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## Michigan's New Milk and Cream Law.

THE new law that is to control the dairy business in Michigan went into effect on August 15, and the sections of this law are well worth the careful study of the progressive dairyman. The farmer who has been carrying on his business with considerable regard for the health of his customers need have no fear of the new law, but where the cattle have been housed in poor quarters, and the owners have been lax from a hygienic standpoint, the Michigan dairy law is going to cause a revolution in methods of producing milk and butter. The good dairymen of Michigan will have their business made bigger and better by the new law and it tends to drive out the man who has been harming both the dairy cow and the public by the use of undesirable methods of production.

One of the most important parts of the law is in Section 1, which states that milk drawn from cows kept in barns not reasonably well lighted and ventilated shall be declared unsanitary. That may bring up an argument on many farms as to what it means to say that a barn is reasonably well lighted and ventilated. It will mean that some farmers will have to make more windows in their barns and do considerable cleaning up before the inspector arrives at the farm. It will also mean that the farmer who is managing his dairy in the right way will not be disturbed and the milk products from his place will bring a better price when the standards of the dairy business are raised by a law stringent enough to drive out the inefficient and undesirable milk producers.

It is said that the man who spends money to improve his dairy and produces sanitary milk is receiving more money for his milk than the man who has a poor barn and makes little effort to handle the production in a sanitary manner. This may be true in some instances but in the majority of cases, the milk from the ill-kept dairy is going to the market for the same price as the products of the man who is spending hard earned money to produce a clean and sanitary milk.

The good barn in the picture is located in a region not distinguished as a dairy center but the owner has spent considerable money to put in iron stanchions, cement floors, and everything necessary to run a model dairy. The barn is ventilated by the King ventilating system and is amply supplied with windows on all sides. One mile down the road is a farmer who is keeping his cows in an old shed. The milk from both of these farms is being shipped to the same creamery and both men are receiving the same rate for their milk.

The good farmer expressed himself as follows: "I am not receiving much encouragement from the people in this community and they seem to enjoy laughing at every effort I make to improve my barns and stock. The fellow down the road has scarcely any investment in his business and he gives his cows very little care outside of a fair amount of good feed. His barns are cheap and dirty with no light, and chink-hole ventilation, and he is boasting that he will make more money from his cattle than I will from mine." The good farmer was so situated that he could not sell to a fancy trade and yet he was producing a milk that was none too good to the creamery that received his entire output. The man with the poor barn was disposing of his milk at the same place because the ultimate consumer did not see his barn and used the milk without considering the quality. It is in an in-

stance of this kind that the good farmer will now receive a just reward for his efforts and the poor farmer will have to improve his methods or leave the business. That is the reason that the new dairy law will be a boom to the agricultural interests of the state and why it has been desired by the progressive farmers of Michigan.

The law will be a big step toward increasing Michigan's already prominent position as a dairy state and every farmer should carefully study the following sections which bring out many important

creta or from any other cause, or milk which shall be drawn from cows which are themselves in a filthy condition; or milk kept or transported in dirty, rusty, or open-seamed cans or other utensils; or milk that is stale, putrescent, or putrid; or milk to which has been added any unclean, or unwholesome foreign substance; or milk which has been kept exposed to foul or noxious air or gases in barns occupied by animals, or kept exposed in dirty, foul or unclean places or conditions, is hereby declared to be insanitary milk. Cream produced from

his servant or agent, or as the servant or agent of any other person, or as the officer, servant or agent of any firm or corporation, sell or offer for sale, furnish or deliver, or have in possession or under his control with intent to sell or offer for sale, or furnish or deliver to any person, firm or corporation as food for man, or to any creamery, cheese factory, milk condensing factory, or milk or cream dealer, any insanitary milk or any insanitary cream.

Section 3. No person shall by himself, his servant or agent, or as the servant or agent of any other person, or as the servant or agent of any firm or corporation, manufacture for sale any article of food for man from any insanitary milk or from any insanitary cream.

Section 4. All premises and utensils used in the handling of milk, cream, and by-products of milk, and all premises and utensils used in the preparation, manufacture, or sale or offering for sale of any food product for man from milk or cream or the by-products of milk, which shall be kept in an unclean, filthy or noxious condition are hereby declared to be insanitary. It shall be unlawful for any person, firm or corporation engaged in selling, or furnishing milk, cream, or any by-products of milk, intended for use as food for man, and it shall be unlawful for any person, firm or corporation engaged in selling or furnishing milk, cream and any by-products of milk, to any creamery, cheese factory, milk condensing factory; or to any place where such milk, cream, or by-products of milk are manufactured or prepared into a food product for man, and for sale as such; and it shall be unlawful for any milk dealer, or an employee of such milk dealer, or any person, firm or corporation, or the employee of such person, firm or corporation, who operates a creamery, cheese factory, milk condensing factory, or who manufacture or prepare for sale any article of food for man from milk, cream, or by-product of milk, or who manufactures, re-works, or packs butter for sale as a food product, to maintain his premises and utensils in an insanitary condition.

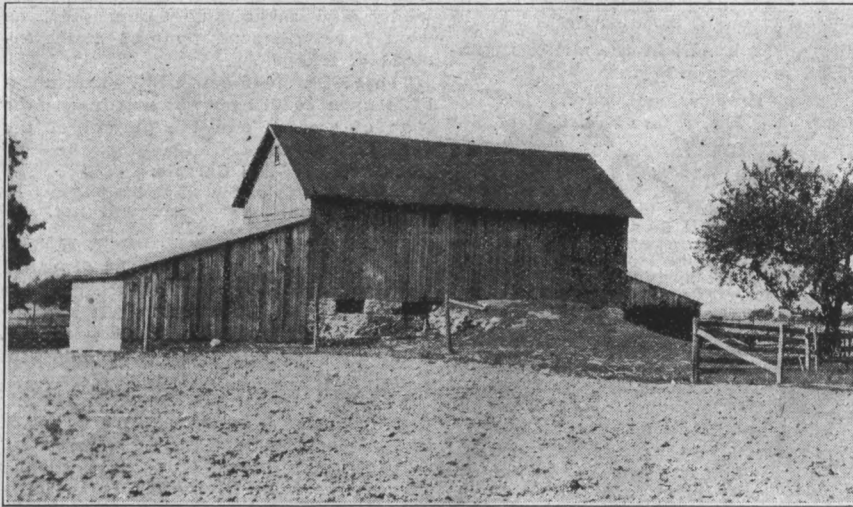
Section 5. Any person, firm, or corporation, not a common carrier who receives from a common carrier in cans, bottles or other vessels any milk, or cream, ice cream or other dairy products intended as food for man, which has been transported over any railroad or boat line or by other common carrier, when such cans, bottles or vessels are to be returned, shall cause the said cans, bottles, or other vessels to be thoroughly washed and cleansed before return shipment.

Section 6. Any person who by himself, his servant or agent, or as the servant or agent of any other person, or as the officer, servant or agent of any firm or corporation, who violates any provision of this act shall, upon conviction thereof, be punished by a fine of not more than one hundred dollars for each and every offense, or shall be imprisoned in the county jail for not more than 60 days.

To those who accept this law in the proper spirit it will prove most beneficial, since compliance with its provisions in the production of milk and cream will be conducive to the health of the herd and will thus stimulate production. Ultimately it will increase the revenue from the dairy herd through increased consumption and better prices for the products, to say nothing of the increased satisfaction to the dairyman.

Ingham Co.

R. G. KIRBY.



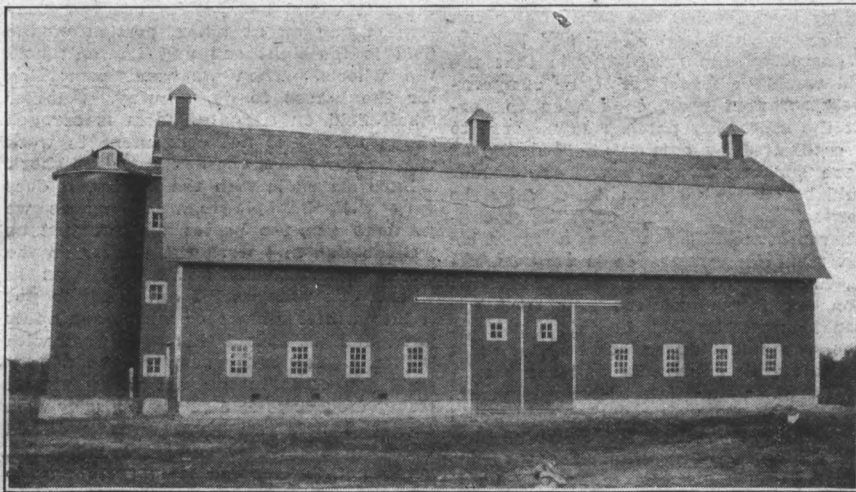
This Barn Does Not Meet the Requirements of the Milk and Cream Law.

points that must be considered by every dairy farmer, milk dealer, and creamery manager.

### What the Law Provides.

Section 1. For the purpose of this act, the term "milk" shall mean the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained eight days before and four days after calving, and contains not less than eight and one-half per cent of solids not fat; and not less than three per

cent of milk fat, and the term "cream" shall mean that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than 18 per cent of milk fat. Milk which shall be drawn from cows that are kept in barns or stables which are not reasonably well lighted and ventilated, or that are kept in barns or stables that are filthy from an accumulation of animal feces and ex-



A Good Example of the Well Lighted and Properly Ventilated Dairy Barn.

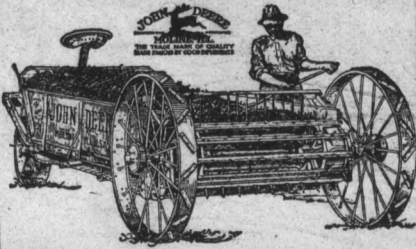
cretions, or from all foul or noxious air or gases which issue or may issue from such place or stable; or cream that is stale, putrescent, or putrid; or cream that is kept or transported in dirty, rusty or open-seamed utensils; or cream which has been kept exposed to foul or noxious air or gases in barns occupied by animals, or in dirty, foul, or unclean places or conditions, is hereby declared to be insanitary cream.

Section 2. No person shall by himself,



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The Spreader with the  
Beater on the Axle



### The Low Down Spreader With The Big Drive Wheels

The main reason why the demand for John Deere Spreaders has been greater than those interested in the spreader business thought possible, is because the John Deere Spreader is built the way you would build a manure spreader, to suit your own requirements.

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With a John Deere Spreader you get a low down Spreader in which the advantage of big drive wheels is not sacrificed for the low down feature.

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There are no clutches to get out of order, no chains to give trouble, no adjustments necessary.

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It does away with some two hundred trouble-giving parts. It makes the spreader low down. It permits the use of big drive wheels. It does away with clutches, chains and adjustments. It puts all the strain and stress of spreader on the rear axle, where it belongs, not on the sides and frame of the spreader.

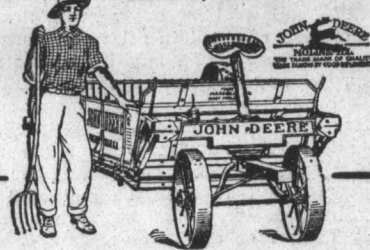
It does a lot of other good things, too. They are fully illustrated and described in our new spreader book.

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It tells how the John Deere Spreader is made and why it is made that way. It contains illustrations of the working parts and colored pictures of the John Deere Spreader in the field. It also has valuable information in regard to storing, handling and applying manure to the land.

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### SEED WHEAT

Dawson's Golden Chaff, 260 bu. from 5 acres this year. No smut or eye in wheat, \$1.50 per bu., bags free. MILLARD PATRICK, Webberville, Michigan.

#### FARM NOTES.

##### Harvesting Millet.

I have a piece of millet on low land. It is over five feet tall and just headed. Can you tell me the best way to cure it? When is the best time to cut it? Would it do to put it in the silo?

Newaygo Co.

W. W. H.

Millet should be cut for hay between the time of complete heading out and the late bloom. Cutting should not be delayed until the seed begins to ripen, owing to possible injurious effects on animals eating the hay, especially horses. On account of the fact that millet stems are large and succulent and because it must be cut at an earlier stage than other grasses to make the best quality of hay, it requires more curing than other hay. Otherwise it is no more difficult to cure than clover and it will endure much more exposure to rain without serious damage.

The curing cannot be well done in the swath, since to properly cure the stems it is necessary to keep the leaves from becoming dried in order that the sap in the stems may be drawn up through the leaves and evaporated from their surface, which can readily be accomplished if the leaves are kept from becoming thoroughly dried. Hence, the hay should be raked after it has become well wilted and cocked up in the field to complete the curing process, which will require several days, after which it can be opened up to the air and drawn at any time when weather conditions are favorable.

Millet could undoubtedly be put into the silo with fair results, but on account of its very succulent nature it would make a rather acid silage when cut at the proper stage. It would also be a rather difficult crop to handle for silage as compared with corn, and where the latter is available for filling the silo, the millet might better, in the writer's opinion, be made into hay.

##### Eradicating Dodder.

I sowed a low, rather wet, field of clay loam with a bushel of oats to the acre last spring, and got a fair crop of oats, but when I removed the oats I found the clover seeding, which is a fine catch, peppered with dodder. What had I best do with it? Would it do to pasture it close this fall and another summer, or be better to plow soon and sow to wheat and seed again next spring?

Tuscola Co.

L. V. B. C.

Where dodder has become established it is important to handle it in such a manner as to prevent it from seeding. Where the infested patches are not too numerous the method advised is to clip it closely and burn, using a little straw if necessary. The method of treatment which will best accomplish this result will depend upon the variety of dodder which is present in the field. Some kinds of dodder produce very little seed in this country but is found to be present in much clover seed imported from other countries. Thus it will be seen that the variety of dodder present, and there are several varieties, will have an important bearing upon the method of treatment. But it is not safe to depend upon the dodder being a variety which will not seed liberally. Hence the treatment should be such as to obviate any risk of getting the land seeded to the weed.

The best authorities claim that the dodder plants rarely, if ever, live over winter, so the problem is in keeping the dodder from seeding this fall. If this can be accomplished by clipping and burning or pasturing, the probability is that the field would be free from it, or comparatively so, next year, enough so to permit the scattering patches so infested to be eradicated by cutting and burning as above suggested. Of course, the dodder could be eradicated from the field by the growing of several hoed crops as it cannot reproduce itself unless a favorable host plant is present. It is very desirable, however, to prevent its introduction upon our farms and the new seed law should materially aid in this direction. When once introduced however, it must be dealt with summarily and the breaking up of the seeding before the plants have an opportunity to mature seed would be the surest method of accomplishing this desired result, although if the infested patches are not too numerous it might be preferable to attempt to eradicate them and save the stand of clover.

##### Fertilizer for Wheat.

Will you please advise me in regard to what kind of fertilizer to use on wheat ground?

Shiawassee Co.

F. R.

It is impossible to tell without considerable experimenting just what combination of plant foods would give the best result in a fertilizer for wheat. Experience has demonstrated, however, that most of our older soils are particularly deficient in phosphorus, an element of

plant food essential in the process of seed production, for which reason most fertilizer manufacturers make a brand of grain fertilizer containing one or two per cent nitrogen to aid in giving the plant a good start, from eight to 10 per cent of phosphoric acid to supply liberal quantities of this element, and two to five per cent of potash, which formula perhaps comes as near giving the general good results for grain as any which might be devised. For this reason it is good practice to buy a standard grain fertilizer of any well known manufacturer having an analysis coming within the figures above given in the essential elements of plant food.

##### Catch Crop for Fall Pasture.

Being a subscriber of your valuable paper, and reading some of "Winter Vetch," I would like to know more about it. I have an orchard which I will plow the last of August and want to sow some kind of seed, to pasture this fall, as I have a bunch of shoats. Would you advise rye, rape and vetch, or is the rape and rye enough? Is the vetch a winter plant, and would the rye and vetch make pasture in the spring if not pastured too heavy this fall? Please state when to sow, and the amount to sow to the acre.

Jackson Co.

E. E. M.

Winter vetch is a leguminous crop, hence in the class of soil improvers. It should be sown as soon after the middle of August as possible on a well prepared seed bed, using about one-half bushel of seed with a light seeding of rye. It will make a moderate amount of fall pasture and, barring any damage from the winter, will also make a rapid growth in the spring.

Rape, if sown under favorable soil and weather conditions will make pasture in about six weeks and will be, with the rye, an excellent fall pasture for hogs. The rape, however, would not live over winter and make any spring feed, as what lives will send up seed stalks instead of foliage.

The best crop to sow will depend not a little upon conditions which influence the time of seeding and the growth of the seed and plants.

##### Wild Carrots.

Would like to know what kind of weeds will winter-kill and what will not. Is wild carrot a bad weed?

Shiawassee Co.

T. N. V.

The only weeds which can be depended upon to winter-kill are annuals, or those which complete their life's cycle and reproduce their seed in a single year, and many of these are of doubtful habits in this direction.

The wild carrot mentioned is botanically considered an annual plant but it has degenerated into almost a perennial. Also it seeds liberally and is becoming very common in Michigan. It is, however, not so bad here yet as it is in some of the eastern states where the writer has seen it cover the meadows with a quite dense growth after haying. It may be classed as a more than ordinarily undesirable weed which should not be encouraged to become established on our farms.

#### LILLIE FARMSTEAD NOTES.

##### Disking Oat Stubble.

The oat crop, of course, this year was late, and we have just nicely got started in preparing for next year's crop of wheat. There were two small fields that we are preparing with horses. One of these it would not pay to use the traction engine on at all, a portion of the field is too light soil and it won't hold the wheels. Then we want something for the horses to do, anyway. Another small field on a rented farm is of such shape that it is not convenient to work the tractor there, the bouts are too short. I have disked it with the tractor, it does very well, but plowing, as long as we want to use the horses we can just as well do this and work the tractor on the larger fields. This small field was in wheat this year, and I am going to put it into winter emmer or wheat again this year, and we disked this both ways with horses. Once over doesn't make a very good job of it in a great many places. Going crossways it digs it up pretty well. But one field we have already disked with the big tractor and the big disks, going both ways, and it is surprising to note how that field is dug up. Certainly the comparison between the horse disk and the traction disk, puts the horse disk out of business, especially on hard ground. It took three days to look over the big traction engine and get things right and we really haven't got everything just right yet, but we used it one day, and we did as much, of course, in that one day as we would in several days with horses, and we did it right. We are learning that you have got to put considerable time on a traction engine to keep it in running order. There is a lot

of machinery about it. It has got to be just right before it works right. If you go into the field when things are not just right you are going to have trouble and it will cost you for repairs and extra time. You might better take the time at first and fix it up and get it just right before you start.

##### The Bean Crop.

The bean crop in this section has been suffering for several days from the dry weather. One man suggested that there was some disease in the beans, the reason that the lower leaves all turned yellow, and that they were drying up, but another man with a lot of experience says that it is nothing only the dry weather. There is not moisture enough so that they can grow, and they are gradually dying, and I am inclined to think that he is right. On the sandier soils the beans are certainly going to be severely affected by the drought. One man is just about ready to pull his beans now. The earlier pods have some beans in them but the later pods are not going to have anything to speak of. I saw a man yesterday and he said that his bean crop looked fine until it began to be affected by the drought and he didn't believe now that he would get eight bushels to the acre, and some of them would not be good beans. My beans are on heavier ground and they don't seem to be affected as badly as his are. There are good long pods and they are growing yet, that is, the pods are growing, the beans are developing, but they are affected without doubt by the extreme dry weather.

On the other hand, the lima beans do not seem to be affected so much by the dry weather. They are good color, they seem to be growing. It must be that they are deeper rooted plants and can stand drought better than common beans. Lima beans are just blossoming now. I wish we could get a good rain, but it don't seem to come. The factory man, however, says that they don't need rain very badly, that the drier it gets the deeper the roots grow into the ground, and they will get moisture and properly develop.

##### Pasturing the Stubble Fields.

This year we are gleaning one 20-acre wheat stubble with hogs. This is unusual for us because, as is well known, we don't believe in having the work fields fenced. This, in fact, is the only field on the farm that is fenced so that we can turn hogs in on wheat stubble, or any kind of stock. This, however, is so situated that we have a lane on two sides of it and a pasture on two sides of it, and must keep it properly fenced. It is pretty handy, I'll admit, and the hogs are getting some of the wheat. While the wheat was not lodged and there was not very much loss from this, it shelled some and there is a little wheat where every shock stood, and the hogs are picking it up and making good use of it. The only question is, will they get enough in this gleaning process to pay to keep the field fenced? I got the notion in my head a good many years ago that it was very detrimental to pasture worked fields, that we had better keep off from them. The temptation is too great in a dry summer like this if you have new seeding clover, for instance, and the cow pasture is short, to turn the cows into the new seeding of clover. You may save a dollar or two then but you lose ten dollars for every one you gain, next season.

I know it seems rather extravagant sometimes to clip the new seeding clover, sometimes it gets pretty large and there is a good bite to eat, and we clip this and let it lay on the ground. And yet, on the other hand, when we consider that one of the most important things in the improvement of soil is adding vegetable matter to it, what the most of the soils need more than they need anything else, is organic matter, this is not so bad. If we pasture all this second growth off the meadow, the new seeding, in a dry time and leave no organic matter on the land, while we might save a dollar, as I say, at that time, later on we would lose a great many more. But where one doesn't have his worked fields fenced there comes a time, of course, where he wants to glean a wheat field or an oat field that there is some waste from grain, yet this grain is not an entire loss.

The second growth clover this year is very short and thin. The fields that we cut first for hay is making some growth. I have no doubt that the heads will be well filled with seed, but whether there will be enough of it to pay to harvest the seed I do not know. It will have to be exceedingly well filled to pay for cutting it and caring for it.



### THE ART OF CONTROLLING MOISTURE.

In some of our western states they manage to raise good crops with practically no rain in the summer. In the wheat district of California where the average yield is thirty odd bushels per acre, they have no rain at all during the summer. They manage to raise from 30 to 40 bushels of corn per acre on the dry plains of Texas with practically no rain during the summer. Yet we of the humid regions think we know how to control soil moisture and work toward that end but our methods would fail completely under the conditions that obtain in these dry sections. A two months' drouth here has proved this conclusively. From May 1 to June 21, less than one-half inch of rain fell in our county, and even this drouth, which would be considered a "wet spell" in some sections has proved to be disastrous to crops.

These drouths seldom fail to come at some time during the season, but they also seldom come so early. When the drouth does come early it does more damage than when it comes later, after the crops have their root systems well developed. At least this drouth has been more disastrous than any we have ever experienced, and it has taught us a few things that will not soon be forgotten. It also proved that our usual methods for controlling moisture are very ineffective and almost valueless when a real drouth does come. Not that the methods are worthless, either, so much as that the manner of execution is at fault. For a good crop here and there proves this easily enough.

But we must do better. Two things we must study closely if we would succeed in holding soil moisture—the condition of the ground and the methods of tillage. Thin land bakes and puddles, and cannot be kept in a good state of tillage such as is necessary to retain moisture. And even better ground that is lacking somewhat in organic matter was not handled with more success. So, first of all, we must keep our ground in a fair state of fertility at least, if we expect crops to stand dry weather. Those soils that are light and friable, rich in humus, are the soils that are most easily handled in dry weather. This means that we must not only keep up fertility but also by all means we must not forget the green manures and tile drainage. Besides, all stubble, weeds, cornstalks and everything of a like nature must be turned under if for no other reason than to help hold moisture. Yet there is nothing better than barn manure. Those fields that have been liberally manured will easily yield twice as much as those not manured. And of the fields so treated those where the manure was spread on the plowed ground and disked into the soil well seemed to get through the drouth in much better condition and will produce better crops than others.

First, we must have the soil, and then practice perfect tillage. The disk, the roller and sub-surface packers and pulverizers are the best of tools for tilling to hold moisture. Where these tools were used intelligently and persistently crops have not suffered for moisture if they were on good ground. Shouldn't this make all of us "take notice?"

Disking ahead of the plow seemed to do more good than anything else when the job was well done. When you disk ahead of the plow you ought to disk, double-disk, and harrow if necessary to get the ground well pulverized. To run the disk over the ground once and roll it out in big chunks is just the same as wasting time and energy. It does no good toward holding moisture, although it may cause the ground to plow somewhat easier. In this work no slip-shod methods or half-way jobs count. Anything less than a good job is nothing at all.

Disk, double-disk and disk deep. Then plow, and drag down two or three times a day. After you are done plowing then begin to disk again and keep the ground rolled down or packed well. Never allow the clods to dry out. Disk, harrow, drag and roll, and—don't get in a hurry to plant. Ground that is worked well and allowed to lie for some time will gather moisture and come into condition for planting. But it is never in order for planting immediately after being plowed if we are having dry weather.

But the lesson is not lost for us even for this year. We expect to disk stubble ground and fallow ground so that we can plow for wheat whenever we get ready. We expect to plow corn ground this fall so that this work to control moisture will be well on the way for next spring. There is nothing equal to a good job of

disking to control soil moisture. Oats that were disked in well made twice as much pasture as those sowed on plowed ground. Very few in our county were good enough to cut this year. So, this corn ground will be disked and well pulverized after it is plowed. And the wheat ground will be disked both before and after breaking, and then pulverized well and packed rather firmly. Wheat wants a good solid seed bed. And such a one holds moisture well so that the wheat may get a good start before winter sets in. If it fails in this the crop is sure to be short.

Indiana.

E. P. H. GREGORY.

### TAXES ON CUT-OVER MICHIGAN LANDS.

Of late I have had several inquiries in regard to taxes on unimproved cut-over lands in my vicinity. It seems many would-be buyers of these lands get scared out when they learn of the taxes that are assessed upon them and to all such and others who may be interested I would desire to make the matter clear. It is true that quite a tax in some cases is assessed annually on some of these lands and rightly, too, and why? Much of this land has been purchased by "get-rich-quick" schemers who a few years ago saw the possibility of these lands and purchased large blocks at from \$3.00 to \$6.00 per acre and are holding them at an outrageous price to intending buyers. They do not improve them in any way, and take no interest whatever in local or other affairs in the vicinity in which they are located. Now as a rule, where progression and improvement is made in a new place by hustlers who are not afraid to work and clean up, it not only adds to the value of their own farms but to a great extent enhances the value of all adjoining lands, even if wild, so year by year these fellows profit in a way directly from the toil of others, though they, themselves, generally are non-residents, miles away and have but little interest in local affairs of any kind. Therefore their properties go on increasing in value year by year, although not one whit better, in many cases worse, by fires, etc., than they were when originally purchased. Now, to give the actual settler, the worker, the man who has really done something to benefit the public, to make a country worth while to live in, the brunt of the taxes would be unfair and all wrong, so our county and other officials are getting next to this class of "republic builders," men who recline in upholstered and luxurious office chairs and tell what rich land it is and how very easily cleared and all that, and assess to such lands as near as may be done, a direct ratio of taxes, many times equal if not more than on adjacent improved farms, and it's all right, too. If they won't do something with this land something is going to be done to it, so they get this kind of a "bracer" usually.

In conclusion, to be brief, don't let any intending homeseeker get "shaky" on taxes, the real home-maker is welcome and wanted on all and any unimproved Michigan lands no matter what county they may be in and when once located his taxes will be the least of his burdens. Try it and see, but buy soon for land is surely, constantly getting higher in price year by year. There is only so much land but every year sees more and more people for each farm acre.

