has not yet been found a sure preventative or cure for contagious abortion; however, the disease can be held in check by treating them.

**Bloody Milk.**—Can you tell me what will cure a cow giving bloody milk? Occasionally bloody milk comes from one quarter of udder and part of the time I can feel a small hard substance in teat. The teat in quarter is not at all tender, therefore, I am inclined to believe that the bunch is a sort of blood clot and I might mention that this is her first milking period. S. J. G., Dryden, Mich.—Your cow bruises udder or else the teat may become congested, the result of over-feeding. Cut down her grain supply and apply one part tincture arnica and seven parts water to bruised udder two or three times a day and if you can locate the injured part, apply ice water two or three times a day to only the diseased or injured portion of bag.

**Cough.**—I have a mare three years old which has a cough that has been bothering her for past four months; I also have a two-year-old heifer that gives bloody milk from both hind quarters of udder. S. L. S., Silverwood, Mich.—Mix 1 oz. guaiacol in 15 ozs. of raw linseed oil and give her 1 oz. at a dose three times a day. See treatment for bloody milk in this column.

**Choking.**—I bought a sow two weeks ago that had 12 pigs; she is in good condition but when eating she swallows food with difficulty and I am inclined to believe she occasionally chokes on feed. Five of her 12 pigs died, all showing similar symptoms. We are feeding them fresh milk with a small amount of calf meal in it. She is due to farrow the middle of August and I would like to know if you advise me to keep her. C. B., Chief, Mich.—By feeding them a thinner slop and allowing them to exercise more, you will succeed in relieving them, and also prevent this ailment. You should avoid feeding food that they are likely to choke on. If your sow is in a healthy condition, I know of no reason why you should sell her.

**Sore Feet.**—Last year during hot weather my lambs were troubled with sore feet, the same ailment is now affecting this year's lambs. I might say that they run in woods pasture and have access to a stream of water the whole year round. M. M., Shepherd, Mich.—It is possible that your lambs poison their feet or may make them tender by too much walking; however, I am most inclined to believe that the cause is a poisonous herb. Apply one part carbolic acid and 30 parts water to feet three times a day; be sure and keep the animal in a clean place or allowed to run out doors.

**White Diarrhea.**—Have lost a great many incubator chicks from what seems to be a white diarrhea. M. G., Merle Beach, Mich.—In order to prevent white diarrhea, it is important to know that the hen that laid the egg be healthy, that the eggs are kept in a clean sanitary place that is not too hot, that the incubator should be thoroughly disinfected before it is used, plenty of fresh air admitted in the room while hatching is going on, and as soon as chicks hatch out keep them in a clean sanitary place with lots of sunlight, and prevent them getting chilled or wet with a cold rain; also be sure that their food and water supply is of good quality. Kindly understand this ailment is the result of a bacterial infection; therefore a removal of the cause will correct it much quicker than attempting to drug chicks a few days old.

**Bruised Breast.**—My colts have soft bunches on brisket which vary in size and part of the time are badly swollen. J. J. S., Belleville, Mich.—Apply one part tincture iodine and five parts spirits of camphor to bunches once a day, and if you believe they contain either serum or pus, make an opening with a sharp clean knife and allow it to escape. Give each colt a teaspoonful of powdered nitrate of potash at a dose in feed once or twice a day. This is dose enough for a yearling or two-year-old.

## West Michigan Holstein Breeders THIRD ANNUAL JUNE Consignment SALE

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WEDNESDAY, June 10th, 1914

### 105 HEAD of well bred tuberculin tested Holstein cattle at AUCTION!

90 head of high class females consisting of some good A. R. O. cows, choice heifers and heifer calves. Several well bred young bulls and bull calves, several grandsons and granddaughters of Pontiac Korndyke, Hengerveld DeKol, Friend Hengerveld DeKol Butter Boy, and Pontiac Aaggie Korndyke. Grandsons and Granddaughters of the thirty pound cow Traverse Princess Weg, and Sweet Friend Aaggie. A son of Johanna McKinley Segis who is a son of King Segis and the 40 pound cow Johanna DeKol Van Boers.


If you are interested write for sale catalogue or what is still better attend the sale.  
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Sales Manager.

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**Registered Percherons, BROOD MARES, FILLIES AND YOUNG STALLIONS** at prices that will surprise you.  
L. C. HUNT & CO., Eaton Rapids, Michigan.