Gladwin Co.

G. A. RANDALL.

### DESTROYING MOLES.

Seeing the article in The Farmer of July 19, page 62-18, on mole destruction, would say I have been troubled for years and have found traps too slow.

I was told by a friend this spring to try cutting up beef in small strips and rolling them well in powdered strychnine, make small holes in your rows of peas and drop in a piece of the poisoned meat, pushing back the soil in place. The above has given me good results.

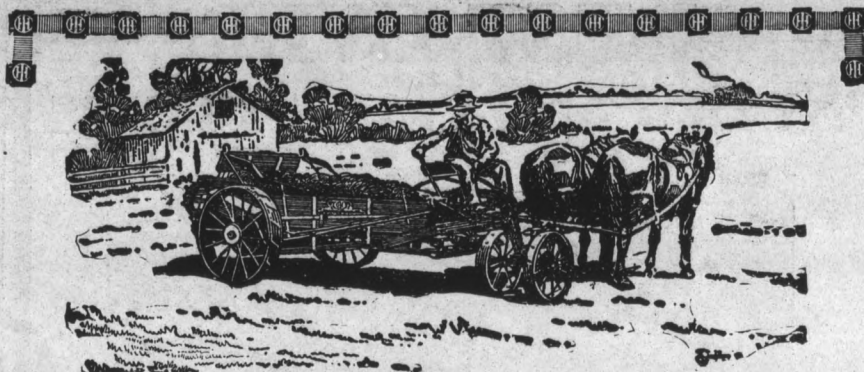
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**DURABILITY** THE BEST EVER PLOWS are made of the best steel and malleable iron. Wheels are of steel with dust proof caps. Oil but once a season. All shares of our famous ACME STEEL.

**ACME STEEL** is the only perfect plow steel made. It makes the only steel shares that are positively guaranteed against breaking in the field or in retempering. Anybody can easily retemper them any number of times. Keep them hard and sharp all the time. They scour perfectly, lighten the draft, plow more acres per day and plow them better.

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## Practical Science.

### SOME SANITARY PROBLEMS INCIDENT TO THE WASTE OF FARM MANURES.—II.

BY FLOYD W. ROBISON.

We have mentioned the general and gradual lowering of the vitality of farm animals through continuous pasturing on a small field which is, of course, the one great evil of a permanent pasture now that the farm unit is getting so much smaller than in former years. The question of the satisfactory disposal of farmyard refuse, manures, etc., therefore assumes a decidedly economic aspect. We have, however, planned on calling to the attention of farmers more particularly the relation to human welfare and naturally this necessitates a consideration of the proper disposal of human sewage.

#### The Importance of Water Supply and Sewage Disposal.

In a city it is generally considered that the most important city problems are the city's water supply and its sewage disposal. But if these matters are important to a city, they are likewise important to a rural community, and farmers have not appreciated up to date the importance of securing an unimpeachable water supply for family use, and of a proper disposal of the farm sewage. It is patent among sanitarians that the greatest prevalence in general of such diseases as typhoid fever is during the summer months, quite frequently referred to as the vacation months. Cities of a more or less definite monthly mortality are usually shown during September and October, the months following the return from vacations, an exceedingly high typhoid fever mortality. This, we believe, is due in a large degree to the fact that during the vacation period persons are changing their food supply and particularly their water supply, and going into communities, rural districts, and resorts where a careful scrutiny of the water supply is not observed.

#### Many Farm Wells Polluted.

Many farm wells are literally breeding places of disease. We have frequently received samples of water from farm homes in which the sender would state that he would like to have an analysis of the water because he wanted to be sure about it, for the water looked bad and tasted bad, and smelled bad. We are reminded of a trite saying of the late Dr. R. C. Kedzie, in his classroom. He said: "You can depend upon it that if water looks bad, and tastes bad, and smells bad, it is bad." But the converse of this is by no means always true. Water may look good, and smell good, and taste good, and yet be literally teeming with disease producing bacteria.

#### The "Dug" Well Not Usually Safe.

There are a great many points which should be observed in the selection of a place for securing the farm well. The general topography of the land, the proximity to possible sources of pollution, and the character of the soil itself determine very largely the type of well and its locality at the same time. It is not usually desirable to use the old "dug" type of well as the source of the water supply for family use. The pipe-driven wells, if the locality is good, are usually very satisfactory. The dug well, which is bricked or crocked up, is very apt to become a drainage center for the polluted surrounding soil.

Having secured a desirable water supply, the next immediate step is a proper disposal of the human excreta, particularly the human excreta. With a proper disposal of the sewage on the farm, together with the securing of an adequate and satisfactory water supply, the principal precautionary measures against the spread of typhoid fever, dysentery, and such other diseases have been observed.

#### Typhoid Fever.

Probably the most important bacterial disease which is caused almost entirely by improper sanitation and improper disposal of sewage is typhoid fever. Typhoid fever is caused by the entrance into the human system of typhoid germs which are taken into the system in the food supply or in the water supply. Typhoid fever gets into the food supply or into the water supply because of an actual contamination of those sources, either directly or indirectly, from sewage. This infection may go to the water supply through drainage from vaults and other sources of soil pollution. It may go to the food supply through the medi-

um of improper fertilization of vegetable foods or through washing such vegetables in polluted water, and in a very common way, actually carried to the food supply on the table and in the kitchen by means of flies. Flies are now recognized to be great carriers of typhoid fever and are to be considered as dreaded an enemy as is now generally conceded to the mosquito carrying malaria and yellow fever.

Typhoid bacteria are very small and, of course, can be seen only through a high power microscope. According to Stiles, it would take 12,000 of them placed end to end to cover one inch. A person suffering from typhoid fever is continually giving off in the excreta myriads of typhoid bacilli and if this excreta is carelessly handled or improperly disposed of it may be the means of carrying typhoid infection not only to a farmer's family but, through the medium of the vegetables on the farm or the milk, to other families beyond his own.

#### The Typhoid Carriers.

Once a person contracts typhoid fever it is difficult to tell without a careful examination of the excreta when the period of danger to others is ended through the possible pollution from the excreta given off in a variety of ways from this one patient. The safest and best plan, especially in view of the fact that many persons are now known to be in reality actually carriers of typhoid fever, in other words, hosts of the disease, without its affecting them in any way seriously we say, the proper and safest way is to carefully plan and secure a proper general sewage disposal on the farm.

#### Summer Diarrhoea.

Dysentery, or summer diarrhoea of children and grown persons as well is a natural accompaniment of the polluted food or drink supply, and is to be guarded against in exactly the same way. It is only a careless and foolish person who will say: "Well, I am strong and healthy, and can eat and drink anything I will." That is a folly in the light of modern science, much more out of place and much more ridiculous than the famous Defi of the Lightning, by Ajax.

#### HOW TO DETECT ADULTERATED VETCH SEED.

The Department of Agriculture regards the hairy vetch as so important a winter cover and green manuring crop that it is continuing its campaign to detect adulteration and misbranding of seed. In 1912, there were examined 207 different samples of this seed and of these 17 contained no hairy vetch seed whatever, while 190 samples consisted of a mixture of hairy vetch, spring vetch and weed vetch. Circular No. 45 of the Office of the Secretary, U. S. Department of Agriculture, 1913, contains the name of the dealers and the extent to which the seed was adulterated and will be supplied without charge on application.

A very simple method by which the farmer can detect the seed of most other vetches from hairy vetch is as follows: The difference in color of the interior of the seed shown by different kinds of vetches affords a ready means for detecting the use of other vetch seed as an adulterant of hairy vetch. Crushed hairy vetch seed is of a lemon-yellow color, somewhat lighter on the flat than on the rounded surface. The crushed seed of most of the other vetches occurring with the seed of the hairy vetch varies in color from a dark fawn to reddish orange.

Crush a small handful of seed and if there are any fawn, salmon, or reddish orange colored pieces the seed is not pure hairy vetch.

Most of the hairy vetch seed now sold in this country is imported from Russia. The recent investigation in Russia by the government seed specialists shows that the collectors of Russian seed were not taking pains to keep it from being mixed with other vetches and especially weed vetches. Much of this seed grows wild in rye fields with a number of weeds. The remedy suggested by the Department for this adulterated seed is for the American farmer to raise his own hairy vetch seed and so be certain that he is getting pure seed. Incidentally, as soon as the American farmer begins to raise his own hairy vetch seed he will get it at a much lower price than now is asked for the imported and frequently adulterated or misbranded article.—Office of Information, U. S. Department of Agriculture.

The above information is of interest to farmers who have vetch seed in hand for immediate sowing. That purchased since August 14 should bear tags showing its purity, yet this simple test may well be applied.—Eds.

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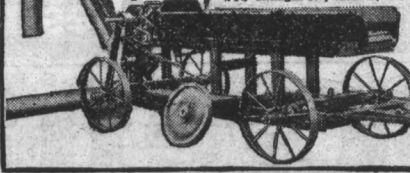
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# Horticulture.

## THE LITTLE PEACH.

The little peach is another of the conundrums of peach growing. It vies with the yellows in making the peach grower trouble, and we know just about as much of it as we do the yellows, which is not very much.

This disease, like the yellows, is a bacterial trouble. Many of the theories advanced as to the cause of the yellows are also advanced in the case of the little peach. We know that it is a disease and that it spreads, and that it has affected our trees bad enough to have it compel our serious attention.

It is apparently a newer trouble than the yellows and it has undoubtedly been as serious in this state as anywhere. It is now considered by many to be more destructive than the yellows, and it is a fact that during the past few years it has been more prevalent.

The symptoms of this disease in a great many ways are the opposite of those of the yellows. The fruit ripens later than the normal time instead of earlier, and the foliage is shorter and broader instead of longer and narrower than the normal foliage as in the case of the yellows.

The "littles" gets its name from the smallness of the fruit, the fruit always being below normal in size. When ripe the specimens have an insipid taste and the flesh is inclined to be stringy.

The leaves are yellowish in color, with the veins of the leaf a darker and greener color. The leaves have a droopy appearance, and there seems to be many more leaves on an affected branch than on the normal tree. This gives the foliage a bunched appearance.

Some confuse the "littles" with constant overbearing or the ripening of too many pits. They claim that the tree has overdone in production and therefore bears only the small peaches. We find, however, that thinning and fertilizing will not help a tree which has the real "littles."

As with yellows, either a few limbs or the whole of the tree can be diseased and either young or old trees can be affected.

Soil conditions may have something to do with the little peach as we generally find it worse on the lighter soils, especially in the colder sandy soils which have hard pan frequently showing on the surface, than we do on the clayey soils.

The numerous conditions that are mistaken for the yellows will also be taken for the little peach. Among these are winter injury, sour soil, black aphids, and injury to the cambium layer of the tree by mice, rabbits, cultivation tools, etc.

Occasionally we find trees which have both the yellows and the little peach. Such trees often confuse those who have knowledge of both diseases but do not know that they can exist together. The tree so affected generally shows the foliage symptoms of the little peach and the symptoms of the yellows in the fruit.

As with the yellows, the little peach should be cut out of the orchard as soon as found, and the entire tree burned. Trees having both diseases should, of course, be treated in the same way. Trees having only one or two limbs of either of these troubles should be cut out entirely.

Cutting out and burning are the only means we have of fighting these troubles and we should freely use the ax and match. Rather cut down a tree which has neither of these diseases than to leave a diseased one stand.

Van Buren Co. FRANK A. WILKEN.

## THE BLACK ROT OF THE CABBAGE.

The black rot of the cabbage has been causing a large amount of damage over a wide extent of territory and has been found on all the common varieties of cabbages. Cauliflower and many species of cultivated and wild cruciferous plants have been found to be infected with this disease.

Warm days and cool nights accompanied by plenty of moisture make favorable conditions for its development, while cool days, warm dry nights, and dry soil act as a check.

Erwin F. Smith who has done some of the finest work in the Bureau of Plant Industry, has made a careful study of the black rot of the cabbage and gave

the results of his investigation in Farmers' Bulletin No. 68. The symptoms of the black rot first appear on the margins of the leaves and the diseased areas become yellow with the exception of the veins, which are blackened. Erwin Smith says that "the leaves appear to have 'burnt edges.' From the margin of the leaf, the progress of the disease is inward and downward through the stem. It usually enters the latter through the leaves. Subsequently the disease passes out again from the infected stem into healthy leaves and up into the center of the head." In describing the action of the leaves during the development of the disease, he says: "Leaves attacked in this manner fall off prematurely one after another, leaving in bad cases a more or less elongated stem covered with leaf scars and crowned with a tuft of small leaves. If the disease has entered the stem only on one side, that side is dwarfed and the head becomes one-sided."

The disease often attacks young plants and kills them and in some localities where many cabbages have been raised for the sauerkraut factories, the farmers have had to turn to other crops because of the losses from this serious trouble. The disease is often spread by throwing cabbage refuse into compost heaps and later distributing it broadcast over the fields. Experiments have led the investigators to believe that the germs can live through the winter in the soil and also for at least a year on the seed.

The protection against this disease must be preventative treatment and the seed bed should be carefully watched and thoroughly cleaned if any infected plants are found growing there. If diseased plants are transplanted to the cabbage field, it brings about a dangerous situation. Some growers have picked off the diseased leaves and burned them, hoping to prevent insects from carrying the infection from one plant to its neighbor. The result of this experiment showed it to be a poor method of control as the cabbage plants were soon entirely pulled up in the effort to continue the destruction of the diseased leaves, and it seemed to have no influence on checking the spread of the organism.

When it is suspected that the disease is present in the locality, the cabbage seed should be treated with mercuric bichlorid (1 to 1,000) for about 15 minutes. The seed treatment and a careful watch of the seed bed are the only methods of prevention, as after the trouble has gained a good start on the cabbage land, the only method of control is to practice a rotation of crops until the organism is completely eliminated from the soil.

Ingham Co. R. G. KIRBY.

## DO APPLE TREES DEGENERATE?

This is a question that horticulturists have discussed for years. Knight, foremost of all, a hundred years ago, maintained that varieties of cultivated plants deteriorate with age. There has been scarcely a horticulturist of prominence since who has not pronounced for or against this view. Plant growers are almost unanimous in the verdict that "varieties do degenerate," while scientists are equally firm against the theory. The New York Agricultural Experiment Station has been making a study of the subject and it has been announced that so far as evidence secured by that station shows, it would seem that the fruit grower is safe in assuming that for practical purposes varieties of apples do not degenerate. Neither do they change. While a tree will now and then wear out it is because of neglect, unsuitable soil, insects and disease.

Baldwin apples have been under cultivation on the New York Station grounds since about 1740, yet they show no signs of deterioration. Though Baldwin is the most widely planted apple in America, the whole progeny of the original tree, with the exception of the Russet Baldwin, is uniformly the same when grown under identical conditions. A Rhode Island Greening tree in the station orchard propagated from what is supposed to be the original Rhode Island Greening, about 200 years old, is the same in growth and bears apples no better, no worse, than trees several generations removed from the parent plant. The Roxbury Russet,

Lady and Fameuse, all grown for three centuries, show no impairment of vigor or change in characters by comparison of the growing plants with descriptions in old textbooks.

## THE STRAWBERRY SEASON OF 1913.

Another season's experience has made it more clearly evident than ever that it is not wise to estimate a strawberry crop beforehand with any great expectation of having our estimate realized. When growth in the plants of the present season's fruiting bed was in the making last May, there was nothing to indicate that the harvest would be the most disappointing of any in all our experience extending over a period of 24 years, but with the exception of two instances, perhaps, such has proven to be the case, and the cause of the short crop was due to unfavorable weather conditions during bloom. Not only was the average temperature below the normal, but there were many light frosts, which, though not killing the blossoms outright resulted in improper pollination. It is very likely that the heavy mulch which protected the surface of the ground in our patch made matters worse, by aiding, as it did, in maintaining a low temperature in the soil.

Complaints of improper pollination were general, though some fields showed a smaller per cent of imperfect fruit than did others, still the yield was generally far below an average, and the quality was not anywhere near up to the usual standard of excellence.

Owing to the scarcity of imported fruit, due to the short crop in the "fruit belt," the price of strawberries started in two or three cents higher on the quart than the usual price, retailing at 16 to 20 cents the quart box, and because of the short home crop prices held higher than usual throughout the season. But this by no manner of means made up for the shortage in the crop. These growers who received for the crop sufficient to cover the cost of growing and harvesting the same, with a balance to the credit side of the crop were indeed fortunate, but the writer is not one of these.

Scientific principles rightly applied will do much to heighten the grower's chances for commensurate remuneration, but it sometimes happens that after all has been done that can be done, natural laws step in and all our well laid plans come to naught. Uncertainties as to what the outcome will be is a factor which must always remain a part of the business of securing a livelihood from tilling the earth.

One very noticeable feature in connection with the strawberry crop of the present season, was the amount and timeliness of the showers that made irrigation unnecessary, with us. The mulch of straw that was a detriment during the blooming period, for the reason mentioned above, held the moisture so well that it was not necessary to set in operation our irrigation outfit until the fruit began to ripen. After it had been working two or three days, copious rains came at intervals to supply the needed moisture, consequently there was a saving made in gasoline and in labor.

Not for many years have conditions been so favorable to the ripening of the strawberry crop, as during the one just past. Systematically and intelligently applied effort always bring abundant results from the soil if only the husbandman could have the assistance of all of the elements of nature, but it would seem that when one of these is favorable, one or more of them work adversely to the interests of the farmer—frosts, dry weather, destructive storms, may at any time work injury to the growing crops, and consequently diminishing the value of his efforts.

Emmett Co. M. N. EDGERTON.

## THE OAKLAND HORTICULTURAL SOCIETY.

The next meeting of the Oakland County Horticultural Society will be held on Saturday, August 30, instead of September 6, at Mrs. H. C. Ward's fruit farm at Square Lake. The meeting will commence at 10:30 a. m., standard time, and the program will be as follows: Morning, "Should not Oakland county develop a special market for the Steele Red?" Discussion led by the president, Mr. Charles Bligham.

"Some Fruit Experiences," Mrs. H. C. Ward.

Discussion of plans for the county exhibit of fruit at the State Fair.

Afternoon: Lecture and orchard demonstration on "Grading Apples," by Prof. O. K. White, of M. A. C.

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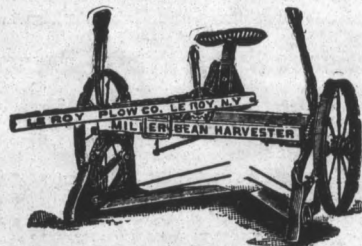
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Experiment until you know the amount that pleases your palate and have it served that way in the future.

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**Sheep Prospects for Michigan Farmers.**

It has been said that if we could foresee as well as we can "hind-see," we would all be rich, the world would be a real Utopia. It is not given to us to know what the future has in store for us, and many times we realize that it is well we do not know. Many of our troubles are those that never happen, and many that do come to pass are the result of our own ignorance and carelessness. A little use of ordinary common sense would many times keep us right on the road to success in our business and in our general life.

This is a world of contrasts, an ever-changing succession of opposites. Nothing stands still. Like the pendulum of a clock it is ever moving: while there are times when the limits of the pendulum's arc must be reached yet the larger part of its sweep is within a far smaller space. Somewhat similar is the position of sheep raising in Michigan agriculture. Just now the pendulum which indicates the financial position of the sheep seems to have swung far over to the side which denotes depression. As we look back, however, over the history of the state and consider the place that the sheep has held in its agricultural development we can not help but think that he will soon swing back into his more accustomed place of average steady profit, and some time not far distant even continue from the force of momentum over to the very profitable point.

**Timidity Common to Sheep and Owners.**

The sheep is a timid animal. He is easily frightened. Nature has given him slight means for self defense. By force of numbers only does he think to protect himself. In time of danger he runs and crowds with his neighbors, and thus flocked together seems to think he can escape even at the expense of his neighbor. Many times we think that the men who raise and handle sheep are too much like their flocks. They are too easily frightened and they crowd together too much. Then so soon as the danger is past they quickly again venture afar, perhaps into forbidden pastures or in unknown fields.

Did you ever watch a flock of sheep spread out to graze, following one or two leaders, perhaps an old bell-wether, into the farthest corner of the field, when suddenly the old wether looks up, sees his shadow, becomes frightened, turns and runs back through the flock, all the rest at the sound and sight of his running, turning and rushing with him? Thus it seems to be with too many men who raise sheep. When wool and mutton bring what seems a good price, and everything seems to be going nicely, farmers increase their flocks, and their neighbors, thinking there is easy money in sheep, are eager to buy. This helps to increase prices for breeding stock and for a time curtail the supply of market stuff. Then the price of wool declines and perhaps lamb and mutton likewise take a tumble. Immediately there is a rush to sell sheep. It is one mad scramble to get rid of the sheep. Price is no object. Then when all is over these same farmers will say sheep do not pay, and when the next advance in prices comes along they will be just as eager to buy again. However popular such methods may be and however many men may follow them, does not make them profitable. Profits do not come that way. An even, steady course that provides for dark times and does not run wild when the high tide of prosperity flows is the one that wins.

Now seems to be one of the times when men want to sell. The cause of the present depression in sheep is primarily due to the proposed tariff legislation as to wool by the dominant party. Contrary to all ante-election promises and clubbed by the big stick of presidential patronage the present Congress proposes to remove all the duties on both wool and mutton, a condition which has not previously obtained but once in almost a century, and never under conditions similar to the present. Moreover, no single industry affected so greatly by tariff duties is thus treated, without any opportunity to adjust itself to changed conditions. That the results will be, in fact are already, detrimental to the business no man can deny. However, not all the supporters of this policy are quite so frank as was the candidate for congressman-at-large in Michigan last fall who advised the farmers in one of the largest sheep-raising sections in the state to sell their sheep and go into cattle, for

sheep were not profitable. And he is a wool dealer!

**Don't Sell the Sheep.**

But the farmer who has a flock of sheep, while he may be discouraged, should not sell them to quit sheep raising, because prices are low just now. There is one thing that too many people fail to realize and that is that when they hit the sheepman and the farmer who raises sheep they hit everybody else along the line. Every line of business will be affected. The present American industrial and financial world is so complex and so interdependent that when any part of it is affected for good or ill all the rest feel it. When the man who secures a part or much of his income from his wool clip and his lamb crop, has that income seriously reduced, his purchasing power is correspondingly curtailed; and in the aggregate over this great country this is no inconsiderable sum. So we see other lines of business affected as the sheep business. Nothing can be gained by selling the flock for what you can get. If you do sell what can you buy that will do any better for you?

**The Sheep Has a Permanent Place in Our Agriculture.**

Regardless of what the doctrinaire or the theorist may say, the sheep has a permanent place in American, and especially Michigan, agriculture. The importance of this position must be determined by the attendant conditions of production and profit as compared with other farm products. In spite of changing conditions and great fluctuations in the value of his products, the sheep has maintained his importance in Michigan for over a half century. The character of the industry has changed. Wool is no longer the sole purpose of a sheep. Mutton has demonstrated its importance as a food. The feeding industry has developed. Various phases of sheep raising and maturing have been introduced and established. The important fact is, that most Michigan farmers have found the sheep indispensable to the most profitable conduct of their farms. The best farming sections in the state judged by the fertility and general appearance of the farms as well as by the bank deposits of their urban centers, are those where sheep find an important place in the farm curriculum.

There are some considerations which should make his place secure on Michigan farms. His ability as a soil conservator and builder have been so often and so fully demonstrated that it seems needless to enlarge upon its importance in this connection. The matter of investment, both as to the flock itself and the equipment in buildings and fences for its proper care should make sheep an essential part of a farmer's live stock. Labor is no small item on the farm these days and the sheep requires as little for the returns he brings as anything we know.

**Some Sheep History.**

Beyond these factors which concern production we can look and consider some conditions which affect the farmer and his flock. The last quarter century has seen the greatest development of sheep raising on the western range that this country will ever witness. From this section has come the strongest competition of the eastern and central states farmer who raises sheep. The west has furnished the Michigan feeder with his lambs. These conditions are changing. Wool growing and sheep raising as handled under range conditions, is fast being contracted. The continual influx of settlers in many sections and the policy of the conservation-crazy people led by Pinchot which has continuously and consistently opposed the sheepman, are putting many of the latter out of business.

Again, some sections directly interested are advocating a lease law, and they are being supported by eastern people who have little or no knowledge of western needs and conditions but think to derive a pecuniary benefit through an increase in the revenues of the federal government from such source. So far all the laws proposed have been so drawn that their working out will result in advantage to the cattle raiser to the detriment of the sheepman. That some law looking to the leasing of the remaining public domain will eventually be passed we believe, and unless some proposition radically different from any yet proposed is advanced and enacted the result will be to close to sheep much range which is now available to them.

In the very prosperous sheep times of five to ten years ago, many men who knew nothing about sheep went into the business. With the advent of hard winters, big losses, and lower prices these men have quit sheep. Just now cattle are bringing very high prices and most western men are buying cows or steers. There seems to be a glamor about the cattle business that attracts the average man more than sheep. Then, too, the homesteader can buy a few cattle, turn them on the outside range during the summer, and feed them through the winter with little labor expense, where sheep require constant attention unless the land is tightly fenced. With the settlement of the west will necessarily come much live stock, but in the early stages of this development it will be largely confined to cattle and wherever the sheep are forced out it will be a long time before they find their way back under the new conditions. Thus while the range sheep business may not be completely extinguished yet it will be so contracted that it will cease to be the dominant factor in the total production of the country that it has been in the past.

**Western Consumption Increasing.**

Another factor which will eventually reduce the western lamb and mutton product to a small item so far as it competes with the farmer's product is the rapidly increasing population in the western states, especially on the Pacific coast, and the establishment of markets and packing houses in their large cities. Already have the beginnings been made and we see much live stock going to Denver, Portland, Seattle, and Los Angeles. Again, with the development of irrigation projects and the settlement of many dry farmers comes large quantities of forage and grain seeking a market. Nothing furnishes one more profitable than the sheep. We have seen the development of northern Colorado by the sheep and lamb-feeding route, and right now there are many other sections which are in the same process of development. For example, the Platte river section in western Nebraska, the Twin Falls and Boise country in Idaho, the Yellowstone Valley in Montana, the Big Horn Basin in Wyoming, and many others. All this development means one thing. The sheep raised in the west will be fattened ready for the block in the west and western people will eat many of them. What this means to the eastern farmer should be easily deducible.

Again, the United States is a comparatively new country, in the years recently past there has been much new land brought into use for grazing and agricultural purposes, which factors have combined to cheapen cost of production and supply competition which the strictly agricultural live stock producer has been hard put to meet. At the same time the population of the country was not enough to consume its meat products. Recall our exports of meats in years not so long gone and then note the conditions the last few years. In the last five years our meat exports have decreased 40 per cent. Census statistics show that the population is increasing and at the same time our meat animals are actually decreasing. With reference to sheep there is no known place in the entire world today, with the possible exception of South Africa, where the number of sheep is actually increasing. Market prices for meat products today forcibly demonstrate that they are profitable to the producer. With an increasing number of people to eat meat and even no decrease in the supply, the inevitable result would be an enhancement of prices to the producer.

Ever since Adam's son became a keeper of sheep have they found an important place in the industrial development of every people. The first writer on English agriculture declared in the early part of the sixteenth century that "sheep is the most profitable cattel that any man can have," and they have ever held a prominent place in English farming. Their periods of prosperity have been coexistent with that of general business. When the shepherd has come upon hard times, has also his neighbor found the hand of plenty withdrawn.

Ponder these facts well, consider how indispensable is wool and mutton for clothes and food for man, remember that every people through all the ages have ever held to their flocks which trod their lands with golden hoofs and brought them their golden fleece. Take new courage, use your native common sense, keep and improve your flock that you may be ready to reap the reward of the better day when it shall come.

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# Dairy.

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## SUMMER DAIRYING BEING FAVORED.

Within the last few years conditions in dairying have changed somewhat with reference to the profitability of winter dairying or summer dairying; that is, with reference to when we shall have the majority of the cows freshen. Ten years ago there wasn't any doubt about its being much more profitable to have the cows freshen in the fall. One of the principal reasons was that dairy products are always higher in winter time than they were in the summer time. When the flush came in spring and the majority of the cows freshened there was such a surplus of dairy products that the price went down to almost below the cost of production. Now, however, two conditions have come about which make a great difference in this respect. One is the modern system of cold storage, and this has a great effect upon the summer price of dairy products. Dealers put butter and cheese into cold storage. It is kept there in excellent condition so that the surplus, which usually demoralizes the market, is taken care of and held over until the season of shortage comes. This helps to equalize the price of butter and cheese during the whole year. Consequently summer prices are not as low as they used to be, and winter prices are not as high comparatively.

Then, again, another condition which has affected the price of summer dairy products is the wonderful demand at the present time for ice cream. We can scarcely realize the amount of cream that is taken to supply ice cream manufacturers during the hot weather of summer now. A few years ago ice cream was a luxury, but today it is becoming a necessity to almost the entire population, and the demand seems to be increasing every year. This is a good thing for the dairyman because it makes a demand for cream just when the flood of dairy products come. This demand, of course, also helps in leveling the prices of summer and winter prices for butter. There is not as much summer butter produced now as there was before this unprecedented demand for ice cream came about. Where the demand for ice cream will end nobody knows, and of course the dairyman does not care. He is interested in having the demand for ice cream increase because it makes dairying more profitable.

## HOLSTEIN BREEDERS AT GRAND RAPIDS.

The third annual picnic of the West Michigan Holstein Breeders' Association was held at North Park, Grand Rapids, August 13, and there was a fine program of talks in the afternoon, following the dinner. President Willard, of Grand Rapids, called on H. H. Halliday, head of the state live stock sanitary commission, for the opening address and Mr. Halliday said in part: "I have been a farmer all my life, and a member of this board for two years, and am amazed at the progress Michigan is making along dairy lines. It is the purpose of the live stock board to do you good, not harm. We are putting men on their honor, in establishing to a great extent, their own quarantines, but when we find a man who is slippery, who is not to be trusted, we are after him. The new law places the state veterinarian on a yearly salary of \$2,000, and he devotes his entire time to this work. Dr. George W. Dumphy has been selected for the office and his headquarters will probably be at the Michigan Agricultural College, East Lansing, where there is free use of the laboratory, saving the state at least \$1,000 annually." In reply to questions, Mr. Halliday said it is not advisable to keep tubercular and healthy cattle on the same farm. Creameries should be required to pasteurize skim-milk before it goes back to the farm to feed. Since tuberculosis is not inherited the economy plan of segregating valuable tubercular cattle on a farm, rather than immediate slaughter of them, appeals to him. In closing he referred to hog cholera, which is now in epidemic form in Branch county, and urged quick action in stamping it out wherever found.

Prof. Anderson, of the dairying department, M. A. C., was the next speaker and

in opening he gave some Holstein history. He said: "The first Holstein-Friesian cow was brought to this country from Holland in 1852 by W. W. Chenery, of Massachusetts, and in 1859 and 1860, he brought over a few more, but these animals and their progeny soon contracted pleuro-pneumonia and died. In 1861 he imported a bull and four cows, which was the beginning of the Holstein cattle industry here. The Hon. M. L. Sweet, of Grand Rapids, in 1877, brought the first black and white cattle to Michigan from New York state, and the following year 20 head were brought to Michigan, 13 of them going to the Saginaw and Bay City district, three to Pontiac, two to Lowell, Kent county. In 1879 seven head were brought in; in 1880, 15 head; in 1881, 23 head; in 1882, 54 head. In 1883 Mr. Sweet imported 70 head and from this time importation was rapid and the breed well established in the state. As to exhibits at fairs the first two animals were shown in 1878 and in 1879. There were 27 entries at the state fair. The first cows were put on advanced registry lists in 1884. There are 2,500 to 3,000 farmers in the state who own one or more Holsteins and the number is fast increasing. In changing to a dairy state and in supplanting to a large extent the Shorthorns this larger type, the Holstein-Friesian, has made special appeal to the breeders. Along with the black and white cattle have come the creameries, the condenseries, and the increasing demand for market milk in cities. In closing let me warn you to keep up the quality by careful selection and the weeding out of the unfit, which will help you more than anything else, this in connection with conscientious and honest dealing."

John C. Ketcham, of Barry county, master of the State Grange, was the last speaker, and spoke of dairying as a science and a business, making many valuable suggestions. "If you cannot afford a pure-bred herd," said he, "at least put a pure-bred sire at the head of your grade cattle. Select a breed and then hang on. The trouble with Americans is that they want results in 24 hours."

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## SUMMER FEEDING OF COWS.

Our cows now are on nearly full feed in the barn. The pastures are getting short and we miss our corn silage. It is going to take a full feed of hay from now until the corn silage comes in September. This is going to eat into our crop of hay materially and we will have no surplus hay this year. Last year we didn't have to feed any silage or any hay to amount to anything all through July and the biggest share of August. There was so much rain that there was ample pasture. But this year it will take the hay which we will need next winter. On the other hand, I don't think there is any question but what the pea and oat straw this year will be practically as good forage as the clover hay was last, and we can feed that, while last year that was ruined with so much rain and we got nothing out of it only for bedding. If we only had corn silage now to feed once a day it would save one feed a day and it would come in very handy, and not only that but it would furnish a succulent food for the cows and it would be better and cheaper. But here again we can't always do what we want to but have to do the best we can under the circumstances, and the farmer is up against this at every turn. Of course, I know that by using our best judgment, and by having ample experience to back up this judgment, we can get around a great many of these things, but I never yet was able to overcome all of the difficulties which were caused by such various changes in seasons, and I never expect to get into that condition. All in all, however, this season promises much better than last. The old saying is that "dry weather scares you, but wet weather drowns you," and there is more truth than poetry in that. Especially on our land we can stand more of a drought than most people would naturally think and have good crops, and yet when we have an extremely wet season we can get practically nothing from the land.

The recent decline in prices for common cattle in the Chicago and other markets of the country was what had been expected for some time, as they had sold much nearer to fat cattle than usual.

It is stated that Missouri has raised 30 per cent more calves this year than last and has sent 50 per cent less veals to market, while nearly all the heifers have been bred.

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DETROIT, AUGUST 23, 1913.

## CURRENT COMMENT.

No season of the year offers the farmer greater opportunity to gain knowledge useful to him in his business than does the season of agricultural fairs. Here will be found gathered, not only the choicer products of the farms, but as well the most highly developed products of the factory in all lines which are in any way related to agriculture. When these products are gathered in one place so that the fair patron has the opportunity of comparing them, the largest educational opportunity is afforded.

As usual, this year the larger fairs will be held first, the season opening with the West Michigan State Fair at Grand Rapids, which will be held September 1 to 5 inclusive, while the State Fair will be held the second week thereafter, or from September 15 to 20 inclusive.

The first of the above mentioned fairs has grown from what was originally a district fair into sufficient importance to justify the term of a state exhibit, while the retention of the words "West Michigan" for its title serves to typify its character as representative of the agricultural interests of the state in general and of western Michigan in particular. Every farmer who lives within easy reach of Grand Rapids or who can arrange to attend this fair will be well repaid for his time and expense.

Of still greater importance and interest to every farmer will prove the Michigan State Fair, which will be held at Detroit on the dates above noted and where the opportunity to compare the best in agricultural products and manufactures will be better than ever before. Aside from the educational factors to be considered the entertainment features will be well worth while to every member of the farm family and in planning the fall work this date should be kept open in order that no member of the family be deprived of the benefit to be derived from attending the State Fair.

Of perhaps lesser educational value in some ways, yet giving even greater opportunity for beneficial comparison, are the exhibits to be found at the district and local fairs, where often the patron may know the exhibitors and gain some knowledge of the conditions under which the different products were produced, the methods of production employed, etc. There is no question but that the benefits to be derived from attending the state, district and local fairs are out of all proportion to the time and expense involved and every Michigan Farmer reader should avail himself of the opportunity thus afforded him.

Pursuant to a recent act of Congress providing for the protection of migratory birds of the United States, the Secretary of Agriculture has recently appointed 15 men located in different sections of the country to whom questions relating to desirable regulations for the protection of migratory birds may be referred. These men are recognized experts in this line and will serve without pay.

The new regulations which will be formulated with the advice of these competent men will go into effect on October 1. It is stated upon good authority that they will work toward uniformity for the protection of migratory, game and insectivorous birds, particularly at night, and to establish protected routes of migration along great rivers in central United States also complete protection for many shore birds and others of economic value which are greatly reduced in number, and a shortening of the open season in many cases will be attempted.

This is in line with the best thought on this subject in the different states. One difficulty in securing adequate protection for migratory birds in Michigan has been the fact that adjacent states have granted no such protection. But with a large degree of national control and a co-ordination of effort in the various states to the same end more beneficial results should follow and our most important game birds and those of greater economic value to the agriculture of the country receive protection which will stay their impending annihilation.

Dr. Mumford, state leader of farm management field studies and demonstrations in Michigan, has announced that his department will place as much emphasis as possible upon seed selection this fall and that several of the county advisors will devote considerable time to this work. We believe that there is no department of endeavor in which greater results are possible than along this line.

In the last issue of The Farmer the advisor for Genesee county presented the situation with regard to bean anthracnose in that county and pointed out methods by which this destructive disease can be most successfully combated. The importance of educating the public, including not only farmers but seed merchants as well, along this line can not be overestimated. We recently received from a Mecosta county farmer a sample of bean pods upon which there was a very marked development of anthracnose. This man was not familiar with the trouble and appealed to us for information, stating that he was growing the beans on contract for a Michigan seed firm who sent him the diseased seed to plant. It is very important indeed, that both farmers and seedsmen be awakened to the loss which this disease is causing to the Michigan bean industry each year.

Another illustration of the importance of seed selection is found in the comparatively poor stand of potatoes found on the majority of Michigan farms this year, due we believe, to the planting of poor seed or seed which has been infected with the late blight which was quite prevalent last year. The farm management service, however, can produce effective results in spots only and it is up to the farmers of the state to take the initiative, or at least follow the lead in giving greater attention to the matter of seed selection this year than ever before, to the end that Michigan agriculture may not suffer unnecessarily from a wholly preventable cause.

While agriculture is rapidly coming into its own so far as the relative rank accorded to it as a business, by the average man, is concerned there are still too many farmers who are prone to envy those in other lines of work and who think that almost any other business is a better business than farming. It is a very common human failing to look upon other people as more fortunate than ourselves, but so far as a matter of business is concerned, if we could get the other fellow's point of view we would more often than otherwise find that he looked upon our business with the same and perhaps an even greater degree of envy. It is only when one gets an expression from a person of varied business experience that he can get an impartial view of this question.

One such man who, notwithstanding a natural love for the farm, went into another line of business because of an advantageous offer so far as income was concerned, described the change which he had made by saying that he had sold his liberty. And this very clearly describes the difference between agriculture as a business and most of the other lines of business which will be open to the farm boy. To a greater extent than any other, the farmer has liberty and the opportunity to exercise initiative in his business

which makes for broader manhood and greater ability, together with a variety of work which the average man in other lines of business would welcome as a relief from the monotony of his daily round of routine duties.

Like our lives, our business is largely what we make it, and as farmers we should make agriculture the very best business in the world from our own standpoint as well as from the standpoint of others.

In the earlier days of Michigan's agricultural development Michigan farmers had the advantage of being able to purchase the best of lumber at an exceedingly low price. Michigan's white pine was a general purpose lumber without a successful rival and Michigan farmers made liberal use of it in the construction work of an earlier day. With the depletion of the supply, however, Michigan's pine can no longer be used for ordinary purposes on account of its great scarcity and high price and Michigan people are obliged to turn to lumber cut in distant forests for use in such construction work as may be necessary at the present time.

Naturally, having accustomed themselves to the use of pine through their knowledge of its excellent qualities, they have first resorted to the use of pines grown in other sections of the country because of the name which they bore rather than their similarity with the white pine product of Michigan. At the same time other lumbers of really valuable qualities for many purposes have been neglected by lumbermen because there was no demand for them, just as in the earlier days of Michigan's lumbering industry there was no demand for the hardwood lumber, thousands of acres of which were logged and burned in order to the more quickly clear the land. Later a successful propaganda was conducted to promote the use of hardwood lumber, particularly oak, for flooring and interior finishing purposes, until today it is the leading wood used for that purpose with the demand so large that it is, like pine, becoming scarce.

With the use of the different kinds of wood in the building industries, people have learned the special qualities of certain kinds. For instance cypress has been for some time in use in the construction of silos because it has been found to be a very enduring wood. On account of its value for this purpose, the forest service of the Department of Agriculture after an investigation, issued a bulletin, (No. 95) giving information regarding the value of this wood for use upon the farm, it having been found that it was particularly valuable where a wood which resists decay is desirable and its use is advised as well for all outside work on the ground that "the properties that fit it for such wide use are freedom of the wood from knots and other defects and the long period which the wood may be expected to last."

This is evidently one of the timbers which have been recently utilized for lumber purposes, with which every farmer should become better acquainted, since with the increasing price of lumber it is more important than ever before to purchase a grade of lumber particularly adapted to the use for which it is intended.

LET US HEAR WHAT THEY SAY.  
Turning through the columns of the Michigan Farmer is like walking through a great warehouse. Pictures and descriptions of hundreds of articles, gathered from all over America, are here displayed. Here you will see the latest and most complete farm machinery; in another section will be found household appliances; yonder are some of the leading automobiles.

Manufacturers buy this space to tell you about their goods. And each one has a book explaining and illustrating in detail what is offered for sale.

Let us give them all a hearing—if for no other reason than to keep ourselves well informed.

## HAPPENINGS OF THE WEEK.

## National.

The Attorney General of New York state has ruled that Martin H. Glynn is now the legal governor of the state and will continue to hold that office until Governor Sulzer is acquitted or the impeachment proceedings against the latter are dismissed by the board of impeachment. The grounds upon which Mr. Sulzer claims he is still executive of the state is that the assembly which passed the resolution providing for the impeachment was not leg-

ally in session, it having previously adjourned sine die.

Harry K. Thaw, the slayer of Stanford White, has escaped from the Matteawan state hospital of New York state, where he has been confined for the past six years as an insane criminal. The escape was effected through a conspiracy whereby Thaw passed the walls of the institution when the gates were opened to admit the milkman's wagon last Sunday morning. Waiting automobiles carried him away, it is believed, to the Connecticut shore where a yacht was awaiting him. A charge of conspiracy has been placed against Thaw and his accomplices and it is thought that it will be possible to extradite him from any state and bring him back to New York.

A compromise has been effected in the adjustment of the differences between the Southern Pacific Railway Company and locomotive and train crews. Both parties are satisfied with the terms of the agreement thereby averting a strike.

The amount of hard coal mined in this country during the first seven months of the year exceed all former records, the amount being 49,339,706 tons.

The funeral of the two strikers who were killed by patrolmen in the mining district of the Upper Peninsula were held Sunday and it is reported that fully 6,000 persons attended the services, while 10,000 people accompanied the remains to the cemetery.

Congress has yielded to the wishes of President Wilson and will continue in session until the tariff and currency bills are disposed of, even though it requires all the time until the December session begins.

Residents of parts of Presque Isle and Cheboygan counties are petitioning for the immediate creation of a new county. The last Legislature passed an act providing for the new county after the measure is ratified by the voters of Presque Isle and Cheboygan counties. It is claimed, however, by the petitioners that the law organizing a new county is a general act and therefore does not require a referendum.

The steamer State of California ran upon an uncharted rock 90 miles south of Juneau, Alaska, and sank in three minutes. It is believed that 25 or more passengers and seven members of the crew are drowned. The accident happened in daylight but the boat was so badly damaged that many of the persons aboard could not be gotten from their staterooms before the craft went down.

## Foreign.

The Mexican situation is still unsettled. It is unofficially reported that Provisional President Huerta has sent an ultimatum to Washington demanding immediate recognition of that government as it now exists. The report also states that in the event the United States refuses recognition, relations between the two countries will be severed. The administration at Washington, however, denies receipt of such an ultimatum and still hopes that matters may be settled peacefully.

Turkey seems determined to hold Adrianople and an army of 400,000 soldiers is now marching to defend that point against the Bulgarians. In arbitrating the differences between Turkey and the allies the powers decided that Adrianople should be released by the Turkish government. This condition the Turks hope to avoid now that the allies have greatly weakened their position by fighting among themselves.

It is reported that martial law is being rigidly enforced in Nicaragua and the administration has established a strict censorship over all criticism of government acts. Disturbances, it is stated, are due to a report that the country would come under the protection of the United States following a convention giving America the right to construct an interoceanic canal over what is known as the Nicaraguan route.

The federal troops of Venezuela have been more successful against the rebels the past week than heretofore. According to advices the town of Coro, recently taken by the rebels, has been recaptured.

Heavy fighting between the Spanish army and tribesmen of Morocco occurred near Tetuan, Morocco, recently. So far the Spanish troops are reported to have repulsed the natives, but the latter are again rallying to make another stand.

Exports from the United States to Canada have practically doubled in the last three years, according to figures made public by the Department of Commerce. Canada is now the largest purchaser of products of the United States of all the countries of the world.

## FOOD AND HEALTH SPECIAL TRAIN.

The Michigan State Board of Health and the State Dairy and Food Department are running a special educational exhibit train over Michigan railroads during August. Special demonstrators accompany the train to explain the exhibits and answer questions. Visitors, and especially high school pupils, are asked to bring their note books and cameras if they have them, and compete for the prizes which will be offered for photographs of the train and reviews of the exhibits. The itinerary of the train for the ensuing week is as follows:

Ypsilanti, Aug. 25, 8:25 to 1:35 p. m.  
Ann Arbor, Aug. 25, all afternoon.  
Dundee, Aug. 26, 7:30 to 9:00 a. m.  
Tecumseh, Aug. 26, 9:30 to 12:00 m.  
Adrian, Aug. 26, all afternoon.  
Hudson, Aug. 27, all forenoon.  
Hillsdale, Aug. 27, all afternoon.  
Jonesville, Aug. 28, 7:30 to 9:00 a. m.  
Homer, Aug. 28, 9:30 to 11:00 a. m.  
Albion, Aug. 28, 12:00 to 2:00 p. m.  
Eaton Rapids, Aug. 28, 2:45 to 4:00 p. m.  
Lansing, Aug. 29, all day.



# 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

## Fighting With Greater Efficiency.

By V. E. LeROY.

EVER since man has tilled the soil he has had to fight frequently occurring invasions of May bugs, grasshoppers, worms and hundreds of other forms of life that were proving detrimental to his crops. The farmer today has practically the same enemies as had the farmer of two or three hundred years ago; he raises similar crops, but his success is different. The old-time farmer fought and lost, we fight and win. The difference of results depends on the method.

Not far from the city of Berne great depredations were once committed by an unusually large number of May bugs. The pest got beyond the control of the farmers and the situation appeared about as encouraging as did the one the Dakota and Kansas farmers faced during the grasshopper plague of a few years ago. These Swiss farmers had their method of "getting rid" of the plague. It was simple. They just went to the authorities of the city and entered a complaint against the troublesome May bugs. The authorities interviewed the Bishop of the Church who immediately issued a letter of excommunication which was taken to the bug-infested fields and duly, solemnly read to the offending bugs.

These letters would read: "Thou irrational, imperfect creature, thou May bug, thou whose kind was never enclosed in Noah's Ark, in the name of my gracious Lord the Bishop of Lausanne, by the power of the glorified Trinity through the merits of Jesus Christ, and by the obedience you owe the Holy Church, I command you, May bugs, all in common and each one in particular, to depart from all places where nourishment for man and cattle germinates and grows," and so on to the finish which consists of a summons to the insects to present themselves on the day stated, before the court and assume the responsibility of law breakers. To make the trial a fair one the city supplied the bugs with a lawyer who could plead their case.

Needless to say, the May bugs did not appear at the trial. Another summons was sent and another, but the bugs were too busy with the farmer's crops. They refused to be disturbed. The farmers grew desperate, and at last, a public official with much pomp and show of power stood in the fields and read in a loud voice the verdict of excommunication: "To you accursed vermine, that are called May bugs, and which are not even counted among the animals." A report concerning the effects of the measure says, "No effect was observed because of our sins."

That report hit the nail on the head. Verily, it was a sin. No present day farmer would attempt to have an insect arrested be-

cause that bug was devouring a crop of corn. It would be Paris green, or tobacco soup for Mr. Bug. Some such a method would eliminate the surplus bugs but it would not keep those remaining from raising comfortable little families of several thousand each. If nothing hindered them in their breeding except the poison the farmer treated them to, there would be a circus in bug-town every day of the season because all the spraying in the world could not put a stop to the onslaught of the bug. He would be supreme in might as he is now in numbers over all other things on earth.

This problem does not trouble the up-to-date farmer of today. On the contrary he uses a little head work. He finds some animal that has an unlimited appetite for the animal that is troubling him; then he imports that animal, or if he has it already in small numbers, he encourages its multiplication. The fight then commences, and the wise old farmer acts as referee to the scrimmage.

Animals of the insect eating kind have appetites varying as much as do their other characteristics. Some can eat

much, others little. But the champion of all is the easiest to enlist in our service. His skill is supreme. His faithfulness is unequalled. He can eat more bugs in proportion to his weight than can any other living thing. Actually, he is an animated appetite. We know him best by his song. We should know him best by his food because there it is that birds are most important to us.

Birds. Yes, there's the rub for the bugs. A bird and a bug are inseparable companions—once the bug is inside the bird, and that is the fate of most bugs. On account of this fact the farmer's birds are as important as part of his means to success as his spraying outfit. The spray will stop a sudden and overwhelming appearance of insects but the birds will keep it stopped or even keep it from appearing, granting that their numbers are sufficient to cope with the myriads of insects one summer brings forth.

Some enthusiastic students of bird life have stated that if all birds were destroyed, insects would multiply so rapidly that in seven years they would eat up

every green plant on earth. That statement is doubtlessly an exaggeration but there is truth in it, as was seen by the experience of the King of Prussia. The king liked cherries and he owned some good trees. But because the birds destroyed some of the cherries, the King ordered the birds destroyed. Nearly all the birds were destroyed or driven away. In two years there were no cherries or any other kind of fruit, the trees were being killed by insects. The King then went to great expense and trouble to import birds to replace those he had ordered killed. After which the King had cherries.

Entomologists know that there are many kinds of insects now restricted in numbers or that are finding their food on plants of no economic importance, which might, if unrestricted in increase, turn their attention to farm crops. Occasionally conditions get just right for these insects to break away from the controlling agencies, and we have caterpillar years, canker worms, etc. But these outbreaks never last long. The checks grow stronger and the evil is downed. Birds, above all other regulators of insect activity, have assisted most in conquering such pests.

Not only insects but an invasion of vermin is handled by birds with the same inevitable result. Field mice sometimes appear in such countless numbers that they destroy corn, and even the pasturage. No man has devised a method whereby he could control these mice, but the birds, especially owls and hawks, have been the means of suppressing the plague as nothing else could.

In France the people used to kill all kinds of birds for food. Upwards of one hundred million birds' eggs were collected each year and sent to market. Many kinds of birds disappeared entirely, and the others were fast diminishing in number when the practice was stopped. The harvests had been growing poorer every year. Insects were eating up all the grain, fruit trees, forest trees, and vines. The loss each year went into many millions of dollars. It looked like a case of complete failure for all the farmers of France. But the government took up the matter, birds were secured, their destruction stopped by law, and good harvests soon followed.

The grasshopper plague of our own country was preceded by the destruction of thousands of birds. In one county alone 30,000 birds were destroyed. From thirty counties about 450,000 quail and prairie chickens were sent to market. Such destruction continued up to the time of the grasshopper outbreaks a few years later. If these birds had been permitted to live they would have eaten countless hordes of these

## The Largest Indoor Flower Exchange. —By— E. I. Farrington.

Boston has the largest indoor flower exchange in the world. Growers within a range of many miles send their choicest blossoms there and dealers from all parts of the city and suburbs come there to buy. Whole wagon loads of flowers are taken away to the larger stores, while the street vendors depart with what they can carry in their arms. The value of the flowers sold at this exchange amounts to almost a million dollars a year. One man does a business of nearly \$400 a day.

The exchange is operated on a co-operative basis and has extensive floor space in a building in the center of the city. Each member may have one stall or several, according to the amount of business he does. The



stalls are arranged in alleys across the room and are rented. Once a year an auction is held and the stalls knocked down to the members who bid the highest for them. Those nearest the door are naturally considered the most desirable and the highest prices are paid for them, but no stall can be rented for less than fifty dollars a year.

The flowers begin to arrive early in the morning, some being expressed and others being brought in by the growers or their wives. Light cardboard boxes are commonly used for shipping the fragile blossoms. Within the exchange are wheel trucks on which the flowers are carted about like merchandise in a dry good store.

The buyers begin to come almost as early as the flowers, but it is a rule of the exchange that no member shall leave his stall to solicit business. The scene is always an animated one, though, for competition is keen and flowers are piled everywhere, great heaps of them, filling the big room with glorious color and sweet perfume. A capable superintendent or manager has an office in one corner and keeps close tabs on all that goes on. And so successful is the exchange that every year a satisfactory dividend is paid the members.



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grasshoppers, and if the plague had happened at all, surely it could not have been so bad as it was.

One might ask the question, "How much would one bird help in suppressing an outbreak of insects?" Experiments have been made on birds held in captivity. In one day a crow will eat 400 or more grasshoppers. A young wren was seen to eat 111 insects in 277 minutes. The younger the bird the greater his appetite. A young robin ate 165 cutworms in a day, nearly twice its own weight when it began to eat. So much for one bird at a time. Now think of the millions of birds. It is obvious that a bird is an eater by profession. How much his profession benefits agriculture, no man can estimate because the good done is beyond imagination.

Any farmer can have birds, and all farmers should have them in great numbers. To get them one must protect them. Get rid of the cat and kill the red squirrels because birds can not live where these animals are found. Fix up a place where the birds can get water. Water will invite birds quicker than anything else.

Birds are like people in that there are some bad ones among all the good ones. The cowbird and the English sparrow are legitimate targets for any farmer's gun. They do no good and a great deal of harm. The crow is a condemned bird, also. Ten chances to one the crow was the rascal that caused your chickens to disappear so mysteriously. So do not blame the hawk for the theft. Most hawks do more good than harm, and as is the case with many other kinds of birds, they get blamed instead of praised.