For Sale—Write W. A. Ewalt, Mt. Clemens, Mich., for these beautifully bred sable and white scotch collie puppies, natural heelers from trained stock, guaranteed.

**DAY-OLD CHICKS**—S. C. W. Leghorns—Commerce strain—for delivery June 8th and 9th, \$8 per 100. Everfresh Egg Farm, Ionia, Mich.

## BREEDERS' DIRECTORY.

### CATTLE.

**Aberdeen Angus Cattle**

We have just received a wire to ship all our surplus young bulls of serviceable age to Minnesota. With grade Angus yearlings selling at \$125.00 to \$150.00, these young bulls, closely related to five International Grand Champions, should be worth \$200 to Michigan farmers with a dozen or more grade cows. Wire, phone or write at one for reservation.

**GEO. B. SMITH**  
Addison and Somerset, Mich.

### ABERDEEN-ANGUS

HERD FOUNDED IN 1900.  
Strains represented consist of Trojan Ericas, Blackbirds and Prides, only. Black Quality Itto, a bull of rare individuality and merit, heads the herd.  
WOODCOTE STOCK FARM, Ionia, Mich.

FOR SALE—2 Reg. Guernsey bulls 2 and 4 years old 2 bull calves best breeding. Pedigree of spring show. Berkshire swine either sex.  
JOHN EBELS, R. R. 10, Holland Michigan.

GUERNSEY BULL CALF, nicely marked, 8 weeks old, great grandson of Gov. Cheese. \$50 takes him.  
AVONDALE STOCK FARM, Wayne, Michigan.

GUERNSEY BULL—Coyne No. 27300. Heifer Lena B of Coloma No. 49950, at a bargain. G. A. WIGENT, Watervliet, Mich.

HEREFORD BULLS 2 six months old 1 15 months old.  
ALLEN BROS., Paw Paw, Michigan.

\$225 Buys a registered heifer 8 mo. old and registered bull 7 mo. old, both 1/2 white, not not akia. E. B. BEAVEY, Akron, Michigan.

Upsland Herd—Offer bull calves, choice A. R. O. breeding, \$100 and up.  
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Bred by one of the best bulls of America.  
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HOLSTEIN FRIESIAN CATTLE BREEDERS of high record cows. Young bulls at farmers prices.  
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Bull Calves \$50 to \$200.  
An absolute guarantee with each purchase.  
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Holsteins—11 High Grade Holstein heifers from Heavy Milkers. Also Registered Bull. Price for the bunch \$1000 F. O. B. J. C. BARNET, Coldwater, Mich.

**BIGELOW'S HOLSTEIN FARMS**  
Breedsville, Michigan,  
Breeder of high class  
Registered Holsteins.

**A. R. O. HOLSTEIN COWS FOR SALE.**  
6 very fine A. R. O. cows, bred to Johanna Concordia Champion, and Duke Ormsby Pieterje DeKol. Price \$1850. Service bulls and bull calves. Kindly write me just what you want.  
L. E. CONNELL, Fayette, Ohio.

Holstein Bull—30-lb. dam, 125 lbs. in 30 days, 2-yr.-old, mostly white and a beauty. Write for photo, etc., or come and see him. HOBART W. FAY, Mason, Michigan.

For Sale—Eight choice registered Holstein yearling heifers, some are bred. Also four cows.  
E. A. BLACK, R. No. 6, Lakeview, Michigan.

**MICHIGAN HOME AND TRAINING SCHOOL**  
LAPEER, MICHIGAN.  
Breeder of High Grade Holstein Cattle. Lists and prices upon application.

**A FEW CHOICE** Holstein Friesian Bull Calves for Sale. A. R. O. Stock.  
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SIX Choice Holstein Friesian bull calves from one Sired by Jacob's Fairy Emmanon 107111.  
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Holstein Friesian Cattle—Herd Headed by Albina Bonte Butter Boy No. 93124. Average for dam and sire's dam A. R. O. at 4 yrs. butter 7 days 23.37 lbs. No stock for sale. W. B. Reader, Howell, Mich.

**"Top-Notch" Holsteins.**  
Choice bull calves from 1 to 7 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices.  
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**Purebred Registered HOLSTEIN CATTLE**  
The Greatest Dairy Breed  
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IRVIN FOX, Allegan, Michigan.