For a general law, one might say, "Protect all birds and encourage them to live on the farm." And then, to balance that assertion, "When a bird is caught in the act of doing wrong, such as stealing chickens or taking too much fruit, kill those birds that are guilty." Do not kill the others. Be sure you are destroying the right bird, and then, stop.

#### HOLIDAYS OF DOMINICAN REPUBLIC.

On the annual holidays in honor of their independence the people of the Dominican Republic celebrate two anniversaries, both significant in their history, but commemorative of two distinct events. The first falls on February 27 and celebrates the independence of the Republic from the dominion of Haiti; and the second on August 16, which marks the emancipation of the Dominican Republic from the Spanish rule.

The island of Santo Domingo has figured prominently in the history of the Western Continent since 1492, when it was discovered by Columbus, becoming successively a colony of Spain; a rendezvous for the buccaners of the Spanish main, made memorable in history by Sir Francis Drake and many others; a dependency of Colombia; of Haiti; enjoying a brief period of independence; becoming again a dependency of the Spanish Crown, and finally winning the autonomy which it now enjoys.

The Spanish domination lasted, with few interruptions, from the period of the discovery of the island for a period of more than a century, and the capital of the present Dominican Republic may justly lay claim to the title of the "Metropolis" of the former vast colonial empire of Spain. Here it was that the early "Conquistadores" made their headquarters for the numerous expeditions which resulted in the subjugation of the surrounding countries. Under the sovereignty of the Spanish Crown the native Indians, a peaceful race, unable to resist the cruel treatment of their conquerors, perished in large numbers, depopulating the island to such an extent that recourse was had to the introduction of slaves from Africa as early as 1517.

During the sixteenth and seventeenth centuries many of the European nations, attracted by the wealth of the Indies and represented principally by adventurers operating under what in later days became known as "letters of marque," succeeded in materially weakening the power of Spain and diverting a considerable portion of the revenue hitherto enjoyed from this source into their own coffers. Of these buccaners the French colony grew to such an extent that their claims were recognized by the paternal government, and by the treaty of Ryswick, in 1697, France obtained possession of the western half of the island, and on July 22, 1795, the entire island was ceded to France. Spanish domination was, however, once more established in 1809, and on December 1, 1821, the inhabitants of the Span-

ish part of the island declared their independence of the King and allied themselves with Simon Bolivar's Greater Colombia. This revolutionary movement was headed by Jose Nunez de Caceres, and the flag of the new government was unfurled on December 1, 1821. The Haitians, however, taking advantage of the fact that the new Republic was for the moment without resources, immediately invaded their territory, and as a result of their vigorous and sanguinary campaign it was rapidly depopulated through the exile of most of its inhabitants. This domination by Haiti lasted until February 27, 1844, when the people rose in arms in a general revolutionary movement, carefully and thoroughly planned, and after a bitter struggle were finally able to regain their liberty. In 1846 this independence was recognized by the United States, Spain, England, and France.

This independence lasted until the year 1861, when the Republic, being in constant fear of foreign invasion, solicited once more the protection of Spain. This protectorate took the form military occupation of the country, the former President of the Republic becoming governor and captain-general under the new regime. That this new protectorate proved anything but satisfactory is evidenced by the fact that a revolutionary movement, which started on August 16, 1863, at Capotillo, resulted in the occupation of Santiago and the declaration of a provisional government under the Presidency of General Salcedo. It was not, however, until May 1, 1865, that the Spanish Crown formally relinquished its claim to the territory.

#### TWO UP-TO-DATE WEATHER VANES.

BY GEO. E. WALSH.

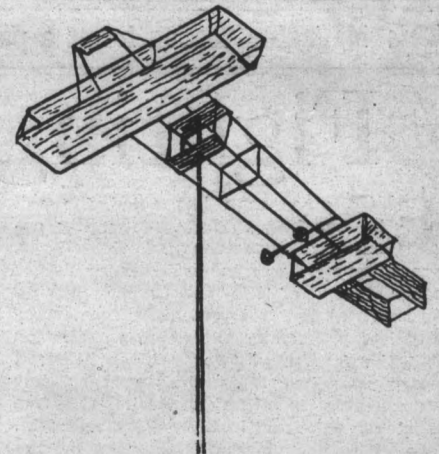
The construction of a weather vane, either for the top of the barn, house or a pole, can be made more interesting if it is designed to represent something appropriate. The arrow was the earliest emblem used for weather vanes, and it was appropriate, for it signified something shooting through the air in the teeth of the wind. But we cannot say as much for the crowing roosters, fish, and running horses that top so many poles to indicate the direction of the wind. Sometimes it makes one wish the rooster or horse would come down to solid ground again where it belongs.

There is nothing more appropriate for weather vanes than airships. These are made to fly through the air, and consequently they make excellent emblems for indicating the direction of the blowing wind. In this age of airships most boys make some sort of a flying ship as models or for ornaments. Why not, therefore, build them for weather vanes so they will always be in use and always flying and doing some good?

The biplane weather vane illustrated herewith was built by a small boy after a model he had designed for flying with rubber bands. Mounted on the top of a pole in front of the house it greets him every morning, and it attracts many people passing. It is a perfect little model, built of wood, instead of canvas, for the planes, and wire instead of cord for the framework. You see you don't have to make it as light as you would one that is designed to fly. Very thin,

at the tail end, which constitutes the rudder of the ship, will cause it to move around in the wind. The other planes are horizontal to the wind and do not catch it. The rudder planes, on the contrary, are perpendicular to the wind.

The more carefully you design the airship after some model, the greater will be your pleasure in watching it every morning. As the airship is to be placed on top of the house or barn, or some other high perch, it should be made about three times as large as a model that is to be viewed nearby. An airship



A Biplane Weather Vane.

four feet long will, on the top of a high pole, look to be about two feet in length.

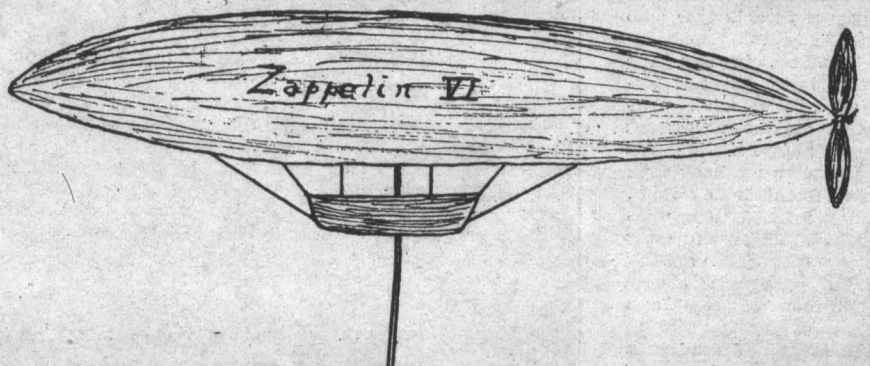
Another pretty and significant weather vane, made by another boy, is an imitation of the Zeppelin airship. The big, cigar-shaped balloon was made of a flat piece of wood cut out with a saw, as shown in the illustration. The car below the balloon was made of similar material. The ropes which seem to hold the car to the balloon are really sticks of wood. At a distance they look like wire ropes. These give a rigidity to the whole piece. The stick that supports the airship goes through a hole in the car to the balloon itself.

Next make a two or three-bladed propeller for the stern. This can be cut out of wood or made of a piece of tin. The blades should be twisted to catch the wind, for this part of the airship actually moves. When the wind is blowing the propeller revolves rapidly, and it adds so much to the effect that at first glance people think the airship is actually traveling through the air. The propeller should be fastened to the tail of the balloon by a light shaft of wood. It should turn loosely and easily on the shaft. Paint the balloon, putting in all the details necessary to carry out the illusion, and then shellac or varnish it all over. An immense amount of satisfaction is obtained from such weather vanes.

#### A TEST OF ENDURANCE.

BY ISAAC MOTES.

It is well known that the mule is one of the hardest animals, especially the Mexican burro and the western mule accustomed to rough usage on the plains, just as the western bronco can stand severer usage than a thoroughbred horse. One reason for this is that a thoroughbred horse is generally kept in good con-



A Weather Vane Fashioned After the Airships of the Zeppelin Type.

flat pieces of wood should be used for the planes. These can be obtained from the sides of small boxes at your grocery store. Many of the boxes are made of thin veneered woods, and those about an eighth of an inch thick will do. In order to keep them from warping they should be treated to several coats of shellac or spar varnish.

Galvanized wire should be used to prevent rusting, and the framework can be whittled out of sticks of wood and treated with shellac. Balance the airship so it will turn freely, and then it will always point up in the wind. The planes

dition, while the bronco is lank, leathery and tough.

But a lank, rangy mule seems to have more endurance than a horse, as a horse is more apt to become "winded" by hard riding or other hard, long-continued usage. In fact no one knows what a mule of this character can endure. A mule is superior to a horse in that it will do hard work on less food than a horse. In this respect the mule is somewhat like the goat. Indeed, the small Mexican burro is somewhat like a goat in many of its habits.

The most wonderful mule that ever



lived, perhaps, was called "Sam," and belonged to a man named John Campbell, who lived in Kansas City about the year 1860. "Sam" was without doubt the most famous mule in the United States a half century ago. Conceded to be the greatest traveler ever known anywhere, the papers were filled with its praise during those early days. This mule made a most wonderful trip, in 1859, from Bent's Fort, in Colorado, to Kansas City, a distance of 620 miles. The journey was made in six days, and under very peculiar circumstances.

Up. Hayes and John S. Campbell were partners in the business of freighting across the plains, as there were no railroads in the west in those days. They worked under a contract with Majors, Russell & Waddell, big wholesale freight handlers, whose headquarters were at Santa Fe. While Campbell and Hayes were at Bent's Fort, Colorado, with a freight wagon train the eastbound stage from Santa Fe to Kansas City came through there with the news that Majors, Russell & Waddell had failed in business in Santa Fe. Campbell and Hayes had \$60,000 in drafts issued by the bankrupt firm which would be worthless as soon as the news of the failure reached Kansas City, and this news would not reach there until the stage arrived, as there were no telegraph lines across the plains in those days.

"We must get to Kansas City and cash these drafts before the stage gets there," said Campbell. "And there's only one way to beat the stage in. One of us must go and ride old Sam." As they had done their work and earned this \$60,000 they felt that they should have their money, and that the bank in Kansas City was better able to lose it than themselves.

"I'll ride Sam, and beat the stage to Kansas City," said Hayes. So away he

started upon the wildest, longest and hardest ride ever made by a man upon the back of an animal. The stage made the trip of 620 miles in six days, but it had relays of horses, and fresh drivers every hundred miles or so. Besides, the stage had a start of two hours on the man and mule.

Well, Up. Hayes rode day and night for six days across the flat, monotonous plains country, sometimes running his mule, sometimes galloping, sometimes trotting, sometimes walking, stopping once in a while at night to lie down in the grass and snatch a few minutes' sleep, while the mule grazed. Then he would pull himself into the saddle again, and away they would go. He practically lived and slept in the saddle. At that time there were wide stretches of barren desert across the plains, with no grass for the mule to eat. Daily the mule grew more and more gaunt, but its strength and endurance showed no signs of giving out.

The mule and its rider passed the stage and beat it into Kansas City only six hours. Mr. Hayes cashed his \$60,000 worth of drafts, receiving half the money, or \$30,000, for his six days' ride. The trip was a terrible one, and aged him considerably, but he was a grizzled plainsman, accustomed to the rough life of a freighter, and whenever friends mentioned the trip he was accustomed to say: "Boys, I'd do it again for \$30,000."

The mule was also pretty well used up, but lived many years thereafter, an object of great curiosity to people, for everybody had read about the trip, and visitors to Kansas City at that early day all wanted to see Campbell's wonderful mule.

It may well be supposed that the wonderful animal was never sold by its owner, and it is interesting to know that it lived to a ripe old age.

## Cockroaches and their Behaviour.

By Dr. L. K. HIRSHBERG.

Next to mosquitoes, flies, fleas, and bedbugs, the common cockroach is man's most domesticated bug. There lives today no housewife with soul so dead, who never to herself has said, "Beware, beware the thirsty jug, in which may lurk this festive bug." The cockroach is the bane of every alert housekeeper. The price of freedom from it, is eternal vigilance. Indeed, the cleanest homes have witnessed much ink spilt over them. Only the other day I myself, in my chemically pure, white enameled, well-perfumed consultation rooms, heaved a pint of blackberry cordial at one. All of which truisms are not to be denied, which are, however, beside the point.

It is with behavior of cockroaches that we are here concerned; not their good or bad relations to the human tribe, for Dr. J. S. Szymanski, of the Vienna Institute for Experimental Biology, now presents, to the world at large, evidence that the much maligned and universally hated pest has eyes that see, ears that hear, muscles that do, and "minds" that think.

Every maid of all work will assure you that cockroaches avoid the light and seek the dark. Indeed, nobody so far from questioning this fact, ever thought of trying to change it. Most naturalists might as soon think of changing a withered rose back into a youthful bud. Not so Dr. Szymanski. This doughty investigator constructed for himself a little trap with an electrically connected floor, so that he could teach cockroaches to reverse their instinctive habits, and seek daylight instead of darkness.

His little roach trap was formed of insulated copper wire-plates. A current could be turned in from an induction battery and made to flow in one part of the trap or another at his pleasure. In order to discover to what extent cockroaches are influenced by the electric shock, he removed the first trap—a rectangular glass box—and replaced it with another that had no bottom. Into this second box a cockroach was placed. As soon as it ceased snobbing hither and thither in its glass cage, the electric current was gently turned on. The intensity of the current was increased gradually until the resting roach suddenly began to act like the restless lions in the circus. It moved about, running to and fro, trying all the while to crawl up the glass walls. If the distance between the induction coils was over five inches a momentary paralysis struck the insect.

As soon as these preliminary facts were learned, the experimenter obtained a lot of home-like, native, Vienna cock-

roaches whose ages were estimated to average about a year and a half. Then began the real researches. At the end of each series of experiments the floor of the cage and the walls of glass were cleaned with alcohol. This destroyed all odors and scents by which the roaches might learn to go certain paths.

Now a cockroach was placed in the lighted part of the box. At once it turned towards the dark part. Then the electric current was switched on. At once the little creature would rush madly about, seeking to crawl up the walls. Finally it found the lighter part of the trap, when the current would be turned off. Every time it re-sought the dark part of the trap the current was switched on and when it found the lighted area off it went.

Soon the cockroaches were able to recognize this difference, and the moment they felt the current they would scamper for the light. Then after a number of times more the electricity was not used at all, but the insects had learned to avoid the dark. Indeed, as soon as they came to the boundaries between the two they would reverse their normal instincts, and flee from the wrath of the dark spots.

Dr. Szymanski trained ten cockroaches in this manner. He considered their training complete when the animal in the light turned back to the light ten successive times as it arrived at the margin of light and darkness, without the necessity of an electric shock. So well trained did these roaches become that the scientist, by stroking their backs with miniature paper whips, was unable to drive them across the frontiers into the darkness that they once loved.

To be sure, some of these cockroaches retained their newly acquired habit—or circus stunt—longer than others. There was no definite relation between the permanency of the newly learned trick and the number of electric shocks received. The fact, however, that is plain seems to be that cockroaches can be trained to learn things as well as dogs, horses, elephants and sea-lions.

Even more radical is Dr. Szymanski's conclusions. He says: "Professor Felix Platen has stated that his experiments upon insects, especially bumble bees, lead him to the positive conviction that bees as well as other insects show no evidence of memory. But the results of these experiments with cockroaches do not support that statement. Cockroaches do have memories and they are only different in degree from the memory of higher animals, such as man."

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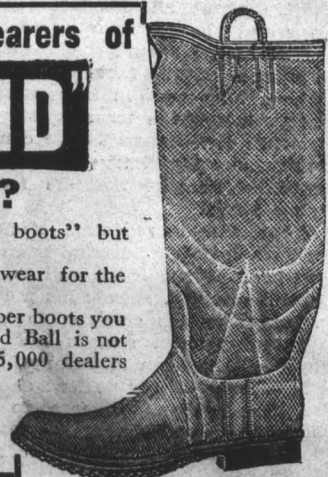
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# Woman and Her Needs

## At Home and Elsewhere



### "Till Death Do Us Part."

A PLAY recently came to town which roused my ire to such an extent that I haven't gotten over it yet. It was built around that idea, so popular just now, of the husband who outgrows his wife mentally and then goes roaming off after that curse of modern society, an affinity. The wife had been busy in her home, rearing her family, doing all her own work, and the chores her husband should have done, in order to give that clever and talented creature time to read and study. The poor thing had only one thought, the advancement of her husband, and she hadn't had time to go chasing after culture or study up on the latest styles. That made no difference to hubby, nor to the world at large. She should have kept up with him and held his love, everyone said, and when she found herself deserted she got nothing but censure.

This seems to be the attitude of the world at the present time. We see it working out in real life and have it served up to us in stories and the "advice to women" columns of the daily papers. The wife must keep up with her husband, or else, of course, he will pick up with someone else. Why shouldn't he?

The mere fact that his wife has borne his children and lost her health and good looks rearing them should not have the least weight with him when he sees a pretty face. The woman he married has acted as his cook, laundress and scrub-woman in order to help him save his first thousand dollars and get the start towards the fortune which he is now about to spend on someone who is "his equal." Or perhaps she has kept boarders to support him while he studied and got to the top in his profession. She has done grinding physical work to make life easier for him; has walked the floor of nights with fretful babies that he might sleep and be fresh for the next day; she has warded off bill collectors so that he need not worry, and literally has given her life to make him a success. All this need count for nothing, according to the modern teaching. She should have kept young and fresh and up with the times anyway. A woman has no business to let herself go down mentally or to get careless about her dress.

I often think I should like to have some of the men and women who write so wisely about it, take the wife's place for awhile. I wonder just how much heart they could put into anything but the most desultory reading after a day spent over the wash tub or ironing board with three meals to get, two or three children to watch and the house to keep tidy in addition. The woman who can do all her own work through the period of child raising and still keep up must have either a superhuman will or superhuman strength. She needs both.

Personally, if my husband has not enough respect for himself and his marriage vows to be true to me if I do fall behind him, I don't want him or his love. If I must dress like a chorus girl, and chatter about all the latest books and plays and pictures in order to be attractive to him, I should prefer that he look elsewhere. If the fact that I have tried to be a help-meet in the good old-fashioned sense of the term counts for nothing, then fare-thee-well. He can take the affinity, and I will try to console myself with the thought that he isn't worth crying about.

If the wife in moderate circumstances does her duty her husband ought to worship her. If she looks well to the ways of her household, spends his money wisely, brings up his children to be worthy men and women, and is not a shrew, why need she have to do anything more? It is because of her patient self-sacrifice that the husband is free to improve. Should not gratitude and common decency bind him to her, if he does lose the

early love which moved him in boyhood?

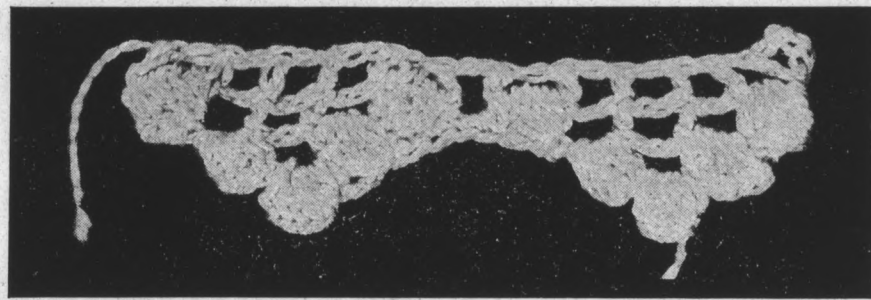
I have no patience with the modern thought which condones the husband who when he arrives deserts the wife who couldn't keep up. If the real truth were known in the majority of cases she is more worthy of praise than the brilliant creature who feels himself so greatly her superior.

DEBORAH.

#### POP CORN STITCH.

BY MAE Y. MAHAFFY.

One of the novelties among crochet workers is the pop corn stitch, sometimes known as raised or puff stitch. It is usually seen in connection with the filet or open block background, and is particularly handsome for bedspreads, sofa pil-



low tops, bags, table runners, towels, bed linen, etc. Any of the coarser and medium threads are used for these purposes, while those of finer quality are made use of if the work is for dress trimming, underwear, and the like. Collars for suits, dresses, or coats may be made in this stitch, and it is a matter of choice whether heavy or fine materials are used, since both are appropriate.

A majority of crochet workers are familiar with the filet background. It consists of open squares made by chaining two stitches and double crocheting into the row of chain stitches made as a beginning. In each succeeding row the same plan is followed, but the double crochet stitch is made into the double

first of these six double crochet stitches; turn back again, chain one stitch, and double crochet into double crochet stitch of previous row. This completes the stitch and the square at the same time, and one is ready to continue to the next puff or open block. A little practice in making the puffs will aid one so that they can carry out almost any cross stitch, bead work or darning pattern in crochet if no regular crochet patterns are at hand. When it becomes necessary to make a puff stitch in a puff stitch of a previous row instead of an open square place the double crochet stitches in the chain stitch which was made in turning the work, leaving the puff standing up loosely on the right side of the work.

The band or insertion illustrated is made of a medium grade of crochet floss, and measures three and a half inches wide. Finer thread will make it narrower, of course, and vice versa.

Make 15 open blocks to start this inser-

tion. In the next row, the 3rd, make 3 open blocks, 2 puffs, 5 open blocks, 2 puffs, and 3 blocks.

The 4th row consists of 1 block, 2 puffs, 2 blocks, 2 puffs, 1 block, 2 puffs, 2 blocks, 2 puffs, and 1 block.

The 5th row is like the 3rd.

The 6th row has 7 blocks, 1 puff and 7 blocks.

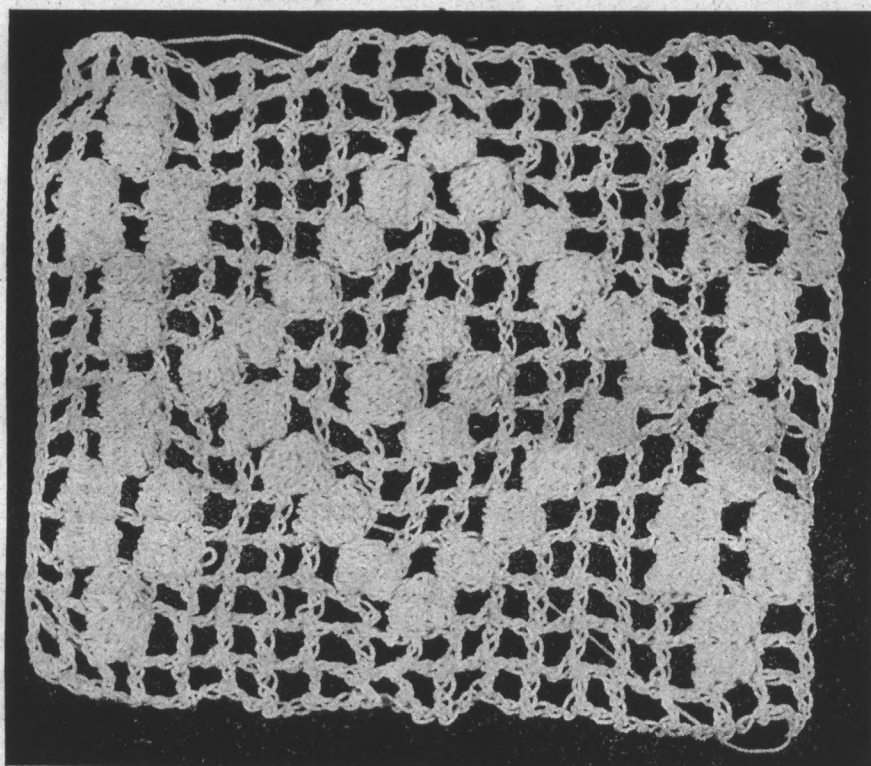
The 7th row has 6 blocks, 1 puff, 1 block, 1 puff, and 6 blocks.

The 8th row has 5 blocks, 1 puff, 3 blocks, 1 puff, 5 blocks.

The 9th row has 4 blocks, 1 puff, 5 blocks, 1 puff, 4 blocks.

The 10th row has 3 blocks, 1 puff, 3 blocks, 1 puff, 3 blocks.

The 11th row has 2 blocks, 1 puff, 3



crochet stitch of the previous row, so that the squares are parallel throughout. Five chain stitches are always made to turn at the edges.

To make the puff stitch, after double crocheting to complete an open square double crochet six more times into the opening of previous row; turn the work in the hands, and slip stitch into the

blocks, 1 puff, 1 block, 1 puff, 3 blocks, 1 puff, 2 blocks.

The 12th row is like the 10th.

The 13th row is like the 9th.

The 14th row is like the 8th.

The 15th row is like the 7th.

The 16th row is like the 6th.

Now repeat from 3rd row until sufficient insertion is made.

Edgings may be made crosswise, just as this insertion is made. Or, a chain as long as the lace needed may be crocheted, and the scallops formed on this, as in the illustration. In this way the loose edges of the puffs form the scalloped edges of the lace.

#### THE FARMER'S PART IN THE TUBERCULOSIS CRUSADE.

BY CHARLOTTE A. AIKENS.

What is the farmer's part in the tuberculosis crusade? As a citizen he must share the burden of caring for those afflicted with the disease, by helping to provide the means for cure in his own state, by the erection and maintenance of sanatoriums for care and cure. But his best work will be the preventive work he does, and the educational work that he furthers in his own immediate community. If he is a good citizen he cannot be satisfied to have no part in this, the greatest war that was ever waged.

One of the hardest of all lessons to be learned is that it is one of the greatest mistakes to send a man or woman who has contracted the disease, hundreds or thousands of miles from home to seek a cure in another climate. Texas, Colorado, Arizona and California are thronged with misguided victims who cling to the delusion that the one thing needed to cure them is a change of climate. It is true that the mild weather (comparatively), in those states makes it possible for people to be out of doors comfortably for the greater part of the year, but it cannot be too strongly emphasized that fresh air is only one item out of four very important essentials to a cure. So far as its curative value is concerned, the fresh air of Michigan or Canada or Ohio or New York has proven quite as effectual in arresting the disease as the air in any one of the western states mentioned.

Every intelligent person should remember these four essentials to a cure, and that the earlier the patient gets under treatment the better his chance of fighting a winning battle!

Rest, abundance of easily digested food, fresh air, and freedom from worry, with cheerful comfortable surroundings. These are the things which the best medical authorities of the world have agreed are necessary to a cure. No one of these alone, nor even two or three of them are sufficient. A consumptive patient may live out of doors day and night and fail to improve if he has not the right food and plenty of it, fixed in such a way that he can relish and digest it. He may have good food and good air and constantly grow worse if he works or tries to, or falls to rest when his condition demands rest, in order that repair may go on. He may have all three of the essentials mentioned and his condition daily grow more discouraging because of loneliness or homesickness or general depressing surroundings.

If a patient has ample means to provide the comforts mentioned and can afford to have some of his own family with him, he may find it worth while to try to "chase the cure" in Denver or San Antonio or Phoenix. If he hasn't, then let him be sensible, and see what can be done to supply these essentials at home.