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The sire is of vital importance. Buy a thoroughbred Jersey bull and grade up. Work towards the 400-pounds-of-butter cow. It costs no more to produce 400 lbs. of butter with a good cow than 200 lbs. with a poor one.  
Let us send you some Jersey facts.  
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**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.  
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Jersey Bulls Yearling and two-year-old. Eligible to register. Splendid breeding. Price right. Address LEWIS RILEY, Metamora, Mich.

**JERSEYS**—Bull calves bred for production. Also cows and heifers.  
Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

**BUTTER BRED JERSEY BULLS**  
CRYSTAL SPRING STOCK FARM,  
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FOR SALE—14 Polled Durham & Shorthorn Bulls from 4 to 24 months old. C. CARLSON, LeRoy, Mich.

Shorthorn Bulls For Sale—One roan 3-yr.-old weighing a ton. Price \$250. Also 3 calves 6 mo. old, from good milking cows, M. A. BRAY, Okemos, Mich.

DAIRY BRED SHORTHORNS of best Bates strains, 26 yrs. a breeder. Bulls all sold. J. B. HUMMEL, Mason, Michigan.

FOR SALE—One Registered Shorthorn bull 18 mos. old. Write for pedigree. WM D. McMULLEN, 67 Madison St., Adrian, Michigan.

Shorthorns \$500 buys two cows three and four yrs. one yearling heifer and two calves six month. A. A. PATTULLO, Deckerville, Michigan.

## SHORTHORN CATTLE

W. W. KNAPP, Howell, Michigan.

**SHEEP.**

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS The Shespany of the East.  
I sell and ship ewes, and any express charges. Write for club offer and price list. Oxford, Shespany and Polled-Delaines.  
PARSONS, GrandLedge, Mich. R. I.

Leicesters—Yearling and ram lambs from Champion flock of Thumb of Mich. Also select Berkshire swine. Elmhurst Stock Farm, Almont, Mich.

## HOGS.

Durocs & Victorias—A few extra Sept. Boars and bunch of Gilts for 1st. of April farrow.  
M. T. STORY, Lowell, Mich., Citizens Phone 55.

BERKSHIRE—Choice fall Boars and Gilts of select breeding, also spring pigs. Priced to sell.  
WHITE OAK FARM, R. No. 4, Brown Osk, Mich.

Chester Whites—Reg. Bred Gilts—Orders taken for spring pigs and Colbie pups. Holstein Bulls at Bargains. FAY B. FARHAM, Bronson, Mich.

**CHESTER WHITES**—The long type, prolific kind. A nice lot of spring pigs.  
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**O. I. C's**—Spring pigs, get my price before you buy elsewhere. CLOVER LEAF STOCK FARM, R. No. 1, Monroe, Michigan.

**O. I. C's**—I HAVE A NICE LOT OF HAND. OTTO B. SCHULZE, One-half mile west of Depot, Nashville, Michigan.

**O. I. C.**—Take orders for spring pigs. One 8 mo. fine type Jersey Bull. Price reasonable.  
N. H. Weber, OakView Farm, Royal Oak, Michigan.

**O. I. C.**—Sows bred for June farrow. We are also taking orders for spring pigs.  
JOHN BERNER & SON, Grand Ledge, Mich.

**O. I. C.**—Bred sows and spring pigs, large and growthy. Pairs and trios, not akin. Write your wants.  
GLENWOOD STOCK FARM, Zeeland, Mich.

**O. I. C.**—Gilts bred for June and July farrow. Also Spring pigs. Serviceable boars all sold. I pay express. G. P. ANDREWS, Dansville, Mich.

**O. I. C's** All sold. Would be pleased to book your order for spring pigs.  
C. J. THOMPSON, Rockford, Michigan.

**O. I. C.**—Three September Boars, four September Gilts. Am also taking orders for spring pigs. They are extra good ones.  
NEWMAN'S STOCK FARM, E. No. 1, Marlette, Mich.

**O. I. C.**—Boars six months old, spring pigs, gilts. Satisfaction guaranteed.  
A. R. GRAHAM, FLINT, MICHIGAN.

**O. I. C. Swine**—May I have the pleasure of receiving your order for a pair or trio, not akin, of April and May farrow. They are bred right. Satisfaction guaranteed. A. J. GORDEN, R. No. 2, Dorx, Mich.

**DUROC JERSEYS**—Fall gilts of the large, heavy boned type, bred for Aug. and Sept. farrow. Also spring pigs, not akin. F. J. Drott, R. 1, Monroe, Mich.

**DUROCS**—A good growthy fall pig immuned and bred for August farrow will make you money. Give me your order now for May shipment. Also fall boars ready for service.  
KOPE KON FARM, Kinderhook, Michigan.

FOR SALE Duroc JERSEYS—College Boy 138557 Farrowed Sept. 7, 1911. Spring pigs after June 1, 1914. J. H. BANGHART, Lansing, Michigan.

Fancy bred Duroc Jerseys—Boars & Gilts of spring & summer farrow. Good individuals at reasonable prices. John McNeill, Station A. R. 4, Bay City, Mich.

**KORN-EL STOCK FARM** now offer Duroc Jersey pigs of either sex at reasonable prices.  
E. R. CORNELL, Howell, Michigan.

**DUROC JERSEYS**—A few fall pigs of both sexes for sale.  
CAREY U. EDMONDS, Hastings, Michigan.

**DUROC JERSEYS**—Spring pigs either sex at reasonable prices. S. O. STAHLMAN, Cherry Lawn Farm, R. 2, Shepherd, Mich.

**Duroc-Jerseys**—Spring boars from prize-winning strains. Sows all ages.  
Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

**ESSEX PIGS**—From Michigan's oldest herd. Get your order in for something good. You know the kind that comes from the Flint River Farm. You have heard of us before. E. P. OLIVER, Flint, Mich.

**LARGE TYPE P. C.**—Largest in Mich. Fall pigs all sold, order a spring pig sired by the largest boar in the U. S., weight 300 lbs., 24 months old. Come and see. Expenses paid if not as represented. W. E. LIVINGSTON, Parma, Mich.

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

**Poland China Boar; Sows Bred, All of the Big Type.**  
A. A. WOOD & SON, Saline, Michigan.

## MY OH MY! What an Opportunity.

Starting May 1st, we are going to give to the farmers and breeders an opportunity to get started right in the breeding industry. We are going to give you a chance to get hold of foundation stock that will give you a nucleus for one of the finest and best herds in your community. We are going to show you as we have others, that you will have greater success with our big type

## POLAND CHINAS

than with any other breed. We want to place at least one pig, or a pair in every community, to advertise our herd. We will give agency, if not already taken. If interested, write for our plan and prices.  
HILLCREST FARM, KALAMAZOO, MICH.

**P. C.**—Fall boars and gilts. Spring pigs. Shorthorn females, Oxford Sheep. C. W. CRUM, Secy., Cent. Mich. Shorthorn Ass'n., McBrides, Michigan.

**POLAND CHINA PIGS**—From large Prolific stock. Shorthorn Bull Calves. Eggs \$1 per 15 from choice Barred Rocks. ROBERT NEVE, Pierson, Michigan.

**BUTLER'S Big Boned Prolific Poland Chinas.** Grow big, keep easy, mature early, ready for market at 6 months. Why? Because we've bred them that way for more than 20 years. We have 25 big boned sows for fall farrow. Buy one and make more money on your hogs. You can't get any better at any price. P. C. History Free. J. C. BUTLER, Portland, Mich.

30 Poland China Fall Pigs—Good ones from immune sows \$10 and \$15 each, while they last. Bred sow sale Feb. 27th, send your name for catalog if you want to buy Big Types with Quality. Wm. Watling, Coldwater, Mich.

350 BIG TYPE MULE FOOT HOGS—America's Champion Herd. Prolific, hardy, Best for Mich. Also Pones. J. DUNLAP, Box M, Williamsport, Ohio.

**Mule Foot** Bred sows, bred gilts and boar pigs, not related, for sale. Satis faction guaranteed. G. C. KREGLow, Ada, Ohio

**Yorkshires**—Spring Pigs Of Excellent Quality.  
GUY J. DOTY, R. 2, Monroe, Michigan.

**FOR SALE**—Yorkshire boars ready for service. Sows bred for Sept. farrow. Prices reasonable. C. H. JOBBE, Mt. Clemens, Mich.

**YORKSHIRE Swine**—March & Apr. pigs ready to ship. Pairs not akin. College Princess and Cooks Bacon foundation stock. Geo. S. McMullen, Grand Ledge, Mich.

**Yorkshires** Guaranteed to not die of Cholera. Prolific, long deep and well fleshed. Pigs ready for delivery. Not akin. Cribbs Bros., Watervliet, Mich.