The benefits of the sanatorium treatment as compared with home treatment under the guidance of an experienced physician who is willing to study the case in all its bearings, and persist in spite of discouragements, are mainly educational. If a patient can afford to spend a couple of months at a sanatorium he learns how to take better care of himself—what he must do to be saved, and what he must do to prevent those near and dear who must be associated with him, from contracting the disease. After he has learned those lessons he has a good chance to secure the benefits of sanatorium treatment at home. A tent in the back yard, or a balcony protected



by canvas, from rains and storms, can be used at home for fully seven months of the year. For the other five, a window tent which is arranged so that the head is out of doors and the body in a room well covered and warm, can be used very effectually.

On the farm he has the best chance in the world of getting the freshest of milk and eggs, fowls, butter, and so on, things which a boardinghouse keeper out in Colorado or Arizona cannot afford to supply except at exorbitant prices. Visitors to, and residents of Denver, have said over and over again, that the most pitiful thing seen in that territory was the army of homesick, discouraged, unkempt, health seekers shut out of the best hotels and boarding houses, forced into third-rate rooms in the least desirable parts of the city, thousands of miles from home, led there under the mistaken delusion that if they could only get to Colorado they could work enough to pay expenses. Every citizen who is interested in the welfare of the sick should use his voice and influence against sending the consumptive with limited means, away far from home and friends, to fight his battle alone, without the support of sympathetic friends and relatives.

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The bread was either kneaded too much or allowed to raise too long. If they are principally just below the crust the oven was too hot.

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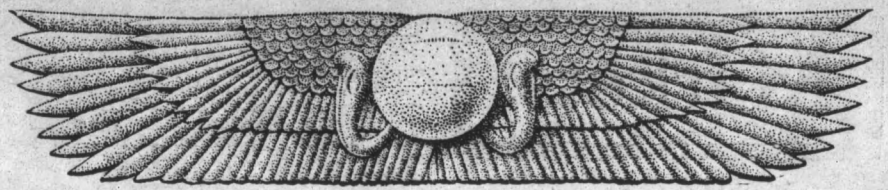
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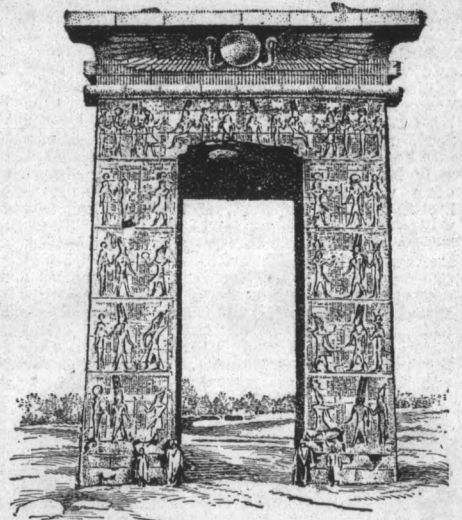
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This telephone protection, with electric speed, reaches the most isolated homes. Such ease of communication makes us a homogeneous people and thus fosters and protects our national ideals and political rights.



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THE MICHIGAN FARMER, Detroit, Michigan.





# Woman and Her Needs

## At Home and Elsewhere



### "Till Death Do Us Part."

A PLAY recently came to town which roused my ire to such an extent that I haven't gotten over it yet. It was built around that idea, so popular just now, of the husband who outgrows his wife mentally and then goes roaming off after that curse of modern society, an affinity. The wife had been busy in her home, rearing her family, doing all her own work, and the chores her husband should have done, in order to give that clever and talented creature time to read and study. The poor thing had only one thought, the advancement of her husband, and she hadn't had time to go chasing after culture or study up on the latest styles. That made no difference to hubby, nor to the world at large. She should have kept up with him and held his love, everyone said, and when she found herself deserted she got nothing but censure.

This seems to be the attitude of the world at the present time. We see it working out in real life and have it served up to us in stories and the "advice to women" columns of the daily papers. The wife must keep up with her husband, or else, of course, he will pick up with someone else. Why shouldn't he?

The mere fact that his wife has borne his children and lost her health and good looks rearing them should not have the least weight with him when he sees a pretty face. The woman he married has acted as his cook, laundress and scrub-woman in order to help him save his first thousand dollars and get the start towards the fortune which he is now about to spend on someone who is "his equal." Or perhaps she has kept boarders to support him while he studied and got to the top in his profession. She has done grinding physical work to make life easier for him; has walked the floor of nights with fretful babies that he might sleep and be fresh for the next day; she has warded off bill collectors so that he need not worry, and literally has given her life to make him a success. All this need count for nothing, according to the modern teaching. She should have kept young and fresh and up with the times anyway. A woman has no business to let herself go down mentally or to get careless about her dress.

I often think I should like to have some of the men and women who write so wisely about it, take the wife's place for awhile. I wonder just how much heart they could put into anything but the most desultory reading after a day spent over the wash tub or ironing board with three meals to get, two or three children to watch and the house to keep tidy in addition. The woman who can do all her own work through the period of child raising and still keep up must have either a superhuman will or superhuman strength. She needs both.

Personally, if my husband has not enough respect for himself and his marriage vows to be true to me if I do fall behind him, I don't want him or his love. If I must dress like a chorus girl, and chatter about all the latest books and plays and pictures in order to be attractive to him, I should prefer that he look elsewhere. If the fact that I have tried to be a help-meet in the good old-fashioned sense of the term counts for nothing, then fare-thee-well. He can take the affinity, and I will try to console myself with the thought that he isn't worth crying about.

If the wife in moderate circumstances does her duty her husband ought to worship her. If she looks well to the ways of her household, spends his money wisely, brings up his children to be worthy men and women, and is not a shrew, why need she have to do anything more? It is because of her patient self-sacrifice that the husband is free to improve. Should not gratitude and common decency bind him to her, if he does lose the

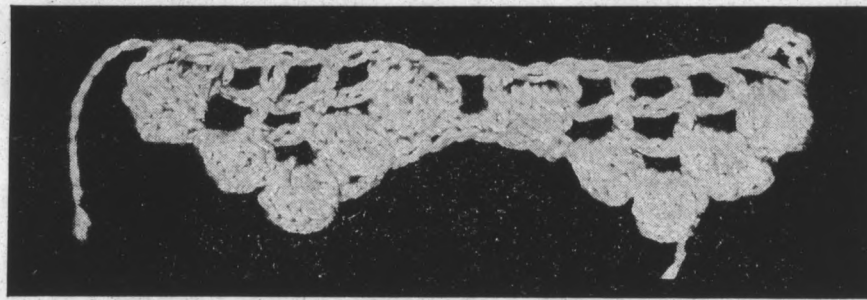
early love which moved him in boyhood? I have no patience with the modern thought which condones the husband who when he arrives deserts the wife who couldn't keep up. If the real truth were known in the majority of cases she is more worthy of praise than the brilliant creature who feels himself so greatly her superior.

DEBORAH.

#### POP CORN STITCH.

BY MAE Y. MAHAFFY.

One of the novelties among crochet workers is the pop corn stitch, sometimes known as raised or puff stitch. It is usually seen in connection with the filet or open block background, and is particularly handsome for bedspreads, sofa pil-



low tops, bags, table runners, towels, bed linen, etc. Any of the coarser and medium threads are used for these purposes, while those of finer quality are made use of if the work is for dress trimming, underwear, and the like. Collars for suits, dresses, or coats may be made in this stitch, and it is a matter of choice whether heavy or fine materials are used, since both are appropriate.

A majority of crochet workers are familiar with the filet background. It consists of open squares made by chaining two stitches and double crocheting into the row of chain stitches made as a beginning. In each succeeding row the same plan is followed, but the double crochet stitch is made into the double

first of these six double crochet stitches; turn back again, chain one stitch, and double crochet into double crochet stitch of previous row. This completes the stitch and the square at the same time, and one is ready to continue to the next puff or open block. A little practice in making the puffs will aid one so that they can carry out almost any cross stitch, bead work or darning pattern in crochet if no regular crochet patterns are at hand. When it becomes necessary to make a puff stitch in a puff stitch of a previous row instead of an open square place the double crochet stitches in the chain stitch which was made in turning the work, leaving the puff standing up loosely on the right side of the work.

The band or insertion illustrated is made of a medium grade of crochet floss, and measures three and a half inches wide. Finer thread will make it narrower, of course, and vice versa.

Make 15 open blocks to start this inser-

tion. In the next row, the 3rd, make 3 open blocks, 2 puffs, 5 open blocks, 2 puffs, and 3 blocks.

The 4th row consists of 1 block, 2 puffs, 2 blocks, 2 puffs, 1 block, 2 puffs, 2 blocks, 2 puffs, and 1 block.

The 5th row is like the 3rd.

The 6th row has 7 blocks, 1 puff and 7 blocks.

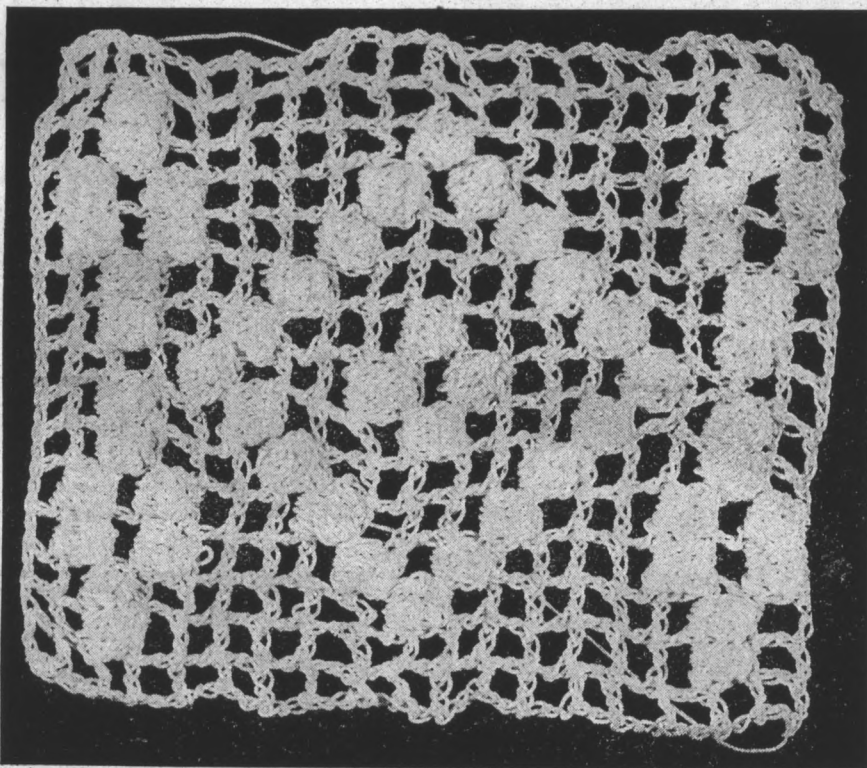
The 7th row has 6 blocks, 1 puff, 1 block, 1 puff, and 6 blocks.

The 8th row has 5 blocks, 1 puff, 3 blocks, 1 puff, 5 blocks.

The 9th row has 4 blocks, 1 puff, 5 blocks, 1 puff, 4 blocks.

The 10th row has 3 blocks, 1 puff, 3 blocks, 1 puff, 3 blocks.

The 11th row has 2 blocks, 1 puff, 3



crochet stitch of the previous row, so that the squares are parallel throughout. Five chain stitches are always made to turn at the edges.

To make the puff stitch, after double crocheting to complete an open square double crochet six more times into the opening of previous row; turn the work in the hands, and slip stitch into the

blocks, 1 puff, 1 block, 1 puff, 3 blocks, 1 puff, 2 blocks.

The 12th row is like the 10th.

The 13th row is like the 9th.

The 14th row is like the 8th.

The 15th row is like the 7th.

The 16th row is like the 6th.

Now repeat from 3rd row until sufficient insertion is made.

Edgings may be made crosswise, just as this insertion is made. Or, a chain as long as the lace needed may be crocheted, and the scallops formed on this, as in the illustration. In this way the loose edges of the puffs form the scalloped edges of the lace.

### THE FARMER'S PART IN THE TUBERCULOSIS CRUSADE.

BY CHARLOTTE A. AIKENS.

What is the farmer's part in the tuberculosis crusade? As a citizen he must share the burden of caring for those afflicted with the disease, by helping to provide the means for cure in his own state, by the erection and maintenance of sanitoriums for care and cure. But his best work will be the preventive work he does, and the educational work that he furthers in his own immediate community. If he is a good citizen he cannot be satisfied to have no part in this, the greatest war that was ever waged.

One of the hardest of all lessons to be learned is that it is one of the greatest mistakes to send a man or woman who has contracted the disease, hundreds or thousands of miles from home to seek a cure in another climate. Texas, Colorado, Arizona and California are thronged with misguided victims who cling to the delusion that the one thing needed to cure them is a change of climate. It is true that the mild weather (comparatively), in those states makes it possible for people to be out of doors comfortably for the greater part of the year, but it cannot be too strongly emphasized that fresh air is only one item out of four very important essentials to a cure. So far as its curative value is concerned, the fresh air of Michigan or Canada or Ohio or New York has proven quite as effectual in arresting the disease as the air in any one of the western states mentioned.

Every intelligent person should remember these four essentials to a cure, and that the earlier the patient gets under treatment the better his chance of fighting a winning battle!

Rest, abundance of easily digested food, fresh air, and freedom from worry, with cheerful comfortable surroundings. These are the things which the best medical authorities of the world have agreed are necessary to a cure. No one of these alone, nor even two or three of them are sufficient. A consumptive patient may live out of doors day and night and fail to improve if he has not the right food and plenty of it, fixed in such a way that he can relish and digest it. He may have good food and good air and constantly grow worse if he works or tries to, or fails to rest when his condition demands rest, in order that repair may go on. He may have all three of the essentials mentioned and his condition daily grow more discouraging because of loneliness or homesickness or general depressing surroundings.

If a patient has ample means to provide the comforts mentioned and can afford to have some of his own family with him, he may find it worth while to try to "chase the cure" in Denver or San Antonio or Phoenix. If he hasn't, then let him be sensible, and see what can be done to supply these essentials at home.

The benefits of the sanatorium treatment as compared with home treatment under the guidance of an experienced physician who is willing to study the case in all its bearings, and persist in spite of discouragements, are mainly educational. If a patient can afford to spend a couple of months at a sanatorium he learns how to take better care of himself—what he must do to be saved, and what he must do to prevent those near and dear who must be associated with him, from contracting the disease. After he has learned those lessons he has a good chance to secure the benefits of sanatorium treatment at home. A tent in the back yard, or a balcony protected



by canvas, from rains and storms, can be used at home for fully seven months of the year. For the other five, a window tent which is arranged so that the head is out of doors and the body in a room well covered and warm, can be used very effectually.

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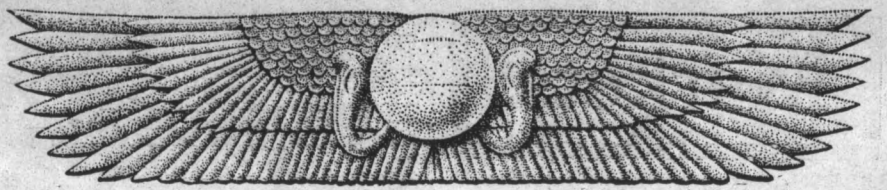
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# Markets.

## GRAINS AND SEEDS.

August 20, 1913.

**Wheat.**—Notwithstanding a net advance in the wheat market during the week, supplies are piling up in market centers and with the spring wheat movement just beginning it is believed that should northwestern farmers sell freely there would be little cause for a strong market. In fact, the present strength of the wheat market is credited to corn conditions and it is believed that the bullish influence of corn will soon reach its limit and that, lacking other support, the wheat market will gradually work to a lower level. There is a heavy increase in the already large visible supply in Europe and liberal offerings of Russian grain. European conditions are such as to cause little demand for export and there is considerable short selling on the market. One year ago No. 2 red wheat sold on this market at \$1.08½ per bu. Quotations for the week are:

|           | No. 2 | No. 1 | Sept. | Dec. |
|-----------|-------|-------|-------|------|
| Thursday  | 89½   | 88½   | 90    | 94   |
| Friday    | 89    | 88    | 90½   | 95   |
| Saturday  | 90½   | 89½   | 91½   | 95½  |
| Monday    | 90½   | 89½   | 91½   | 95½  |
| Tuesday   | 90    | 89    | 90½   | 94½  |
| Wednesday | 90½   | 89½   | 91½   | 95½  |

Chicago, (Aug. 19).—No. 2 red wheat, 87½c; No. 3 red, 86½c; Sept., 86½c; Dec., 90½c per bu.

**Corn.**—This market advanced sharply up to Monday of this week when reported showers in the southwest caused a reaction and it is believed that should further rains mark the end of the drought traders will be on the selling side of the market. The bullish side of the market is not considered attractive at the present high level of prices and bears are only awaiting a favorable opportunity to make an attack on this market, feeling that drought conditions are often exaggerated and that good rains might make a fair crop of much corn that was supposed to have been utterly ruined. One year ago No. 3 corn sold on this market at 81c per bu. Quotations for the week are:

|           | No. 3 | No. 3   |
|-----------|-------|---------|
|           | Corn. | Yellow. |
| Thursday  | 74    | 76      |
| Friday    | 75    | 76      |
| Saturday  | 76    | 77      |
| Monday    | 77    | 78      |
| Tuesday   | 76½   | 77½     |
| Wednesday | 77    | 78      |

Chicago, (Aug. 19).—No. 2 corn, 77½c; No. 3 corn, 77c; No. 3 yellow, 77½c; Sept., 75c; Dec., 68½c per bu.

**Oats.**—This market has fluctuated slightly during the past week in sympathy with corn, although free selling of grain again weakened prices after any marked advance. There were only moderate receipts of cash grain on this market during the week. One year ago standard oats sold on this market at 32c per bu. Quotations for the week are as follows:

|           | No. 3 | Standard. | White. |
|-----------|-------|-----------|--------|
| Thursday  | 43½   | 43        | 44     |
| Friday    | 44½   | 44        | 45     |
| Saturday  | 45½   | 45        | 46     |
| Monday    | 44½   | 44        | 45     |
| Tuesday   | 44    | 43½       | 44½    |
| Wednesday | 43½   | 43        | 44     |

Chicago, (Aug. 19).—No. 2 white oats, 43½c; No. 3 white, 42½c; Sept., 42½c; Oct., 45½c per bu.

**Beans.**—Reports from central Michigan indicate that some fields of beans have been seriously damaged by rain, followed by the severely hot weather, also by either fungous disease or insects working on the stem, which weakens and finally destroys the affected plants. Prices on this market are unchanged; for immediate shipment, \$1.75; October, \$1.80 per bu. Chicago, (Aug. 19).—Pea beans, hand-picked, choice, \$1.90@1.95; red kidneys, \$1.65@1.80 per bu.

**Rye.**—Quotations have advanced half a cent during the week. Cash No. 2 is now selling at 64c per bu. At Chicago No. 2 rye is quoted at 67½c per bu., which is a sharp advance over last week's quotations.

**Barley.**—This grain has again advanced during the week. Quotations in this market are \$1.20@1.30 per cwt. At Chicago quotations are 55¢@74¢ per bu, while at Milwaukee malting grades command 65¢@73¢ per bu.

**Clover Seed.**—Prime October seed was marked down 20c per bu. during the past week. October and December now being quoted at \$8.20 on this market; October alsike, \$11.25. At Toledo prime October clover seed is quoted at \$8.20; December, \$8.25; March, \$8.42½; prime October, December and March alsike, \$11.60 per bu.

**Timothy Seed.**—There has been an advance of 15c on this market during the past week, prime spot now bringing \$2.65 per bushel.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in ½ paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.50; second, \$5.20; straight, \$5; spring patent, \$5.10; rye flour, \$4.60 per bbl.

**Feed.**—In 100-lb. sacks, jobbing lots: Bran, \$23; coarse middlings, \$24; fine middlings, \$26; cracked corn, \$31; coarse corn meal, \$29; corn and oat chop, \$25.50 per ton.

**Hay.**—Prices remain unchanged; trade firm. Carlots on the track at Detroit are: No. 1 timothy, \$16@16.50; No. 2,

\$12.50@13.50; light mixed, \$14.50@15; No. 1 mixed, \$12@12.50.

**New York.**—New hay is offered in fair quantities and selling within range of \$16@21 per ton. Old hay firm and higher for best grades. Large baled, No. 1 timothy, \$21@22; standard, \$21; light clover mixed, \$19@20; heavy mixed, \$16@17 per ton.

**Straw.**—Detroit.—Steady. Rye, \$8@9; wheat and oat straw, \$7@7.50 per ton. New York.—Steady. New, rye straw, \$17 per ton.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—In spite of the reported slow movement of butter because of a somewhat tight money market, the local deal is firm with only moderate supplies and prices for creamery grades are up a half cent. Quotations here unchanged. Extra creamery, 27c per lb; firsts, 25½c; dairy, 21c; packing stock, 19c.

**Elgin.**—Market steady at 27c, a half cent advance over last week's price.

**Chicago.**—This trade ruled firm and moderately active. Quotations are: Extra creamery, 26@27c; extra firsts, 26c; firsts, 25c; seconds, 23½@24c; ladles, 22c; packing stock, 21@21½c as to quality.

**New York.**—Improvement in demand and slight restriction in supply moved values upward and left the trade on a firm basis Tuesday. Creamery extras, 28@28½c; firsts, 26@27c; seconds, 24½@25c; state dairy, finest, 27@27½c; good to prime, 25@26c; common to fair, 23@24c; packing, 22@22½c as to quality.

**Chicago.**—A general improvement is noted in prices with the quality of the goods covering a wider number of grades. Current receipts, 16@19c; ordinary firsts, 18½@19½c; firsts, 21½@22c; extra, 22c; checks, 11@12½c; dirties, 13@13½c per dozen.

**Eggs.**—Another advance of a cent follows last week's higher quotations and the trade is firm at the new quotations. Both supply and quality are slumping. Current offerings, candied, quoted at 21c per dozen.

**New York.**—Both high and low grades are in excellent demand while medium kinds rule easier. Prices show advances all along the line. Fresh gathered extras, 28@30c; extra firsts, 26@27c; firsts, 24@25c; western gathered whites, 22@28c per dozen.

**Poultry.**—No change in values. Supply is moderate and demand ordinary. Quotations are: Live—Broilers, 18@18½c; hens, 15@15½c; No. 2 hens, 11@12c; old roosters, 10@11c; turkeys, 17@18c; geese, 10@11c; ducks, 14@15c per lb.

**Chicago.**—No changes except a ½c advance for fowls. Quotations on live are: Turkeys, good weight, 18c; others, 12c; fowls, good, 14½c; spring chickens, 17c; ducks, 13c; geese, 10c; guinea hens, \$4 per dozen.

**New York.**—Dressed poultry steady with exception of turkeys, where better prices rule. Fresh dressed western chickens, 17@23c; fowls, 15½@19½c; turkeys, 19@20c.

**Cheese.**—Easy. Wholesale lots, Michigan flats, 13½@14c; New York flats, 15½@15¾c; brick cream, 15½@16c; limburger, 13½@15c.

## FRUITS AND VEGETABLES.

**Apples.**—Heavier supply depresses the price. Now being quoted at 75c@1 per bu., and \$2.50@3 per bbl.

**Huckleberries.**—In a little better supply and lower. Quoted at \$4@4.25 per bu.

**Peaches.**—Ohio, 25@35c per peck; supply is short and trading firm.

**Potatoes.**—Trade easier under heavier receipts. Best quality is coming from outside states. Imported tubers are quoted at \$2.50@2.60 per 2½ bu. sack.

**Tomatoes.**—Increased offerings has put values down another dollar. Home-grown \$1.50@1.75 per bu.

**Cabbage.**—Lower; good quality quoted at \$2.25@2.50 per bbl.

## GRAND RAPIDS.

The egg market is firm, buyers paying the country trade 19½@20c. The hay market is higher, best timothy bringing up to \$19 per ton. Offerings on the city market Tuesday morning were largest of the season, with 400 loads in sight. Plums were leaders in fruit, ranging from \$1@1.80, and there were also some peaches selling from \$1.50@1.75. Dutchess apples were firm at 60c, while Astrachans sold around \$1.50; Sweet Boughs at \$1. The peaches are rather small on account of dry weather. First home-grown watermelons appeared this week, bringing \$1.50 per dozen. Potatoes sold around 75c on Tuesday.

## DETROIT RETAIL PRICES.

Eastern Market.—Offerings did not appear to be moving quite so freely on the market Wednesday morning, due largely to their abundance and only an average attendance of buyers. As a result prices were reduced for a majority of the products. Following are quotations for most important varieties: Tomatoes of poorer quality and plentiful going at 90c@1.25 per bu; potatoes, small and fair quality, 85c@1.1; string beans, 75@85c; apples of good grade, \$1; crabs, \$1; plums, \$1.50@1.75; pears, Seckels, \$1.25; cabbage, 60@75c; onions, \$1.25; corn, 75@90c per six dozen bag; celery, 30c, large bunch; eggs, 28@30c; hay, \$13@16 per ton for loose.

## THE LIVE STOCK MARKETS.

### Buffalo.

August 18, 1913.

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

Receipts of stock here today as follows: Cattle, 130 cars; hogs, 55 double decks; sheep and lambs, 43 double decks; calves

With 130 cars of cattle on our market here today, with quality taken into consideration, all cattle weighing above 1200 lbs., sold fully 15c a hundred below last week; cattle from 1200 down, all grades of butcher cattle, sold strong 15@25c per hundred weight higher than last week; an active market on all butcher grades and everything sold at the close. Heavy cattle dull and draggy from start to finish.

We quote: Best 1350 to 1450-lb. steers, \$8.50@8.90; best 1200 to 1300-lb. steers, 8.25@8.50; best 1100 to 1200-lb. steers, \$8.25@8.50; coarse and plain heavy steers \$7.75@8; choice handy steers, \$7.80@8; fair to good 1000 to 1100-lb. steers, \$7.50@7.75; grassy 800 to 1000-lb. steers, \$6.75@7.15; best cows, \$6.50@7; butcher cows, \$5.50@6; cutters, \$4.25@4.50; trimmers, \$3.50@3.75; best heifers, \$7.75@8.25; medium butcher heifers, \$6.50@7; stock heifers, \$5.40@5.75; best feeding steers, \$7@7.25; fair to good do., \$6.25@6.50; common light stockers, \$5.25@5.50; best butcher bulls, \$6@7; best bologna bulls, \$5.25@5.75; stock bulls, \$5@5.50; best milkers and springers, \$7@8; common to good do., \$4@5.

Our receipts of hogs today were moderate, about 60 double decks, and trade but very little changed from the close of last week. There was a wide spread in prices; choice heavies selling from \$8.70@8.90; mixed, \$8.90@9.10; yorkers as to weight, from \$9.10@9.25; pigs generally sold at \$9.25; roughs, \$7.50@7.75; stags, \$6.75@7.25. Trade closed about steady, and very few going over unsold.

The sheep and lamb market was fairly active today, with prices about 20c lower than the close of last week; most of the choice lambs selling from \$7@7.15; few fancy at \$7.25; yearlings, \$5.50@6. Look for little better prices the balance of the week.

We quote: Choice lambs, \$7@7.15; cull to fair do., \$5@6.75; yearlings, \$5.50@6; bucks, \$3@3.25; wethers, \$5@5.25; handy ewes, \$4.50@4.75; heavy do., \$3.90@4; cull sheep, \$2.50@3.50; veals, choice to extra, \$11.50@12; fair to good, \$9.50@11; heavy calves, \$5.50@7.

### Chicago.

August 18, 1913.

Cattle. Hogs. Sheep.  
Receipts today .....19,000 29,000 28,000  
Receipts a year ago...19,516 31,231 30,319  
Receipts last week...47,487 156,321 119,152  
Receipts a year ago...50,697 92,679 117,529

There was a moderate run of 19,000 arrived for the Monday market, including 3,000 western rangers. Native beef steers of good to choice grade had active call, prices holding steady to firm and for choice yearlings occasional trades were 10c higher. Common and medium natives and most fat light and middle weight steers were steady. Top of \$9 was made for prime heavy and fancy yearling heifers sold at \$8.95, a price within 5c of the year's high point for heifers. Most native steers sold at \$7.90@8.75. Rangers went up to \$7.30, bulk at \$6.85@7.15 and good range cows made \$6.60. Native butcher stock sold steady to 10c higher than the close last week, mainly at \$5.15@6.25 for cows and bulk of fat heifers at \$6.35@7.25. Bulls were steady at \$5.65@6.50 for bulk, choice up to \$7.25. Calves also sold at unchanged rates, tops \$10.75, bulk \$10@10.50. Feeder cattle had strong demand from Indiana, Michigan and Ohio buyers. A run of 29,000 hogs fell below expected volume and as a result higher prices were made, the bulk of the sales showing 5@10c advance over Saturday but it was an uneven trade and in many cases light weights were no higher. Heavy packers and good mixed grades had most appreciation. Lights topped \$9 and though few went above \$8.75 and good heavy shipping made \$8.40@8.55. Most mixed packing sold at \$7.65@7.90 and rough heavy hogs down to \$7@7.25.

Sheep receipts of 28,000 sold freely, mutton stock making steady rates while lambs went 10@15c higher. A smaller proportion of range lambs than marketed in recent weeks arrived, and this meant scant picking for feeder buyers who were on hand in generous numbers. Western lambs topped at \$7.75, natives at \$7.60 while best feeding lambs sold at \$6.80 and few went below \$6.60. Best ewes for slaughter went at \$4.25, choice ones at \$4 and wethers topped at \$4.50.

Sales of cattle during the past week showed more frequent fluctuations in prices than usual, with a Monday run of only 14,771 head and an advance of 10@15c in prices, while Wednesday receipts of 21,779 head caused breaks of anywhere from 10 to 25c, butcher stock being unevenly lower and ruling 25@40c under early Monday figures. Later in the week prices showed more stability because of moderate offerings, but the week's aggregate supply was much greater than the exceptionally small receipts for the preceding week. The bulk of the beef steers sold during the week at \$7.85@8.80, with Monday sales of prime heavy cattle at \$9.20. Later in the week the choicest beefs brought \$8.75@9, with sales of the commoner class of grassy steers at \$7@8, while a fair to medium class of steers sold at \$8.10@8.45, with good cattle going at \$8.50@8.70, and common to prime yearlings at \$7.75@9. Butcher lots of sows and heifers went at an extreme range of \$4.85@8.75, a fancy little 550-lb. heifer calf bringing \$9. Cutters brought \$4.30@4.80, canners \$3.45@4.25 and bulls \$4.90@7.65. Western range cattle arrived in increasing volume and had a good outlet, considering that most of them were shipped too early. Cows, heifers and steers going at \$5.25@7.55. Many of the commoner lots of range steers went for feeders. The stocker and feeder market was more animated, with prices averaging much higher, because the offerings generally graded better. Stockers sold at \$5.50@7.70, feeders at \$6.50@8 and stock and feeder heifers at \$5.50@8.65. Calves were active on the basis of \$5@11.50, according to weight and quality, and milch

cows sold at \$50@95 each, top being paid for a fancy six-year-old Holstein cow.

Hogs experienced an extremely unsatisfactory week for sellers, with receipts running enormously ahead of a year ago and far ahead of the previous week. Eastern shippers bought much more liberally, but the outward movement failed to increase anywhere near as much as the receipts, and when the week closed hogs were going at a range of \$7.20@7.90, compared with \$7.80@9.35 a week earlier, while pigs brought \$4.25@7.75 and throw-out packing sows \$6.25@7.35. Booming prices for corn and burned-up pastures are largely responsible for this unexpected increase in the receipts, and great numbers of pigs are coming to market from sections where sickness has broken out. The future course of the market will depend on whether these enormous receipts are maintained. Prime light hogs and medium butcher weights are still market toppers, and thin sows are declining most of the time, the extreme spread in hog prices being much greater than at any time before this season. The extremely hot weather is unfavorable for the consumption of hog products, both fresh and cured.

Sheep and lambs were marketed in vastly increased numbers last week, the Idaho, Montana and other ranges sending in the great bulk of the supplies. The market stood firm for fat lambs and feeders, with a strong demand for both, but otherwise prices were off largely 25c, and some ewes sold as much as 50c lower. When the week closed lambs were salable at \$5@7.60, with feeder lambs wanted at \$6.50@6.90. Yearlings were salable at \$5.25@5.75 for feeders, with the best mutton lots at \$6. Wethers sold at \$4@4.85, ewes at \$2.50@4.30 and bucks at \$3@4. There is all the time a larger demand for feeder sheep and wethers than can be met, prices being nearly as high as those paid for killers. Feeder wethers have sold at \$4.25@4.60.

Horses sold in a number of instances last week from \$10@25 per head lower than heretofore, trade being extremely dull, and in some cases there were no bids. A big horse that sold at \$800 made no money for the sellers, and a pair of good drafters that sold at \$580 netted a loss. The best heavy drafters were still quotable at \$300@350, and few sold up to \$300. The cheaper horses sold at \$85@125. The midding kinds were weakest.

## LIVE STOCK NEWS.

The receipts of thin cattle in western and southwestern markets that were so excessively large a few weeks ago because of the drought were followed later by much smaller supplies, and sellers were able to obtain better prices for cattle at all desirable in quality. Dry weather has not caused the liquidation that was expected, and the trade sees a reason for it. The cattle are not in the country. It becomes more apparent every day that farmers will have to go extensively into cattle feeding next winter if anywhere near a normal beef supply is to be produced, and if they fail to do so, choice beefs will rise to abnormal prices. That the recent cattle receipts in Kansas City were not larger was a good deal of a surprise to the trade. The market is the nearest one to the dry weather belt, and it was assumed that there would be a continued liberal marketing there of parched pasture cattle. Yet, with one or two exceptions, the receipts in that market were not much larger than usual. All the cattle that have been received in Kansas City have been disposed of readily, and the larger share were sold for feeding purposes to corn belt buyers. That there is a real scarcity of cattle is becoming more apparent all the time, and there is a wide-spread belief that cattle will bring higher prices a few months later. With a curtailment in the corn supply and prices booming to unusually high levels, and a shortage of beef cattle, predictions of high prices later this year are made freely.

Of late the best demand for feeder cattle in the Chicago market has come from states east of that city, with Ohio and Indiana farmers asking for the better class of fleshy 975 to 1,100-lb. feeders.

A leading live stock commission firm located in Chicago, with branch houses in other important markets, advises its country patrons against shipping western cattle off soft grass, as they invariably shrink badly in transit and present an unfavorable appearance upon arrival. Feeders of native cattle who have the grass and corn are cautioned not to be in a hurry about marketing their cattle, as once the surplus incidental to the drought has been worked off, conditions will naturally improve. Owners should let cattle harden before being shipped.

Reliable information regarding the marketing of northwestern range cattle is to the effect that there is going to be a shortage compared with last year of from 25 to 40 per cent, and it is estimated that there will be less fat cattle from Kansas pastures on account of drought conditions than last year.

## MERINO SHEEP BREEDERS MEET.

The twenty-seventh annual meeting of the State Improved Black Top Merino Sheep Breeders' Association, at the home of Fred Howe, in Eagle, had the largest attendance of sheep breeders the association has ever brought out, every section of the state being represented. L. L. Harsh, of Union City, for 23 years president, was unanimously re-elected, and O. M. Robertson, of Eaton Rapids, who has served as secretary-treasurer for 15 years, was elected to succeed himself.

### Grange Picnic.

The Fourth Annual Picnic of the local Grange will be held three miles southeast of Edwardsburg, Mich., August 27. N. P. Hull, National Grange Lecturer, will be the speaker.



## THIS IS THE FIRST EDITION.

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

## DETROIT LIVE STOCK MARKETS.

## Thursday's Market.

August 14, 1913.

## Cattle.

Receipts, 1110. Market active at Wednesday's prices on all grades. No dry-fed on sale.

We quote: Steers and heifers, 1000 to 1200, \$7.50@8; do. 800 to 1000, \$6.50@7.50; grass steers and heifers that are fat, 800 to 1000, \$6.50@7.50; do. 500 to 700, \$6@6.50; choice fat cows, \$6; good do., \$5.25@5.50; common do., \$4.50@5; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.75@6.25; stock bulls, \$4.50@5; choice feeding steers, 800 to 1000, \$6.50@7; fair do., 800 to 1000, \$6.25@6.75; choice stockers, 500 to 700, \$6@6.50; fair do., 500 to 700, \$5.75@6.25; stock heifers, \$5.25@5.75; milkers, large, young, medium age, \$6.50@7.50; common milkers, \$3.50@5.

Bishop, B. & H. sold Kendall 22 stockers av 564 at \$6.25; to Parker, W. & Co. 1 bull weighing 830 at \$5.50, 2 do av 905 at \$6, 1 do weighing 1180 at \$6, 2 do av 1190 at \$6.25, 1 do weighing 730 at \$5.30, 4 cows av 1005 at \$5.35, 2 do av 1050 at \$5.50, 2 heifers av 750 at \$6, 3 do av 666 at \$6.35, 5 bulls av 950 at \$5, 1 do weighing 820 at \$6; to Breitenbeck 3 cows av 963 at \$4.75, 9 butchers av 666 at \$6.20; to Sullivan P. Co. 4 cows av 1080 at \$6, 5 do av 1000 at \$5.50, 1 bull weighing 550 at \$4.75, 1 steer weighing 880 at \$7, 14 butchers av 662 at \$6.25, 1 bull weighing 850 at \$6, 1 do weighing 1800 at \$6.50, 2 cows av 1015 at \$5.25; to Kendall 3 stockers av 647 at \$6.10; to Mich. B. Co. 1 cow weighing 990 at \$6; to Kamman B. Co. 1 steer weighing 790 at \$7; to Austin 2 oxen av 1515 at \$6.15; to Johnson 2 feeders av 910 at \$7; to Kull 3 steers av 587 at \$6, 2 do av 825 at \$7; to Schumaker 1 stocker weighing 570 at \$5, 9 do av 509 at \$5.75; to Bray 2 cows av 975 at \$4.25; to Hammond, S. & Co. 3 bulls av 1060 at \$6.25, 2 cows av 850 at \$4.50, 6 butchers av 440 at \$4.90; to Parker, W. & Co. 8 do av 827 at \$6.90, 4 bulls av 992 at \$6, 3 cows av 1010 at \$5, 10 butchers av 691 at \$6.40.

Spicer & R. sold Mason B. Co. 1 cow weighing 1050 at \$5.25, 1 do weighing 980 at \$5.50, 11 butchers av 634 at \$6.25, 18 do av 523 at \$5.25; to Kamman B. Co. 6 steers av 820 at \$6.70; to Schumaker 2 heifers av 300 at \$5, 4 stockers av 500 at \$5.50; to Lampkin 12 stockers av 460 at \$5.50; to Bresnahan 4 do av 455 at \$5.50; to Kull 10 butchers av 860 at \$7.25, 8 do av 650 at \$6.50; to Heinrich 23 do av 864 at \$7.30; to Wyness 7 cows av 880 at \$5.75; to Bresnahan 6 heifers av 533 at \$5.50, 2 steers av 825 at \$7, 4 do av 592 at \$5.50; to Hammond, S. & Co. 3 canners av 800 at \$4.

Haley & M. sold Newton B. Co. 1 cow weighing 1020 at \$4.25, 9 steers av 930 at \$7.50, 2 butchers av 875 at \$5.85, 7 do av 840 at \$5.75, 3 cows av 910 at \$5.40, 7 heifers av 781 at \$6.65, 2 cows av 980 at \$5.85, 2 bulls av 985 at \$5.50, 4 do av 830 at \$5, 5 butchers av 962 at \$6.75, 1 cow weighing 960 at \$4; to Snow 21 stockers av 513 at \$6.15, 3 do av 517 at \$6.25, 11 do av 480 at \$5.85, 7 do av 595 at \$6; to Sullivan P. Co. 6 cows av 960 at \$5.50, 2 do av 1075 at \$5.25, 1 do weighing 900 at \$4.50, 4 do av 962 at \$5.40; to Schumaker 5 stockers av 488 at \$5.75, 2 do av 675 at \$6.30, 9 do av 452 at \$5.50; to Johnson 10 feeders av 812 at \$7.25; to Mason B. Co. 9 butchers av 728 at \$6.75, 8 do av 655 at \$6.85; to Breitenbeck 6 bulls av 800 at \$5.65; to Mich. B. Co. 1 cow weighing 990 at \$6, 6 steers av 645 at \$6.75, 2 do av 565 at \$5.25; to Rattkowsky 4 butchers av 445 at \$5.50, 4 do av 430 at \$5.80; to Hammond, S. & Co. 3 cows av 757 at \$4; to Marx 7 butchers av 736 at \$6.85, 4 do av 970 at \$5.65, 10 do av 732 at \$6.90; to Mich. B. Co. 7 do av 550 at \$5.25; to Hammond, S. & Co. 4 cows av 762 at \$4.

Roe Com. Co. sold Hammond, S. & Co. 2 cows av 840 at \$4, 1 canner weighing 770 at \$4, 4 butchers av 480 at \$5.50, 1 bull weighing 410 at \$5, 4 do av 630 at \$5.25; to Mich. B. Co. 9 cows av 1020 at \$5; to Sullivan P. Co. 4 butchers av 777 at \$6; to Heinrich 2 do av 765 at \$6.75, 44 do av 990 at \$8.10; to Goose 2 do av 775 at \$4.75; to Parker, W. & Co. 2 bulls av 815 at \$5.50; to Johnson 2 feeders av 835 at \$7, 12 stockers av 610 at \$6.50; to Sullivan P. Co. 2 cows av 970 at \$5.50, 1 do weighing 800 at \$4, 1 bull weighing 1050 at \$6; to Mich. B. Co. 15 butchers av 697 at \$6.50, 2 do av 895 at \$6; to Fromm 3 do av 517 at \$5.75.

## Veal Calves.

Receipts, 560. Market strong at Wednesday's prices; few choice 25c higher. Best, \$10@11; others, \$8@9.50.

Bishop, B. & H. sold Sullivan P. Co. 4 av 155 at \$7.50, 4 av 125 at \$10, 5 av 150 at \$11, 3 av 160 at \$8; to Parker, W. & Co. 11 av 165 at \$11, 11 av 150 at \$11, 7 av 180 at \$10.75; to Mich. B. Co. 2 av 205 at \$11, 2 av 430 at \$6, 3 av 130 at \$11, 4 av 155 at \$10; to Thompson Bros. 15 av 150 at \$11; to Hammond, S. & Co. 4 av 155 at \$11, 3 av 105 at \$11.25; to Mich. B. Co. 1 weighing 150 at \$11, 1 weighing 400 at \$9; to Sullivan P. Co. 9 av 145 at \$11, 1 weighing 200 at \$9, 4 av 155 at \$11.25, 3 av 170 at \$11; to Parker, W. & Co. 12 av 160 at \$11.25; to McGuire 2 av 275 at \$6, 2 av 125 at \$9, 4 av 185 at \$11.50, 11 av 175 at \$11.25; to Kull 12 av

155 at \$11.50; to Burnstone 5 av 160 at \$11.50, 4 av 140 at \$11.25, 5 av 200 at \$7.25, 9 av 140 at \$9.50; to Hammond, S. & Co. 10 av 167 at \$11.

Spicer & R. sold Burnstone 3 av 215 at \$8, 8 av 155 at \$11.25; to Parker, W. & Co. 4 av 155 at \$10.50, 2 av 260 at \$7.25, 4 av 190 at \$8, 15 av 160 at \$11; to Sullivan P. Co. 4 av 150 at \$11.

Roe Com. Co. sold Newton B. Co. 8 av 155 at \$11, 1 weighing 150 at \$9, 4 av 155 at \$11.25; to Goose 8 av 150 at \$11, 7 av 175 at \$11; to Barlage 5 av 155 at \$10.

Haley & M. sold Parker, W. & Co. 4 av 155 at \$11, 6 av 225 at \$10.50, 8 av 150 at \$11, 2 av 170 at \$10, 2 av 130 at \$11, 6 av 165 at \$10.75, 15 av 230 at \$8.50, 5 av 150 at \$10.50, 5 av 165 at \$11; to Mich. B. Co. 3 av 125 at \$10; to Sullivan P. Co. 3 av 170 at \$11; to Hammond, S. & Co. 20 av 160 at \$11, 7 av 185 at \$11.

## Sheep and Lambs.

Receipts, 3185. Lambs 50c higher than last week, but 25c lower than on Wednesday; sheep steady. Best lambs, \$7; fair to good lambs, \$6.25@6.75; light to common lambs, \$5@6; yearlings, \$5@6; fair to good sheep, \$4@4.50; culls and common, \$2.75@3.

Bishop, B. & H. sold Hammond, S. & Co. 7 lambs av 60 at \$6, 134 do av 73 at \$7, 2 sheep av 130 at \$4; to Sullivan P. Co. 33 sheep av 120 at \$4, 14 lambs av 60 at \$5.50, 16 do av 65 at \$7; to Parker, W. & Co. 11 lambs av 67 at \$7.25, 78 do av 70 at \$7.25, 47 do av 75 at \$7.35, 16 do av 57 at \$5.50, 7 sheep av 125 at \$4; to Nagle P. Co. 6 do av 120 at \$4, 7 do av 105 at \$3.50, 58 lambs av 78 at \$7.25, 10 do av 67 at \$7.10, 19 sheep av 115 at \$4.25, 38 lambs av 62 at \$7; to Hayes 11 do av 65 at \$6.75; to Sullivan P. Co. 11 do av 50 at \$5.50, 27 do av 70 at \$7, 1 sheep weighing 170 at \$4; to Thompson Bros. 19 do av 100 at \$4.25, 10 do av 101 at \$4, 18 do av 90 at \$3, 34 lambs av 67 at \$6.75; to Hammond, S. & Co. 82 do av 63 at \$6.85; to Hayes 13 do av 65 at \$4.50; to Fitzpatrick Bros. 4 do av 75 at \$7, 7 do av 80 at \$6.75; to Sullivan P. Co. 130 do av 75 at \$7; to Barlage 45 do av 70 at \$6.50; to Eschrich 19 do av 50 at \$6; to Nagle P. Co. 41 sheep av 120 at \$3.75; to Hammond, S. & Co. 64 lambs av 75 at \$7.

Haley & M. sold Sullivan P. Co. 17 lambs av 70 at \$7.25, 7 yearlings av 77 at \$5, 32 sheep av 120 at \$4.25; to Mich. B. Co. 32 sheep av 125 at \$4, 13 do av 130 at \$3.50, 116 lambs av 73 at \$7, 32 do av 75 at \$7, 50 sheep av 105 at \$4; to Parker, W. & Co. 10 sheep av 104 at \$3.75, 15 lambs av 80 at \$7.25; to Newton B. Co. 116 lambs av 75 at \$7.20; to Hammond, S. & Co. 28 do av 75 at \$7; to Sullivan P. Co. 34 do av 67 at \$7; to Thompson Bros. 10 do av 49 at \$6, 24 do av 80 at \$7; to Hammond, S. & Co. 51 do av 70 at \$7, 15 sheep av 78 at \$4.50; to Parker, W. & Co. 91 lambs av 70 at \$7.15; to Newton B. Co. 33 do av 55 at \$6.50.

Spicer & R. sold Sullivan P. Co. 19 lambs av 60 at \$6.50, 23 sheep av 90 at \$3.75, 21 lambs av 55 at \$6; to Parker, W. & Co. 49 do av 67 at \$7.10; to Hayes 60 yearlings av 70 at \$5.50.

Roe Com. Co. sold Newton B. Co. 25 lambs av 55 at \$6.50, 42 sheep av 70 at \$3.75; to Hayes 22 lambs av 60 at \$6.75; to Mich. B. Co. 14 lambs av 65 at \$6.50, 7 sheep av 120 at \$4, 5 lambs av 70 at \$5.50, 13 do av 57 at \$6.50, 71 sheep av 105 at \$4, 9 do av 140 at \$4, 83 lambs av 75 at \$7; to Barlage 19 sheep av 95 at \$4.25.

## Hogs.

Receipts, 2114. Market 20c lower than on Wednesday.

Range of prices: Light to good butchers, \$8.80; pigs, \$8.80; mixed, \$8.75@8.80; heavy, \$8.50@8.75; stags one-third off.

Bishop, B. & H. sold Hammond, S. & Co. 1017 av 190 at \$8.80.

Roe Com. Co. sold Sullivan P. Co. 175 av 190 at \$8.80.

Haley & M. sold Parker, W. & Co. 45 av 185 at \$8.80.

Spicer & R. sold same 250 av 190 at \$8.80.

## Friday's Market.

August 15, 1913.

## Cattle.

Receipts this week, 1279; last week, 1782; market steady.

We quote: Best dry-fed steers, \$8.25; steers and heifers, 1000 to 1200, \$7.50@8; do. 800 to 1000, \$6.50@7.50; grass steers and heifers that are fat, 800 to 1000, \$6.50@7.50; do. 500 to 700, \$6@6.50; choice fat cows, \$6; good do., \$5.25@5.50; common do., \$4.50@5; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.75@6.25; stock bulls, \$4.50@5; choice feeding steers, 800 to 1000, \$6.50@7.25; fair do., 800 to 1000, \$6.25@6.75; choice stockers, 500 to 700, \$6@6.50; fair do., 500 to 700, \$5.75@6.25; stock heifers, \$5.25@5.75; milkers, large, young, medium age, \$6.50@8; common milkers, \$4@5.00.

Receipts this week, 661; last week, 787; market steady. Best, \$10.75@11.25; others, \$8@10.

## Sheep and Lambs.

Receipts this week, 3978; last week, 3726; market steady. Best lambs, \$7; fair to good lambs, \$6.25@6.75; light to common lambs, \$5@6; yearlings, \$5@6; fair to good sheep, \$4@4.50; culls and common, \$2.75@3.

Receipts this week, 2860; last week, 2293; market 10c higher.

Range of prices: Light to good butchers, \$8.90; pigs, \$8.90; light yorkers, \$8.90; heavy, \$8.50@8.75; stags one-third off.

Late advices received from southwestern drought-stricken regions say stock feeders have been paying higher prices than the terminal markets for corn, and in southwestern markets September corn has sold at higher prices than in the Chicago market. Few farmers in that country are disposed to part with their old corn until they are satisfied, with the crop outlook.

## CROP AND MARKET NOTES.

St. Joseph Co., Aug. 12.—Early potatoes, owing to the drouth, are a light crop but late potatoes bid fair to be a full crop. Some varieties of winter apples are a full crop but as a whole, owing to the May freeze, the crop will be light. Peaches and pears, except in favored locations, are a total failure. The early summer was hard on small trees and many that leaved out and made an early growth withered and dried up. Peppermint, which is raised quite extensively on the muck near here, is only about a half crop, it making but a very small growth, the leaves are exceptionally well filled with oil, running as high as 36 lbs. to the still. The price paid here now is \$3.05 per pound. The S. M. Carr Canning Factory had 56 acres of string beans contracted for and they are running to their fullest capacity. They have about the same tomato acreage, with fine prospects for an immense crop; the price paid for tomatoes is \$9.00 per ton. The Free-stone Pickle Co. have a large acreage into cucumbers, with every indication for the largest yield in years. At 75c per bushel they have proved a money-making crop. Corn is filling out in good shape and bids fair to be the largest corn crop in years. Many new silos are being erected this year. Good prospects for a second cutting of clover, first cutting very light.

Genesee Co., Aug. 15.—August has brought plenty of rain which, while it has injured oats standing in the fields, has helped growth in other crops. Much damage in this vicinity from electric storms. Pastures are green as in June. Corn bids fair to be a big yield. Beans now need dry weather. Sugar beets look well. Some hay moving, also new wheat. Harvest yields of wheat and oats generally satisfactory.

Delta Co., Aug. 13.—Haying is about all done and winter grain is harvested. Oats and spring wheat will be ready to harvest in about ten days. We have had a lot of rain here so everything that was not drowned out is going to be a big crop. Some fields of oats are four feet tall and as thick as they can stand. Potatoes will be a bumper crop. New hay is selling at \$12 a ton; potatoes, \$1.25 a bushel; eggs, 20@25c; butter, 27@30c; cucumbers, 25c a dozen; beets and carrots, 50c a dozen bunches; apples, 50c a peck.

Livingston Co., Aug. 18.—The rains of the past few weeks have made the prospects for corn and beans very promising. Late potatoes will also be a good crop. Pastures are furnishing plenty of feed for stock, notwithstanding the fact that a much larger acreage has been left for clover seed than usual. The new seeding has come on much better than seemed possible a few weeks ago, but it was so severely injured by the dry weather earlier in the season that it cannot make a very satisfactory stand. Oats are all up but not in very good shape owing to the frequent showers. Considerable plowing has been done for wheat. Threshing has begun with wheat and oats yielding well for the straw.

Ottawa Co., Aug. 18.—The severe drouth was partially broken in this section by a good shower yesterday. It will be a great benefit to corn and late potatoes, as these crops were beginning to suffer for the want of moisture. In some parts of the county, a few farmers began to fill their silos before the middle of the month in order to save the fodder. Pastures are so badly dried up that it will require many heavy showers before there will be much fall feed; in fact, many farmers are obliged to feed stock now, on account of pastures being so poor. New seeding is nearly all killed, especially clover. Where clover was cut early there will be a better crop of seed than last year, because the second crop is not half as heavy, and the heads seem to be all well filled on account of favorable weather conditions. Oats are not yielding very well, and they are light in weight, as the average is not over 28 lbs. per measured bushel. There will not be much hay for sale in this section this season.

## Pennsylvania.

Erie Co., Aug. 15.—A severe drouth has visited this section, with but very little rain, not enough to sustain growing crops. Considerable damage will be the result if not sufficient rain fall soon. Potatoes promise to be a failure; corn fairly good; oats generally light and nearly all harvested. Hay about a three-fourth crop. Buckwheat promises to be a failure. Prices of horses and cattle range the same as in previous months; hogs, 8½@9c, live weight.

## Indiana.

Davies Co., Aug. 12.—Drouth continues. Corn drying up fast; less than half a crop; pastures killed; oats, hay and truck a failure. Wheat, 80c; corn, 30c and hard to get; mixed hay, \$15; alfalfa, \$20; butter, 30c; chickens, 13c; eggs, 20c. Shipping stuff, hogs, 9c; cattle, 8c; stockers, 6@8c and coming down rapidly.