## YORKSHIRES

The large, long-bodied, prolific kind. Gilts bred for July, August and September farrow. A choice lot of spring pigs, pairs and trios, not akin. Prices reasonable.  
W. C. COOK, R. 42, Ada, Michigan.

**Lillie Farmstead Yorkshires**  
Open gilts and gilts bred for September farrow. Spring pigs either sex, pairs and trios not akin. Satisfaction guaranteed.  
COLON C. LILLIE, Coopersville, Michigan.

Practical Science.

THE VARIATION IN TEST IN MILK AND CREAM.

BY FLOYD W. ROBISON.

In the relationships between the dairyman and the creamery there has always been a great deal of dissatisfaction over the variations in fat test from day to day of the patron's milk and cream.

To explain to the dairyman the reasons for repeated and constant variations in test has been an almost impossible task for the creameryman. Dairy men knowing that by adjusting the power separator they are able to vary the richness of their cream, try to reason with considerable force that when they do not adjust the separator there should be practically a constancy in the percentage of fat in their cream from day to day.

Width of Cream Zone Not a Reliable Guide.

There are a great many factors which influence the percentage of fat in cream or in milk. We have been accustomed to value the richness of milk by the width of the cream zone on the milk when it is allowed to stand unmolested for a period of time and here some dairymen wonder why it is that while the cream zone on their milk is very visibly greater than the cream zone on their neighbor's, according to the Babcock test at the creamery, they cannot secure credit for as much butter-fat as the neighbor with the narrower cream zone.

The width of the cream zone on milk will vary in the same milk from day to day, and it will vary materially from one herd of cows to another, caused undoubtedly by very many factors such as the size of the fat globules, undoubtedly by the content of solids not fat in the milk, and many other factors which influence the gravity and viscosity of the milk and cause a rapid rise of the cream or a slow rise of the cream.

We had occasion to investigate this matter a few years ago and had two notable examples or illustrations called to our attention. In one of these milks the cream zone was very nearly twice as wide as in the other and yet the one with the narrower cream zone contained a greater amount of butter-fat. This was using the natural or gravity rise of the cream and is the condition which would exist in milk and cream when the separator is not used. When the separator is used, of course, there are other factors, both mechanical and physical, which enter in, complicating the conditions.

Any boy or girl can earn a watch after school hours or on Saturday. Write for particulars to The Michigan Farmer, Detroit, Mich.

NOISE

The motor's complaint against incorrect oil

If your motor makes some unusual sound, stop your car. Investigate.

Noise frequently means unnecessary friction—the direct result of incorrect lubrication.

Common noises are:

"Thumping."—A dull thump at each revolution of the main shaft indicates worn main or connecting rod bearings. This trouble is hastened by oil of low quality or incorrect body—will finally result in badly worn bearings and knocking.

"Knocking."—This may be due to loose wrist-pins. It may be due to badly worn bearings or bushings which should be refitted or replaced. Incorrect lubrication will cause both of these troubles.

"Carbon Knock."—A sharp muffled ring, at ignition, indicating excessive carbon deposit usually caused by oil of low quality or incorrect body.

"Pounding."—Due to engine laboring under overload. Lubrication plays no part in this trouble.

"Hissing."—Frequently due to heavy scoring of cylinder walls. It is most often brought on by inefficient lubrication.

There is only one insurance against the results of incorrect lubrication. That is the use of oil of the highest quality which is correct in body for your type of motor.

You can secure this oil by referring to the Lubricating Chart which is partially shown at the right.

Our complete Chart will be mailed you on request. We will also send on request a pamphlet on the Construction, Operation and Lubrication of Automobile Engines. It describes in detail the common engine troubles and gives their causes and remedies.

Stationary and Portable Engines and Tractors For all types of Gasoline and Oil Engines. Water cooled—Use Gargoyle Mobiloil "A" in summer; use Gargoyle Mobiloil "Arctic" in winter. Air cooled—Use Gargoyle Mobiloil "B" the year 'round. Tractors—Use Gargoyle Mobiloil "B" the year 'round.



Mobiloils

A grade for each type of motor

The various grades of Gargoyle Mobiloils, purified to remove free carbon, are: Gargoyle Mobiloil "A," Gargoyle Mobiloil "B," Gargoyle Mobiloil "E," Gargoyle Mobiloil "Arctic." They can be secured from reliable garages, automobile supply houses, hardware stores and others who supply lubricants.

It is safest to buy in original barrels, half-barrels and sealed five and one-gallon cans. See that the red Gargoyle, our mark of manufacture, is on the container.

For information, kindly address any inquiry to our nearest office. The city address will be sufficient.

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

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

Domestic Branches: Detroit Boston New York Chicago Pittsburgh Philadelphia Indianapolis Minneapolis

APPLETON Silo Filler

"Who makes it?"—that is far more important than any description. Thousands have proved that "Made by Appleton" means the best that can be built. Appleton has a 40-year reputation for making farm machines right. Appleton Silo fillers are guaranteed to do more and better work with less power than any other silo filler operating under equal conditions.

Free: Book on Silo Building Describes all types of silos; how they are built, and the advantages of each kind. Catalog of Appleton Silo Fillers, Corn Huskers, Gasoline Engines, Manure Spreaders, Corn Shellers, etc., also free. Appleton Mfg. Co., 420 Fargo St., Batavia, Ill., Est. 1872

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makes barn work easier. Our Feed and Litter Carriers easily do the most thorough work in the shortest time. If you take pride in a clean, orderly stable, investigate our Patented Stalls and Stanchions. Write for our large, illustrated catalog. It fully describes everything, contains many valuable hints. Mailed Free! Please ask for it on a post card today. The Harris Mfg. Co., Box 250 Salem, Ohio

Advertisement for Phelps' Book, featuring a portrait of H.C. Phelps and a hickory buggy. Text: Phelps' Book is Yours For The Asking. It Shows You How to Save \$25.00 to \$40.00. Every Buggy Sold on 30 Days' FREE Trial Absolutely Guaranteed for 2 Full Years.



Correct Lubrication

Explanation: In the schedule, the letter opposite the car indicates the grade of Gargoyle Mobiloil that should be used. For example: "A" means "Gargoyle Mobiloil "A." "Arc" means "Gargoyle Mobiloil "Arctic." For all electric vehicles use Gargoyle Mobiloil "A." The recommendations cover both pleasure and commercial vehicles unless otherwise noted.

Table with columns for Model, Year (1910-1914), and Lubrication grade (A, Arc, B, E). Rows list various car models like Abbott Detroit, Alcoa, American, Autocar, etc.

Save \$4 to \$8 per Acre Seed and Fodder

On Clover, Alfalfa, Flax, Vetch, Peas, Timothy, short grain, etc. A rake or tedder will knock off and waste the seed and leaves. You save all that waste by equipping your mower with the

THORNBURGH Side-Delivery BUNCHER AND WINDROWER

Deposits crop to side, out of way of mower and team on next round. Leaves crop in either loose, hollow bunches or in windrows; heads and leaves in center, stems, which hold the sap, sticking out to dry quick.

Saves the seed and leaves and half the labor. Saves making extra trips over the field with dump-rake, side-delivery rake and tedder. Cures Quicker—No Bleaching—Costs Little and Pays for Itself Every Day Used.

OVER 120,000 SATISFIED USERS Write today for FREE CATALOG and mention dealer's name



The Thornburgh Manufacturing Co., Dept. O, Bowling Green, Ohio

For Intensive Tillage Cutaway (CLARK) Disk Harrows and Plows

A style and size for every farmer THE CUTAWAY HARROW COMPANY Makers of the original CLARK disk harrows and plows 912 Main Street Higganum, Conn.

RUN ON KEROSENE 6c for 10 Hours

Ellis Engines develop more power on cheap lamp oil than other engines do on high-priced gasoline. Will also operate successfully on distillate, petrol, alcohol or gasoline. Only three working parts.

Advertisement for Ellis Engines, featuring an illustration of an engine and text: Ellis Engines, 110 Mullett St., Detroit, Mich.

PUMP GRIND SAW Made for Hard Use

Wood Mills are Best. Engines are Simple Feed Grinders, Saw Frames, Steel Tanks CATALOGUES FREE AGENTS WANTED Perkins Wind Mill & Engine Co. Est. 1860 135 MAIN ST. Mishawaka, Ind.

MASON'S LAWN FENCE 6c PER Ft.

Lawn Gates only \$2.25. Close wove 48 in. Stock and Poultry Fence 27e a rod. Heavy 49 in. Field Fence 34e a rod. Hog Fence 14e a rod. Barb Wire \$1.40 a spool. 60 days' trial. We not only lead on prices but on quality as well. Our great FREE Catalog proves it. Write for it today. It saves you money. The Mason Fence Co., Box 68 Leesburg, O.

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