## Wisconsin.

Pierce Co., Aug. 12.—Both orchard and cane fruit are in great abundance, trees and vines being over loaded. There is a very heavy crop of potato vine and the early varieties turned out well. Grain harvest is nearly over, about 75 per cent of a crop. Corn, if not overtaken with frost, will be about 80 per cent normal. Several farmers are pasturing extra cattle, turning the unusual grass crop into a profit. Beets and other root crops are doing well, as the almost constant rain keeps the ground moist while the high temperature produces nearly tropical conditions.

The spring lamb crop of 1913 is moving to slaughtering points, with heavy and small supplies alternately, depending upon whether the market is up or down. An active demand exists for grazing lambs, and thus far no considerable numbers have been offered on the market. There is a normal crop of spring

lambs in Virginia, Kentucky and Tennessee, the percentage of lambs being larger, although fewer ewes were bred. The crop of native spring lambs of the middle west is variously estimated as from 40 to 60 per cent smaller than that of last year. Of course, everybody knows that lambs have supplanted sheep in popular estimation and that lambs of equal quality far outsell sheep every time, there being but a limited demand in this country for English mutton chops or heavy cuts of mutton. It is also well understood that heavy lambs must be sold much cheaper than fat light weights.

## DISTRICT AND LOCAL FAIRS THAT SHOULD BE WELL ATTENDED.

The Thumb District Fair held at Port Huron, has become a fixture and at its fourth appearance promises to surpass the splendid results of former years. Liberal premiums are offered and the exhibits compare well with those of other large expositions. The 1913 dates are September 9 to 13, being the week between the Grand Rapids and Detroit Fairs. High-class free attractions have been secured and the attendance this year should reach the high water mark.

The Cheboygan County Fair will be held at Wolverine, Cheboygan county, Sept. 17-18-19. If you are looking for an exhibit of fruit, grains and vegetables you will find no better place to go than here. For amusement we will have games and sports that will be enjoyed by both young and old during the whole fair. Visit us and be satisfied.

Persons visiting the Northern Michigan resorts this season should plan their trip so as to be at Petoskey, Sept. 16-19, when the famous Emmet County Fair is in session. It is the big fair of the north, giving an exhibition of fruit and other farm products surpassed by none. An excellent speed program and high-class free attractions will also be given.—E. A. Botsford, Sec.

**BINDER** Attachment with Corn Harvester cuts and throws in piles on harvester or winrows. Man and horse cuts and shocks equal with a Corn Binder. Sold in every state. Price \$20.00. W. H. BUCKTON, of Johnston, Ohio, writes: "The Harvester has proven all you claim for it: the Harvester saved me over \$25 in labor last year's corn cutting. I cut over 500 shocks; will make 4 bushels corn to a shock." Testimonials and catalog free, showing pictures of harvester. Address NEW PROCESS MFG. CO., SALINA, KANSAS.

**10ct Barn for Sale**—One of the best in Michigan. N. F. RICHESON, Gladwin, Michigan.

**We Want HAY & STRAW**  
We get the top price on consignments, make liberal advancements and prompt remittances.  
**Daniel McCaffrey's Sons Co.**  
PITTSBURG, PA.  
Reference, Washington Trust Company, or any bank in City

**HAY** Ship your carload lots to us, THE E. L. RICHMOND CO., Detroit, Michigan.

**FARMERS**—We are paying 5c 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.

## Farms and Farm Lands For Sale

**240 ACRE FARM FOR SALE**—At Auction, Sept. 1. For particulars address **ARTHUR FOLKS**, Stockbridge, Michigan.

**FOR THE BEST FARMS**, best locations and Michigan, write E. N. PASSAGE, Plymouth, Mich.

**MICHIGAN FARMING LANDS**  
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.

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

**Fertile Virginia Farms**  
Two and even three crops can be grown on the same land a year in Virginia. The climate is so mild and the rainfall so abundant. Big markets nearby with excellent transportation facilities. Write today for our big 69-page catalog, giving full descriptions, prices and terms of large and small farms.  
**The Realty Company of Virginia**  
Dept. B, Blackstone, Va.

## For Sale or Exchange!

Hotel, stable, garage and ice-house with about 20 acres of grass and garden land extending from large to small lake. House practically new, containing 32 rooms with bath rooms, hot and cold water and gas light in principal rooms, the whole newly furnished throughout last season. Has a high-grade summer patronage and has done a paying winter business. Only 20 miles from Portland (on main auto road to White Mts.) connected by steam and stage. Also telephone connection. Value \$14,000. Would exchange for farm of equal value, good land and location being more desired than quality of buildings. A good opportunity for energetic young couple who would prefer hotel business to farming. Send full particulars of what you have to offer.

**THE ELM TREE INN**, Raymond, Maine.

**Overlooking Lake**  
340 Acres, \$5400

One of the best big farms in New York State; ideal location, delightful surroundings; fields particularly level, rich loam, spring and brook-watered pasture for 50 cows and valuable wood lots, 100 fruit trees, excellent condition. 2-story 10-room hotel, 70 ft. barn, many other out-buildings, mapleshade; owner's business calls him away, if taken now only \$5400, part cash. Please call or write for travelling directions to inspect this recently listed farm bargain. Have your own Big Illustrated Catalogue, 36 of 500 farm bargains? If not, please write for it today. E. A. STROUT FARM AGENCY, Station 101, Union Bank Building, Pittsburg, Penna.



# Farm Commerce.

## Securing a Co-operative Manager.

CO-OPERATIVE societies do not work automatically. The power that is bound together in them is useless and can be put to no good unless it be guided and controlled. Without some plan for directing that power into economical channels it would serve men no better than flashes of lightning around about them. So far from being automatic in their working, co-operative organizations require to be even more carefully managed than private concerns. This is because the stockholders of these concerns take an active part in the business, whereas in the private concerns that conduct similar lines of work the majority, if not all, of the stockholders are interested only in the dividends that their investments make.

It becomes necessary, therefore, to centralize the authority vested in the organization; and the usual method of doing this is for the members to choose a board of directors in whose hands the affairs of the concern are intrusted. The directors in turn usually select a manager who is expected to do the actual business under the direction of the board.

The commission plan of running co-operative concerns has been tried. This scheme consists in taking the matters of business before a board of commissioners for disposal, while the actual conduct of the business is in the hands of a clerk. But the plan is so cumbersome that it does not yield readily to legitimate business activity. In other words, it has proven a failure because of its inelasticity, and also because the actual work is done by an irresponsible person.

Going back to the other method of government, it may be stated that two sources are open from which a manager may be secured by a board of directors. One source is from among strangers and the other is out of a list of friends.

One who has become acquainted with the history of these organizations would not readily commit himself in favor of either source as the one from which a successful manager may be secured. Many instances are on record of where men from both sources have succeeded. Executive ability in organizing, knowledge of the business to be undertaken and a liberal quota of common sense are the important elements in a good manager, and they are as apt to be found in the man from the place where the organization is located as in applicants coming from outside points.

An experienced board of directors will not select a man merely to give him a job. There are always fellows around who are more or less popular, who usually apply for such jobs as the managing of co-operative associations and who will almost invariably hire at a comparatively low salary. To an inexperienced board the two conditions named usually make an appeal, and too frequently the appeal is so strong that such men are hired; but the board of directors that has been through the "ups" and "downs" of an association are wise and they know that such men are dear at any price.

Business ability and a congenial spirit are by no means synonymous; a board of directors would be fortunate, indeed, if they could secure a manager with both these qualities, but if either is to be sacrificed let the latter go and make sure that business ability is present in the man elected. A rather good rule, and one that is more or less closely followed by shrewd business men, is to go out and find a man, either in the home community or elsewhere, who is at the time successfully conducting the very kind of business that the co-operative society will expect him to do. Such a person is most certain to have business and executive ability, together with the other qualities that will make him a safe person to hire.

Almost every instance of securing a manager is a problem unto itself because of the varying factors that enter, and for this reason but few, if any, rules can be laid down that will lead the board of directors to certain results. The most that can be said to aid these men in their task is to impress the absolute importance of it in molding the future of the organization. So necessary is it to have the right man that the directors

should make the matter a personal obligation as well as a collective one, and use all available sources to learn of the candidate's ability. It is well and proper to listen to the advice of promoters of these organizations as to the qualifications of prospective managers, as it is also prudent to hear the words of candidates themselves as to their own fitness, but it is neither wise nor significant of sound business sagacity to stop the inquiry here; a talk with competitors and former employers will usually bring out weaknesses in the personality of the candidate that may unconsciously, or purposely, be left out of the qualifications as submitted by himself or someone who is anxious to get the man a position. With a person's strong and weak points before them for consideration it is easier for the members of the board to form a true judgment of his worth than it is with information that tends to be biased on one side only.

Realizing that a large number of readers who are not now connected with any

is a query every man is unconsciously asking himself and earnestly putting to his neighbor; and in the thoughts that result from this searching and pondering many suggestive plans are brought out for trial to see if they answer in whole, or in part, the general marketing proposition.

Now to add to the number of helps that are being brought to the front to assist in selling Michigan apples, the Western Michigan Development Bureau is preparing to inspect apples this fall, that its label, "Sunnyripe," may be placed upon such stock as will meet the Bureau's approval. Since every effort is being made to make "Sunnyripe" brand popular by meeting every condition demanded by the most critical markets, it is almost a certainty that the fruit bearing the Bureau's guarantee will bring a better price in the market. If the system of inspection can be made effective and done economically this plan of the Bureau will in a small way help to solve the marketing problem as it will lead to an increased confidence in the goods containing the label. Those wishing to take advantage of the inspection service should address the Bureau at Traverse City.

### SACRIFICES TO HELP FRUIT GROWERS IMPROVE THEIR WORK.

Rev. A. Bentall resigned from the pastorate of the First Congregational Church of Northport last December that he might give his time to the task of increasing the prosperity of the Leelanau county fruit grower. He did this despite the fact that the salary of the secretaryship of the fruit growers' association, which position he now holds, is less than what he was getting as a pastor.

Rev. Bentall saw clearly that the fruit growers needed a leader in their attempts to make a success of co-operative buying and selling. This year instead of preaching he is showing the fruit men the latest and most approved methods of pruning, spraying, cultivating, thinning and harvesting. If necessary he goes into the orchards and demonstrates the various principles. He also gathers up the orders of the different members of the association for spraying supplies, fruit packages and buys in quantity, getting a lower rate for those who otherwise could not get them.

Last year he helped market the cherry and apple crops and by selling in carload lots at new markets secured better prices than the fruit men would otherwise have obtained. His reputation for honesty is such that the growers are not afraid to trust him to divide the returns among those who furnished the fruit. He is sure that his locality is to be a big and prosperous fruit section and is trying to hasten the day by giving the community the use of his ability at a less figure than they were willing to pay him for ministering to their spiritual needs.

### STUDY THE EFFICIENCY OF THE PICKERS.

The first think that means money to the fruit farmer during the harvest season is the hiring of good pickers, and observations in the orchard will show that some men are more efficient than others, although they seem to exercise no greater energy. Some pickers are careless and think nothing of breaking off the fruit spurs or small branches and throwing them in the basket or on the ground. Others are naturally slow and take too much time in selecting specimens that have reached the proper maturity. Some men have the capacity of speeding up and doing fine, rapid work when the boss is watching but lag behind all the rest of the day, and the slow but steady man may have a better daily average. The only way to solve the problem is to study the men and elim-

inate those holding a disregard for the best interests of their employer.

The profit on one bushel of peaches is small and it makes considerable difference whether it costs five, eight, 10 or 15 cents to pick that bushel of fruit. The amount of fruit that a man can pick in a day depends entirely on the size of the trees and the crop, but the farmer with a large number of pickers can make some interesting observations, when the men are working on trees that are nearly similar in size, variety and quantity of fruit.

A surprising variation in the efficiency of the men was noted on the farm of a prominent peach grower. The orchard contained a fair average crop of Elbertas on 12-year-old trees. The observations were made by the orchard boss who worked around among the men and endeavored to keep a close watch over the work of each individual.

Bill emptied his half-bushel picking basket on an average of once in 10 minutes, and by keeping this up during a 10-hour working day, he averaged three bushels of fruit per hour, making a sum total of 30 bushels for the day's work. He received \$1.50 per day, so it cost the grower five cents per bushel to hire Bill to pick peaches.

John was a reliable man, but only came down the ladder once in 15 minutes. He was only picking two bushels per hour and on the average his work totaled 20 bushels per day. He was also earning \$1.50 per day and it cost the grower seven and a half cents per bushel to harvest the peaches that John picked.

The grower had a crop of 8,000 bushels of peaches that year, and if John or other pickers of his caliber had harvested all the fruit, it would have cost an increase of two and a half cents per bushel or \$200 more for the entire crop, than as if Bill, with pickers of equal ability had finished the harvest at five cents per bushel.

The two men worked side by side during the entire season and it is doubtful if either of them realized that one was doing more work than the other. If Bill had received an increase in his wages, John would have left the farm, for he had never had his labor judged by a standard of efficiency and would have resented any imputation that he was not equal to the other men.

Picking peaches cannot be handled like piece-work in a factory. It leads to carelessness in the effort to win a bigger pay check, and peaches cannot be handled like potatoes. The problem is one to be studied on each individual farm and the farmer who understands the capacity of his men has learned a big factor in successful farm management. Throughout the picking season Bill was daily doing one-half again as much as John for the same remuneration. The knowledge was valuable, for if a man had to be taken from the orchard and sent out with the team, John was the man to send. John was as good a teamster as Bill, but Bill could make more money for the grower at picking peaches.

Studying human efficiency was making that grower a success. He never placed two men on a one man job or one man on a two man job, and he knew which man was the most efficient in each line of work. The peach pickers were not chosen at random and after they had been on the job, it was a question of doing efficient work or quickly learning how to do it. Their skill was noted by the orchard boss and the drone with little interest in the work did not remain to influence the efficient harvesters.

Ingham Co.

R. G. KIRBY.

### LIVE STOCK NEWS.

Idaho sheepmen expect to make their largest shipments of lambs to market during September, so that prices may be expected to be at their lowest next month.

Most of the western stocks of wool have been sold, and since the bulk of the clip left growers' hands there has been an advance of two cents per pound.

Late reports come from Montana that about half of the 1913 beef crop of that growing state will be shipped to the Pacific Coast.

Recent investigations lead to the conclusion that there is a serious shortage of ewes of breeding age, due to close marketings of lambs during the last few years from all sections. There is at the same time a decided deficiency of matured wethers all over the west and a marked scarcity of yearlings in most sections. The lamb crop is a very good one, although by no means a bumper one, as the number of ewes bred was away below normal. There is a gradual, but sure, falling off of the sheep industry in nearly all the western range states, due chiefly to the steady encroachment of the farmer and enhancement of land values.



Rev. A. Bentall, of Leelanau County, Becomes a Successful Leader of a Fruit Growers' Association.

co-operative enterprise, are watching these columns closely, we wish to deviate from the line of thought running through the preceding paragraphs, to state that, had those who have ventured in the past to join the community organizations for mutual good, given them the careful study that they deserve, there no doubt would be fewer failures recorded and the system of co-operation would have been much farther advanced in this country than it is. These failures are almost entirely the result of poor management and not the fault of the system. And since the management is more or less directly a reflection of the intelligence of the membership, the better informed the members are, the greater are the chances for success. For this reason, too, the possibilities of co-operation in America are limitless because of our educational system, and if farmers and others will give that close attention to this plan of community effort that they are now giving to production, the day of its advantages will be hastened.

### TO HELP SELL MICHIGAN APPLES.

When a question becomes so important that the people of every community have it constantly before them, sooner or later its answer will be forthcoming. The condition of the marketing question at the present time seems to be in this unsettled state. How to improve the means of distributing the products of the farm



## Veterinary.

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

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

**Caked Udder.**—Cow came fresh a few days ago, now udder is caked, two quarters affected. W. H. Reading, Mich.—Apply fluid extract of phytolacca to caked parts once a day and give her 2 drs. of this same medicine at a dose three times a day. Her bowels should be kept open.

**Puffed Hock.**—I have a young colt with puffed hock, but hock is cool and causing no lameness. I am told it is bog spavin, but am not certain. E. W. W., Hand Station, Mich.—Your colt suffers from either a sprained ligament of hock or has had a navel infection, leaving joint enlarged. I am most inclined to believe it an infected joint. Apply one part iodine and ten parts fresh lard to puff twice a week and he will gradually get well. This treatment will usually cure incipient bog spavin, if kept up long enough.

**Warts on Colt's Nose.**—We have a colt whose nose is covered with small warts and I put on nitric acid, which did some good. P. S., Gladwin, Mich.—Clip off those with necks, apply lunar caustic carefully. In many cases smearing nose with sweet oil, castor oil, or one part carbolic acid and ten parts vaseline will remove them. Feeding too much stimulating food will cause warts.

**Foot Soreness.**—My colt bruised frog of foot 18 months ago; since then she has been tender, at times showing lameness. For the past two months she has been quite lame. The frog of foot is not now diseased. She went sound for five months. A. B., Grand Rapids, Mich.—She bruised bottom of foot and if you will protect it with leather sole she may go sound. Never attempt to treat lameness until you have first located it.

**Barren Heifers.**—Have two heifers that fail to get with calf, both have been regularly served by sure calf-getting bulls. A qualified Vet. tells me neck of womb is open, vaginal canal normal. These have no vaginal discharge. Have applied both permanganate of potash and bicarbonate of soda treatment, also thoroughly disinfected their stable. Veterinarian tells me they have no ovarian cysts. C. E. G., Union City, Mich.—Your heifers suffer from contagious abortion infection, and no doubt the treatment you have given them is good, but I doubt if it will prove effective in these cases. Give each heifer 30 drops carbolic acid in a quart of water once a day.

**Cold Abscess.**—My brood mare has a bunch high up on neck a few inches back from head, which is hard, and I have applied iodine without reducing it much. C. H. S., North Branch, Mich.—Apply one part red iodine mercury and eight parts lard to bunch every three or four days. When it softens, open and allow contents to escape, using peroxide hydrogen to clean out pus, then apply one part coal tar disinfectant and 30 of water.

**Cough.**—I have a seven-year-old mare that seems to be healthy, but is troubled with a hacking cough. A. L. W., Ithaca, Mich.—Give her a dessertspoonful of glycerol (Smith) at a dose in feed three times a day.

**Enlarged Thyroid Glands.**—Have a colt that has two moveable bunches in throat, but they do not seem to make him sick. I forgot to say he is only four months old. W. D. V., Suttons Bay, Mich.—Give colt 5 grs. potassium iodide at a dose daily and if these bunches do not lessen in size in two weeks give the medicine twice daily.

**Rheumatism.**—I have a young cow that dropped a calf some three months ago, which is stiff and sore and whenever she is brought into stable she lays down at once. Her feet are sound and I fail to find any swelling on any of her legs. J. H. W., Caseville, Mich.—Give her a table-spoonful powdered nitrate of potash at a dose in feed three times a day; also apply spirits camphor to sore parts twice a day.

**Navel Infection—Sore Neck.**—Several colts have died in this locality from navel disease and as I have several mares to foal this fall, would like to know what to do for them. I also have another mare with sore neck and a bald patch on body, which we would like to hair over. C. C. C., Lake Odessa, Mich.—With a piece of corded silk or linen thread which has been soaked in one part carbolic acid and 20 parts water, tie cord one inch from body, cut off cord, paint end of cord with tincture iodine or apply iodoform. Many of the home-healing remedies are all right to heal end of cord. Keep the mare and colt in a clean stable and they are not nearly so apt to become diseased.

**Lump Jaw.**—We have a cow that has a hard bunch on jaw and would like to know what ails her. F. C. H., New Baltimore, Mich.—Apply one part red iodine mercury and four parts lard to bunch once a week, also give her 2 drs. potassium iodide at a dose in feed or water twice a day.

**Rheumatism—Goitre.**—I have a good mare that has rheumatism, she starts lame, but soon warms out of this soreness. I also have a colt which has two

loose bunches in throat and I am afraid they will do colt harm. A. C., Melvin, Mich.—Give her 2 drs. sodium salicylate at a dose twice or three times a day and apply tincture iodine to bunches three times a week and colt will soon be well.

**Cow Gives Bloody Milk.**—About two weeks ago one of my Jersey cows commenced to give bloody milk from right fore quarter and I am certain she could not have bruised udder in pasture lot. N. E. D., Wheeler, Mich.—Apply one part tincture arnica and ten parts water to affected quarter three times a day.

### LIVE STOCK NEWS.

Charles Critchfield, of Missouri, had four carloads of Galloway two-year-old heaves on the Chicago market on a recent Monday, that tipped the scales at 1,197 lbs. and brought \$8.90 per 100 lbs. He brought the cattle to market and was highly pleased with the sale. Number and weight considered, this is the highest sale of two-year-old cattle made in the Chicago market this year, and not for a long period has a bunch of Galloways of that number sold so high. Mr. Critchfield bought these cattle in the Kansas City market and fed them a little over half a year. He spoke of conditions in his locality as favorable, the corn crop promising especially well, and good rains have made fine pasturage.

A short time ago a bunch of Mexican cattle from a dry Kansas pasture were sold in the Chicago market for \$5.55 per 100 lbs., their average weight being 798 lbs. They were typical Mexicans and were marketed entirely because the hot, dry weather had destroyed the grass in that portion of the southwest. Last spring grass cattle were bought down there at high prices, and grass rents there this year are the highest prices ever recorded, so that normal gains and good prices are necessary in order to let grazers out whole, to say nothing of reaping fair living profits.

The hog trade has never been on a colder basis than at the present time, the strength shown in prices from week to week being due to the fact that the requirements for the fresh meat and provision trade exceed the supply of swine in the corn belt states. Prospects appear to be highly encouraging for continued high prices, and stockmen should use every pains possible to make their holdings prime before marketing.

The recent sensational collapse in prices for the too generous percentage of soft, heavy, grass-fed hogs in the Chicago stock yards came as somewhat of a surprise to many stockmen, yet there was nothing remarkable in it, for such swine are wholly unwelcome, and packers simply will not buy them except at extreme reductions in prices from those paid for well fattened hogs. In short, the widening out in hog prices is extremely large, and stockmen should note the fact and act accordingly in preparing hogs for marketing. Prime light hogs are still topping the market daily, with choice medium butcher weights coming next and throwout packing sows going much the lowest of all. Where it is possible, hogs should be made choice before shipping to market. It is true that even the best hogs have sold at sharp declines in prices recently, but they are still selling at far better values than in past years and are expected to do so indefinitely.

The largely increased receipts of thin, grass-fed cattle from drouth-stricken sections of the country, including thousands of not very desirable grassers from Kansas and Oklahoma, have been a depressing influence in recent weeks in western markets. Chicago has felt their influence, although the receipts have been largely in Missouri river markets, where these cattle always find their principal outlet. As they have had to be disposed of at large discounts from the prices paid for fat corn-fed cattle, the inevitable result is a marked widening out in prices between the best and the poorest cattle. In selling thin grassy cattle everything depends upon whether they are adapted for feeders or not, and if not, buyers find it an easy matter to secure them at very low values. The trade in feeder steers, cows and heifers in the Chicago market has fallen off materially lately, but hundreds of farmers are waiting for a favorable opportunity for restocking their pastures. They are mostly particular as to the breeding of the cattle they purchase, however, and are opposed to wasting time and money on stock of low breeding.

Dr. A. D. Melvin, chief of the Bureau of Animal Industry, was designated by Secretary Houston, of the Department of Agriculture, to carry on an investigation of three months of the meat packing industry in the principal cattle growing countries of South America and to investigate the possibilities of getting meat from Australia after the free cattle and meat tariff bill becomes a law.

### A VALUABLE REFERENCE.

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

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

### BREEDERS' DIRECTORY.

#### CATTLE.

#### Aberdeen-Angus.

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

**Guernsey Bull-Calf.**—Rich in A. R. breeding. Fit to head any herd. A Gee Dandy. G. A. WIGENT, Watervliet, Mich.

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

**HEREFORD BULLS FOR SALE.** Also Poland. ALLEN BROS., Paw Paw, Michigan.

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

**Buy A World Record Holstein Bull** NEXT TIME. We have 2 with 15% same blood of 3 world record cows. Great bargains at \$250 each. LONG BEACH FARMS, Augusta, (Kalamazoo Co.) Mich.

#### "Top-Notch" Holsteins.

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

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

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Breedsville, Mich.

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

Send for circular.

#### TWO HOLSTEIN COWS

With their Bull Calves for Sale. Clothilde Houwtje Soldene, four years old, not bred. Her yearling bull is a splendid individual sired by Pontiac Hesselte Korndyke of the Pontiac Asylum herd.

Ivis II, three years old and bred to a son of Pontiac Apollo. Her bull calf is two months old and a fine individual; sired by a son of Pontiac Burke. These animals are being sold to reduce the size of our herd. Write for prices. Dr. L. BREISACHER, 71 Washington Ave., Detroit, Mich.

#### DISPERSION SALE

Over 40 head Registered Holstein cows & heifers of choicest breeding. Describe what you want or come and see them. C. D. WOODBURY, Lansing, Mich.

**Holstein Friesian Cattle.** A couple of young bulls for sale. We boast of quality not quantity. W. B. Jones, Oak Grove, Mich.

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

**Registered Holsteins.**—HOBART W. FAY, Mason, Mich. Farm right in the city, only a few minutes from Jackson or Lansing, electric cars from both cities every hour.

**FOR SALE.**—On Cornwell Farm, Clare, Mich. Holstein new milch cows. Also 400 yearling steers. Also good Dairyman wanted. Enquire of ERNEST PIETZ.

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

**For Sale.**—4 Reg. Holstein cows bred to Sir Korndyke Fietertje Hengerveld, No. 55292. Also 2 bull calves and 3 heifers. E. A. BLACK, R. 6, Lakeview, Mich.

**For Sale.**—2-yr. old Jersey Bull—Dam's 5-yr. old record 1054 lbs. milk, 513 lbs. fat, 904 lbs. butter. Sires dam's record—1297 lbs. milk, 630 lbs. fat, 706 lbs. butter. 2-yr. old full sister's record—9610 lbs. milk, 435 lbs. fat, 513 lbs. butter. All authenticated, kind, sound, sure. Waterman & Waterman, Ann Arbor, Mich.



### The Jersey

The Jersey gives richer milk and more butter than any other known breed, at a lower keeping cost. She does it continuously and persistently. Her milk and butter bring better prices than the product of any other dairy breed. That's where quality does count. Jersey facts free. Write now. We have no cows for sale.

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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. COLON C. LILLIE, Coopersville, Mich.

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**For Sale.**—Registered Jersey Cattle, tuberculin tested: bulls and bull calves; heifer and heifer calves; cows with Register of Merit and Cow Testing Association records. IRVIN FOX, Allegan, Mich.

**Notton Farm, Grass Lake, Mich.** A few young Jersey Bull Calves at \$25 to \$45 each.

**RED POLLED COWS and HEIFERS.**—For sale, of good milking strains. John Berner & Son, Grand Ledge, Mich. Route 4.

**9 Shorthorns.**—Bulls from 8 to 12 months old. Best of breeding. Write for pedigrees. W. W. KNAPP, Howell, Mich.

**DAIRY BRED SHORTHORNS.**—Bates bred bull 7-mo. old for sale. Price \$100. J. B. HUMMEL, Mason, Michigan.

**Dairy Shorthorns.**—Large Cattle—Heavy Milkers. Milk Records of all cows kept. No stock for sale at present. W. W. KNAPP, R. No. 4, Watervliet, Mich.

**FOR SALE.**—A registered yearling Short-horn Bull, color red, good enough to head most any herd. Write or come and see. WM. D. McMULLEN, R. R. 9, Adrian, Mich.

### SHEEP.

## The Reason Why!

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS, "the sheep man of the east." I sell and ship everywhere and pay express charges. I will start one man in each township. Write for club offer and descriptive price list.

**OXFORDS,** Shropshires, Ramboulllets and Polled Delaines.

**PARSONS, Grand Ledge, Michigan.**

Kingsville, O. July 17, 1913.  
Dear Sir: I received Oxford Sheep yesterday in good shape and will say he is a peach. When I got home with sheep a couple of my neighbors came over and looked him over. They said he was the biggest sheep they ever saw and the best around here. I will keep the crate. I paid the express agent \$2 for it. Thanking you for your prompt delivery, I remain, Yours truly, Arthur L. Peck.

At one time men drove many miles in search of Rams: nowadays PURE BRED Sheep are ordered by letter of

"The Sheep Man of the East"

### SHEEP FOR SALE IN CARLOAD LOTS.

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**A Few Choice Oxfords at Reasonable Prices.** W. E. GARDINER, Morley, Michigan.

**Reg. Rambouillet Sheep, Pure Bred Poland China HOGS and PERCHERON HORSES.** 2 1/2 miles E. Morrice, on G. T. R. R. and M. U. R. J. Q. A. COOK.

**The Ingleside Farm** is offering more and better before. All stock recorded. Write us what you want HERBERT E. POWELL, Ionia, Mich. Citizen's Phone.

**Prize two-year-old Shropshire Rams 1912.** 1st and 2nd Also good yearling Rams and Ewes for sale. E. E. LELAND & SON, Ann Arbor, Michigan.

**Shropshire Rams.**—Good ones cheap. Write before Aug. 15th, for special proposition. KOPE KON FARM, Kinderhook, Michigan.

**SHROPSHIRE** rams 1 and 2 years old, and some extra good lamb rams, wool and skin good type. GEO. P. ANDREWS, Dansville, Ingham Co., Mich.

### HOGS.

**Durocs & Victorias.**—A Desirable Bunch of Sows of Either Breed due April and May. M. T. STORY, R. R. 48 Lowell, Mich. City Phone 55.

**BERKSHIRES** Choice spring boars and gilts, priced to move quick. Farmers stock. ELMHURST STOCK FARM, Almont, Mich.

**A Yearling Sow**—bred for July farrowing, also a choice lot of Spring Pigs for sale. Either sex. A. A. PATTULLO, R. No. 1 Deckererville, Mich.

**Chester Whites.**—Spring and summer pigs, write us your wants. Price and quality right. Meadow View Stock Farm, R. F. D. No. 5, Holland, Mich.

**O. I. C.**—Big growthy type, last fall gilts and this spring farrow to offer. Very good stock. Scott No. 1 head of herd. Farm 1/2 mile west of depot. OTTO B. SCHULZE, Nashville, Mich.

**O. I. C.**—growthy kind, with plenty of bone. No cholera ever on or near farm. Satisfaction guaranteed. A. NEWMAN, R. 1, Marlette, Mich.

**O. I. C's.**—all sold. Orders booked for April and May pigs of the choicest breeding. C. J. THOMPSON, Rockford, Michigan.

**O. I. C's.**—Bred sows, March pigs pairs and trios. Buff Rock Eggs \$10 per 15. FRED NICKEL R. 1, Monroe, Michigan.

**O. I. C's.**—All ages, growthy and large. Males ready. 100 to select from. Attractive prices on young stock. H. H. JUMP, Munith, Mich.

THIS



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**SOW WEIGHED 932 LBS. AT 23 MONTHS OLD**

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I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, R. No. 10 Portland, Mich.

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**O. I. C. SWINE.**—I am offering 200-lb. gilts, bred, due to farrow the latter part of August and first part of September. All who are interested write me. A. J. GORDON, R. No. 2, Dorris, Mich.

**DUROC-JERSEYS.**—Fall and Spring boars from prize-winning strains. Sows all ages. SPECIAL BARGAIN in summer pigs. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

**Duroc Jerseys.**—Nothing But Spring Pigs For Sale. CAREY U. EDMONDS, Hastings, Michigan.

**Duroc Jerseys.**—Gilts all sold. Spring pigs of the large and heavy boned type. Pairs not akin a bunch of guaranteed. F. J. DROTT, R. No. 1, Monroe, Mich.

**Duroc Jerseys For Sale.**—Three fall boars, also spring pigs, either sex, of finest breeding and individual quality. John McNicoll, Station A, R. 4, Bay City, Mich.

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

**LARGE STYLED POLAND CHINA SPRING PIGS.**—Sows bred for fall farrow, also Shorthorn Bull calves at close prices. Robert Neve, Pierson, Mich.

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

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

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

**P. C. BOARS AND SOWS.**—large type, sired by Expansion. A. A. WOOD & SON, Saline, Michigan.

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

**YORKSHIRE** Swine.—We have some nice spring pigs now ready for sale. Write for description and prices. OSTRANDER BROS., Morley, Mich.

### Lillie Farmstead YORKSHIRES

Spring bred gilts all sold. Gilts bred for next August farrow. September pigs either sex, pairs and trios not akin. Orders booked for spring pigs. COLON C. LILLIE, Coopersville, Mich.



# Poultry and Bees.

## SELECTING THE LAYERS.

Beginners are sometimes at a loss to decide just what is best for winter layers. Indeed, it is often a difficult proposition for some of the rest of us, who have had years of experience. A few years back the writer never thought of keeping a hen longer than two years for laying purposes, and firmly believed that none but early-hatched pullets were suitable for layers.

We have all learned that a great deal, in either case, must necessarily depend upon the variety of chickens. All large varieties, such as Orpingtons, Plymouth Rocks or Wyandottes are inclined to put on fat rather than lay eggs after they are two years old, as a rule. However, there are some exceptions. In nearly every case the food that a hen consumes has more to do with the number of eggs she lays than has her age or origin. This does not apply to "scrubs." A mongrel hen, like a scrub cow, is seldom, if ever, worth the feed she eats. Good varieties of chickens which have been crossed may look like common scrub fowls, but there is a difference. However, this was not intended to be a talk on scrub hens.

If a hen is known to be a good winter layer, it is not a good plan to dispose of her at the end of the second year unless the winter quarters are in danger of being overcrowded. When the time arrives for the hens to moult, watch for the early moulters. A hen that moults early is nearly always a good winter layer. The hens that moult slowly, late in the season, should be sold, or otherwise disposed of unless they are wanted for some purpose other than winter laying. Early moulting hens are the ones that lay the eggs while the late moulters and pullets are getting ready to lay. Late moulters are useful sometimes as sitters and to lay eggs in spring when the hens that have laid all winter are taking a rest. However, where hens are kept for winter eggs it is best to weed out the "drones," and late moulters.

Hens begin to moult about the same time every year. That is, a hen that moults early one year will, as a rule, moult at about the same time the next year. It is the same with the late moulters. Never send moulting hens to market. They should be fed heavily until they are feathered. High feeding will sometimes force them to grow new feathers quickly, but a natural moult is, by far, the best for layers. Sunflowers were largely grown a few years ago to be used for the purpose of helping poultry to moult. They are still used to some extent, but not so much as formerly. The husks are very difficult to digest, and have no food value at all. Oil meal mixed with corn meal and bran will give better results. Some pulverized charcoal should be added. Remember this ration is not intended for the layers, but it is not so very far off the subject, since the proper disposal of surplus poultry helps to make the business more profitable.

Those who keep Leghorns should not be in too great a hurry to dispose of the hens. These little egg machines are different from other chickens. A neighbor who thinks she knows a great deal about poultry, was treated to a little surprise recently. This lady has kept fancy Brown Leghorn hens for some time past, partly for pleasure and partly for profit, winter eggs being the principal object. We were casually discussing the subject of winter eggs when she remarked that her hens had been laying unusually well, but that she had begun killing them off, for table use. This was early last April. When asked why she was doing this, she replied that she was very fond of chicken and, as the hens would not do to keep another year, she had decided to kill them all during the spring and summer and then buy some young pullets to keep for next winter. I asked how old her hens were. She replied that they were not quite a year old yet. I promptly informed her that I often kept good Leghorn hens until they were four years old, and that I do not consider a Leghorn hen ever at her best until after the first year. My neighbor could scarcely express her surprise and chagrin. Needless to say, she decided not to eat any more Leghorn meat for a while.

We often hear it said that only the early-hatched pullets are suitable for winter layers. Now, this is true enough

when only large varieties are considered, such as those previously spoken of in this article. But there are others, one, at least, which comes in the general-purpose class, viz., the Rhode Island Red. These begin laying, as a rule, when about five months old, as do the Leghorns. I had some of both hatched in July, last year, and they were laying well by the middle of December.

When Leghorns are hatched very early in the season they grow rather slowly while the weather is cool. Then late in the fall, they drop their tail and wing feathers. This partial moult is sure to retard the production of eggs several weeks. And, as their growth was less rapid at the start, the early-hatched Leghorns seldom make as good a showing in the fall as those that were hatched later. Therefore, do not hesitate to keep the thrifty, late-hatched Leghorn or the Rhode Island Red pullets for winter layers. There are doubtless some others that will give good results. Of course, I do not mean to infer that none but late-hatched pullets should be kept. Probably the very best time to hatch layers is during May and June. But it is not always possible to hatch enough by the last of June. I like June-hatched pullets for layers, but I have very good success with the July hatches. Feed and care will bring the eggs, never fear.

Ohio. ANNA W. GALLIGHER.

## POULTRY FEEDING.—I.

An expert feeder's objects are not merely to feed his animals to fill their stomachs, or to satisfy their appetite, but to supply all the needs of the body. All animals need building material, whether it be used on building new tissues as in the young and growing body, or that which has been worn out in the general wear and tear of the organism. The same elements which go to make eggs also are used in building tissues.

All animals need food that will supply heat and energy—heat to keep up the body temperature, and energy to carry on the various functions. Carbohydrates and fats are the elements of foods which produce heat and energy. Protein is the element which furnishes material for the renewal of the worn-out tissues and for the growing of new tissues, as in the state of young stock.

The ideal ration for any animal is one that supplies every need of its body in relation to the purpose for which it is kept, and does this at the least cost. The ideal ration for poultry, therefore, depends upon whether it be used for growing broilers, making eggs, or in supplying the needs of a breeding flock.

In order to balance up a ration for his specific needs, it is necessary that the feeder understand the composition of the different foods as well as the composition of the tissues that go for rebuilding and building up the body and keeping it in working shape.

For the simple reason that much more than one-half of the total weight of a fowl is water, it can be readily seen that the ordinary ration for poultry does not nearly supply the needs in this direction. Therefore, it is necessary to supply water to chickens in addition to that which they can get from the grain and other food they get. Hence the necessity of water forming a separate part of the chickens' food.

Mineral matter is employed in the formation of bones and feathers, as well as in regulating the density of the blood and other fluids of the body, such as the juices of the stomach, etc. Mineral matter is used in the formation of egg shells. In a fowl's body about five per cent of mineral matter is found. The reason why, in estimating food values, mineral matter is generally omitted, is that all of the common poultry foods contain enough of this substance. Therefore, it need not be taken into consideration at all when making up your ration.

But it is always advisable to distinguish between the inorganic mineral matter and the organic. The inorganic mineral matter is found largely in oyster shell and bone meal, hence the reason for always including these in your list of poultry foods. The organic mineral matter is found only in living plants and animals; this the fowls can generally obtain to some extent on free range during the summer; on account of the impossibility

of supplying it during the winter the fowls can never be made to do quite as well as in spring and summer.

The muscles, tendons, brains, blood and internal organs of fowls, are largely composed of nitrogenous material. The working machinery of a chicken's body is composed largely of nitrogenous material. New York. F. W. KAZMEIER.

## A CASE OF ROBBING.

As a beginner in bee-keeping I have been very much puzzled lately at seeing so many of my workers being stung to death. Five or six workers will all attack one of their number and, in a very short time, death will be the result of their vigorous stinging. It cannot be from too large a number of bees, as two swarms have left the hive this season. Leelanau Co. A. B.

Your bees were in all probability being robbed and I fear that, unless something has been done before this, you will have no bees in that colony to care for. But perhaps I can assist you in avoiding trouble of this kind in the future. In the first place, your bees swarmed too much and in consequence were so weakened that when robbers attacked them they were unable to effectually resist them.

You would be unable to detect the robbers going out and in, as they would undoubtedly look like the rest to you, but if you were accustomed to looking for them you could distinguish them by the peculiar inquisitive manner in which they approach the hive—a manner different from the swift unhesitating flight of the regular workers from the field. They usually, when robbing, fly in a peculiar spraddle-legged and highly inquisitive style that reminds one of a small boy who knows he is in mischief and is afraid he will get caught at it. When they leave the hive they will usually, instead of flying direct from the entrance as the regular workers do, run up the front of the hive a few inches before taking flight. But don't get excited the first time some of your young bees go out for a play-spell, for they will act very much as I have described the robber bees. But there is this notable difference. Bees inside a hive in which robbing is going on will be in an uproar, and if there are bees enough to put up some kind of defence there will be some fighting.

Now for the cure. As in most other things, prevention is better than cure, and this can be accomplished by not allowing your colonies to become weak; or, if they have become weak in spite of you, keep the entrance closed down very small. Where robbing is prevalent and the colony very weak, give them just room for one bee to go out at a time. This gives them a good chance to defend themselves. Once robbing is well under way and the bees in the hive demoralized, you can hardly stop them by closing the entrance alone. A good way is to close the entrance as recommended and then throw a lot of damp grass over it several inches thick. The bees already in will gradually work out, but very few robbers will work their way in. Better yet, close up the hive entirely and carry it down cellar, robber bees and all; leave it there three or four days and your robber bees will join forces with the hive they were trying to rob. When they are set out, instead of a weak colony you will have a strong colony of vigorous fighters, for all robbers are good defenders at home.

Robbing is usually started by leaving little particles of honey where bees can get at them when there is a dearth of nectar. Once they get a taste of the stolen honey they are crazy for more. Mecosta Co. L. C. WHEELER.

One should aim to keep the young poultry growing well throughout the summer. Because you think they are nearly raised is no reason why your interest should grow weaker. They still need faithful attention. By avoiding and setbacks, due to improper feeding or care, they will mature more readily and uniformly. After giving them their freedom you should be careful to see that they all find their proper places at night, and are protected from rats and other enemies. There still should be regular hours for feeding and if you have been giving them a dry mash be sure to see that it is still there. Morning and evening they should be given a feed of wheat or cracked corn. Do not forget the good clean water in a clean dish. Give them skimmed sweet milk if you can spare it. With free range they are getting plenty of green stuff. If the pullets have been well taken care of they should begin laying in October or the first of November.

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

#### Associational Motto:

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

#### VALUE OF EDUCATION.

Paper read at the August meeting of the Ingham County Farmers' Club by Miss Florence Taylor.

In looking at the year book of the Farmers' Club, I noticed particularly the sentiment for this month—the English school sentiment—"Either teach or learn or leave the place." This seems to pertain to the teacher in a particular way and to education in a somewhat general way. Let us see how some scholars define education.

The oldest definition, one that has stood the test of 2,300 years, is Plato's: "Education gives to body and to soul all the beauty and perfection of which they are capable."

Dr. Dewey says, "Education is life."

Another scholar says: "Education is the process by which an individual is changed from a dependent, self-centered, egoistic being to an independent, social, altruistic being."

We may accept any of these definitions that suits us best, but we see that the fundamental idea in all of them is the growth and development of the individual. In this way he becomes better adjusted to his environment and is capable of greater service. This is brought about largely by the public schools and the fine training the children receive there. We think our system of common schools is the best and perhaps we are justified in doing so.

Education is a necessity in a free government. The life and success of a free government depends primarily on the average intelligence of the people. Slavery is an institution that cannot well exist where the people are generally educated.

In no other country is there more diversity of thought and race, or of interests and habits. When we look over the history of the settlement of our country and notice with what entirely different motives our country was settled, we see the diversity was true from the very first.

Then, too, the immigration enters. More than a million immigrants are coming to our country every year from nearly every country on the globe. Unless these people are taught American manners, customs and patriotism, there is real danger in immigration. The common school is the greatest factor in the solution of the problem. "No other agency can harmonize so effectively the diverse interests and make Americans of the children of the immigrants."

The parochial schools cannot do this for they are established on a different basis; private schools frequently draw a line between the rich and the poor.

Education decreases criminality. In examining the prison records it is found that in proportion to their numbers the illiterate members of a community furnish eight times as many criminals as do the educated people. The question of the educated criminal arises, but education for all should not be abolished just because a few of its products have not lived up to the best of their knowledge. The educated criminal is a criminal, not because of his education, but in spite of it.

Education decreases pauperism. In one of our definitions of education we said it changed an individual from a dependent to an independent being. This necessarily means that one must be able to care for himself; and as each is able, pauperism decreases. As one acquires an education his faculties are better developed; he can attain greater success and be of greater success to his fellowmen.

The keynote of our schools today is industrial efficiency. More and more stress is being laid on the practical side of education. Many examples of this are being found in the curricula of schools. Community arithmetic for instance, in which

the problems deal directly with the occupations of the community. Some supplementary handwork, such as paper cutting and tearing, raffia work, clay modeling, etc., when wisely mingled with the common branches, in the primary and intermediate grades, makes the school work infinitely better and more interesting to the children than a strict adherence to the three R's as was found in the "olden golden days" of which we younger teachers hear so much.

I believe in the course of your splendid programs you have had helpful discussions concerning manual training, domestic science, and agriculture in the schools. Right here a word about nature study is well expressed by Burroughs: "I should not try directly to teach young people to love nature so much as I should aim to bring nature and them together and let an understanding and intimacy spring up between them." This work may combine some of the rudiments of agriculture; the testing of seed corn, work of the sun upon starch in leaves, etc., something of plant and animal life; studies of the grasshopper, frog, cricket, and others, together with those of trees and plants; principles of physiology and hygiene are taught also. The subject is a very broad one and easily adapted to any school in the community.

If after one has spent some years in acquiring an education, he finds his earning powers increased, he feels repaid for his efforts and perhaps sacrifices. The fact that this is true is a great credit for education. I have a friend who was teaching at \$40 per month, but after completing her university course secured a fine position at \$80 per month. We are inclined to think that education—particularly higher education—is practical only for teachers, but this is not necessarily true.

While, of course, it does aid teachers greatly, it aids any one who obtains it. Whatever makes life sweeter and worthwhile of the living is certainly beneficial.

People advocating higher education are always met with the question, "Does it pay?" I believe the Farmers' Club is no exception, for it seems to me I remember listening to a very interesting and spirited discussion of this question during the early part of the year. I would like to present an argument based on "Who's Who in America?" of May, 1913, concerning the commercial value of education? Perhaps an apology is due for putting it on a mercenary basis, but still it is a strong argument. A selection of 7,852 notable men, successful in all lines of work all over our country was made and inquiries concerning their education made. These men were not alone teachers, but superintendents of factories, managers of plants, successful business men of all kinds; men who have been successful in all walks of life.

On the basis of 40% million of people in the United States 21 years of age and over, the following statistics were gained: First, 4% million, without school training, furnished 31 notables; second, 32% million with eight years of school training, furnished 808 notables; third, 21-6 million, with 12 years school training, furnished 1,245 notables; fourth, 11-10 million, with 16 years of school training, furnished 5,768 notables.

By these last figures we find that one-fortieth of the people—those with college training—furnish thirty-fortieths of the notables. Does not this speak well for college training?

From the entire list these conclusions were drawn: First, an uneducated child has one chance in 150,000 for distinction; second, eight years of training increases his chances nearly four times; third, 12 years of training increases his chances over the common school boy 25 times, and over the uneducated boy 87 times; fourth, college training increases the chances of the high school boy nine times, giving him 219 times the chance of the common school boy and over 800 times the chance of the untrained boy.

Of the 7,852 notables, about three-fifths were full college graduates. It should be borne in mind that there were no more teachers in the list than other professions. These people with more education have increased earning-power and are capable of making more money. Those who were in business for themselves were better fitted to conduct their affairs and were doing so in such a way as to receive greater returns. \* \* \* The aim of all institutions of learning is the triumph of mind over matter. The fundamental principle of all education is the training of the mind.

"Were I so tall to reach the pole,  
Or grasp the ocean with my span;  
I must be measured by my soul,  
The mind's the standard of the man."

## Grange.

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

### THE SEPTEMBER PROGRAMS.

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

Opening music.  
Fall handling of crops: 1. Corn. 2. Potatoes. 3. Beets. 4. Fruits.

Music.  
My favorite poem with some account of its author.

What can a farm boy do, while attending school, to earn money toward a high school or college education?

What can a farm girl do, while attending school, to earn money toward her high school or college fund?

Summary of good points made in this program.

#### Suggestions for Second Meeting.

Song by children of the Grange.

Roll-call responded to by each member mentioning the name of some person whose home he passes on way to Grange, who does not belong to the Grange.

How did you start in life for yourself? Answered by two men and two women.

Recitation.

Shall father and mother move to town when they cannot work as they once did and children are grown? Why, or why not?

Some things a retired farmer and his wife may do for their community. Discussion.

Solo, "Stay on the Farm," No. 120, Grange Melodies.

Short farce.

Light refreshments, served by the "bachelor girls" of the Grange.

### THE IDEAL GRANGE AND GRANGER.

Paper presented by Mrs. L. C. Murray at recent joint meeting of Nunica and Cooperville Granges and published by request.

The ideal differs widely from the practical the ideal being largely imaginary; so let us imagine this ideal Grange.

First, an ideal Grange will provide for itself an ideal home. Such a home shall differ from the ordinary barn-like structure usually known as a hall. Its outward appearance suggests what it is intended to be, a home. It is well shaped and nicely painted, a cozy little porch shelters the entrance, inviting the chance visitor, as well as the home member.

The inner arrangements follow the outward suggestion of a home. Its auditorium or lodge room is sufficiently large to comfortably entertain not only one neighboring Grange, but several. It has a large, well-equipped dining-room and kitchen, storage and ante-rooms, a comfortable room where the sisters may put the babies to sleep and make the other small children comfortable; also we will go a step further in arranging our ideal home and provide a smoking and card room to give the brothers a chance to be happy in their own way.

We all have different ideas of happiness, so if one's enjoyment may be so arranged as not to interfere with the pleasures of others, we will follow Col. Roosevelt's advice and have all the fun we honestly and decently can. Our ideal Grange Home will encompass all these, striving to make each individual member happy.

Now having a mental picture of our ideal home, we will imagine our ideal Grange at work in this home. As the opening hour approaches we find the other rooms all being deserted for the lodge room. The officers are in their respective places, all present, not an absentee. The chairs are well filled with members of all ages, plenty of young people, as well as those of riper years, all eagerly attentive to the work before them.

And this ideal Grange work. What a wide range it covers! We notice, as each division of the evening work is reached by the presiding officer, the members who have been entrusted with that particular work respond promptly; the different committees are ready with their reports; new work is suggested, everything moves along, not perfunctorily, but full of interest every minute. Listening attentively we hear much about co-operative buying and selling, fire, cyclone and life insurance, better marketing facilities, spraying, fertilizing, destroying weeds; how to simplify the every-day work on the farm, handier barns, hog and hen houses, so as to accomplish the most work with the least labor. Re-arranging the kitchens, screened-porch dining-room, out-door sleeping rooms, with the idea constantly in mind, more home-making with less labor.

Better babies, better chances for the

little children, better reading matter, the best ways of combating the ever-present fly, the trouble with the home gardens, the troublesome moles in the yard, college education for the farm boys and girls, etc., etc.

The members of this ideal Grange must indeed be broadminded, courageous people, for hear how they discuss in a neighborly way all manner of things. Good roads, free wool, free trade in all the various ways which affect the farmer; income tax, lower general taxes, yes, even single tax, are fully discussed pro and con, in a non-political way which is truly inspiring.

And we observe the sisters taking part in these talks instead of being quiet listeners, and note how well informed they are, and, we reason, why not? Are they not equally interested in all these matters? So these ideal sisters are bravely setting forth their ideas on all these things because they affect the home, trying to learn how to make good on the farm and still remain good citizens, alert and watchful for the best interests of each other and all.

The ideal Grange looks closely after the good of its members, caring for the sick, helping the needy, relieving helplessness wherever found, provides a home for its aged members who may be so unfortunate as to need such help; provides a school for its orphaned children where they may have a chance for an education also a vocation enabling them to make good in this great hustling world. The ideal Grange is one great unselfish family looking for ways to better conditions for all. It is not self-centered, but reaches out to sister Granges, increasing its strength by uniting with others in pressing forward.

It is an accepted fact that the world is no better than its separate parts, so this ideal Grange must necessarily be composed of ideal members.

Now to be an ideal Granger means a great deal, so we will study these members a little. We find them to be well versed in the regular lodge work, familiar with the ritual, the degree work, have an excellent degree team, each individual member being able to exemplify the work if called upon; each patron is qualified to do good, able work anywhere in the Grange, and not only able, but willing and ready, when wanted.

The ideal master is always looking forward, making suggestions along various lines this way or that to improve conditions, and the ideal member is quick to grasp and put in force everything that seems to be for the general good. And so, too, will the ideal member respond cheerfully when called upon by the ideal lecturer to assist in the evening's entertainment.

There is one little phrase never heard from the lips of the ideal Granger. It is, "I cannot." Instead the ideal Granger will always reply, "I'll do the best I can." So when the lecture hour arrives in this ideal Grange how well the members respond, and we listen to song and story well rendered.

But this is not all. Our ideal Grange looks after the social welfare of its members as well as the fraternal, legislative, financial and intellectual. The short recess gives members a chance for neighborly chat and making the new members and visitors feel at home and one of the family.

Then when the lecture hour is over and the dining-room doors thrown wide open, inviting all to partake of an ideal Grange supper, the response is even more prompt if possible.

While we are lingering a little over this ideal supper we hear the orchestra tuning its instruments, and pretty soon the scene changes, the music strikes up a lively tune, and away go our ideal younger members lost in the mazes of the dance, an ideal dance which is but the natural expression of music, not an ungainly, unlovely exhibition.

So our evening closes, and how thoroughly enjoyable it has been.

Can we, too, reach the Ideal?

Somebody said that it couldn't be done, but he with a chuckle replied, "That 'maybe it couldn't' but he would be one."

Who wouldn't say so, 'till he'd tried.

So he buckled right in, with the trace of a grin.

On his face. If he worried he hid it, He started to sing, as he tackled the thing.

That couldn't be done, and he did it.

### COMING EVENTS.

#### Pomona Meetings.

Wayne County Pomona rally, in Joseph Waltz's grove, at Waltz, Friday, Aug. 29. D. E. McClure state speaker.



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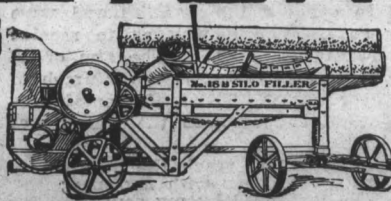
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