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## FARM NOTES.

### Fertilizing Beans.

I have 12 acres of gravel and sandy soil which I would like to put into beans. It was mowed for hay last year and this year the clover was nearly all winter-killed. Now, I wish to put this field into beans and want to put fertilizer with them. How would be the best way to put fertilizer on, put it in with the beans or drill on each side of the row, and how much fertilizer would you use per acre?

Tuscola Co.

F. KEILITZ.

Those who have experimented with commercial fertilizers for beans on clay loam soils are pretty well agreed that it does not pay to use a fertilizer containing either nitrogen or potash, but that it is profitable to use acid phosphate to supply needed phosphoric acid. This is generally applied at the rate of about 200 lbs. per acre on fertile soils, and the best way of applying it is to sow it thru three drill hoes, using one on each side of the row, as well as one thru which the seed is sown. From his experience in the use of commercial fertilizers, however, the writer is of the opinion that the best way to apply fertilizer for any crop is to apply it broadcast or with a drill so as to get an even distribution and a thorough mixing with the soil before the crop is planted. On a sandy soil for beans it would also probably pay to use some potash as well as phosphorus, since sandy land is generally deficient in this mineral element of fertility. But this is a question which can be satisfactorily answered only by the soil itself, and the best way to determine it is to put the question direct to the soil, by using different kinds and different amounts of fertilizer. However, it would probably not pay to use a fertilizer containing much if any nitrogen, as the clover sod will leave an abundance of that costly plant food in the soil, and the beans are a leguminous crop which have the same faculty of appropriating the nitrogen from the air when the bacteria peculiar to the plant are present in the soil.

### Does the Manure Spreader Pay?

I would like to ask your advice in regard to purchasing a manure spreader. Will it pay to own one of these machines on an 80-acre farm? We draw out, on an average, from 150 to 160 loads of manure every year. Any advice that you may give along this line will be greatly appreciated by subscriber and some others living in this locality.

Gratiot Co.

O. C. MERRITT.

This is a question which an increasing number of farmers are asking themselves each year, and as object lessons of the benefit of the manure spreader become more common in their respective neighborhoods, more of them are answering it in the affirmative. There is no question in the mind of the writer that the manure spreader would be an exceedingly profitable investment for any farmer having from 150 to 160 loads of manure to apply to his land during the year. But let us figure on this proposition a little and see if we cannot prove it to the satisfaction of the reader. It is conceded by every farmer that hauling manure and spreading it from the wagon is hard work, and the actual saving of time and labor in the hauling of this quantity of manure would easily pay a reasonable rate of interest on the investment in a manure spreader, and an excess over this charge which would nearly, if not quite, counterbalance the natural

depreciation of the machine, so that it would be a fairly good investment to own a manure spreader from this standpoint alone. But this is only a minor consideration. Every farmer knows that much of the value of stable manure to the succeeding crop depends upon the evenness of its distribution. He also knows that it is impossible to do a first rate job of spreading by hand without taking a good

deal of time in doing the work, and that even then it cannot be done without applying at least 20 good big loads of stable manure per acre. And then, even under the most favorable conditions, the hand work will not compare with the work of the manure spreader so far as fine and even distribution is concerned. In fact, a good even job of spreading can be done with the spreader when applying only one-half the amount per acre that must be applied when spread by hand to get even a fairly even distribution, so that about twice as much ground can be evenly covered each year with a given amount of manure where a manure spreader is used as where the manure is spread by hand. Experience has proven that it is not only much better to spread manure evenly and thinly over this larger area than to apply it thickly on a smaller area, but it has proven that owing to the greater benefit derived from it because of the better distribution, the smaller quantity when evenly distributed with a manure spreader will give just about as good results as the larger quantity spread by hand, even by a careful man. When this fact is taken into consideration, there is no doubt about the profit in owning a manure spreader, even by the small farmer, if he has say, 100 or more loads of manure to spread each year. It means that he can cover ten acres of land instead of five, and the increased yield of his corn crop will, in the writer's opinion, represent a handsome profit on the investment, while the saving in time and labor will pay the interest on the investment.

### Fertilizing Worn Clay Land.

We have a six-acre field of clay loam that is badly run down and have no manure for it. How would it be to use fertilizer? Would it pay to put it around the corn after it comes up, and how much, or what brand should we use?

Kent Co.

SUBSCRIBER.

While commercial fertilizer will not, in any sense, take the place of stable manure in bringing up a worn piece of clay land it would probably pay to apply 400 to 500 lbs. per acre broadcast and harrow into the soil before the corn is planted. Of course, the corn could be given a good start by applying say 100 lbs. per acre in the hill at the time of planting the corn or by dropping it on the hills and harrowing in after the corn is planted. For either purpose a standard grain fertilizer having a formula of something like 2:8:2 would be suitable for this kind of soil. But the trouble is that while this will add available plant food to the soil, worn clay land is generally in a poor mechanical condition, owing to the fact that the vegetable matter or humus has been depleted. Stable manure would supply this element, which the commercial fertilizer will not, and while the fertilizer will aid in the growing of a better crop in a favorable season, yet the permanent results which might be expected from a liberal application of stable manure should not be expected from it in a case like this. The thing to do with this land is to get it seeded to clover as promptly as possible, which will supply it with both vegetable matter and nitrogen. Then by using a little stable manure and supplementing it with commercial fertilizer to supply the needed mineral elements of fertility, it can be put into good condition for growing crops, as both its mechanical con-

## THE UNKNOWN DEAD.

Above their rest there is no sound of weeping,  
Only the voice of song-birds thrills the air;  
Unknown their graves, yet they are in God's keeping,  
There are none "missing" from his tender care.

He knows each hallowed mound, and at His pleasure  
Marshals the sentinels of earth and sky;  
O'er their repose kind Nature heaps her treasure,  
Fanned by soft winds, which 'round them gently sigh.

Bravely they laid their all upon the altar,  
Counting as naught the sacrifice and pain,  
Theirs but to do and die without a falter—  
Ours to enjoy the victory and the gain.

They are not lost; that only which was mortal  
Lies 'neath the turf o'erarched by Southern skies;  
Deathless they wait beyond the heavenly portal,  
In that fair land where valor never dies.

In the great heart of coming generations  
Their fame shall live, their glory never cease;  
Even when comes to all earth's troubled nations  
God's perfect gift of universal peace.





dition and its available content of plant food will be improved, but simply increasing the available plant food in a soil that is in poor condition mechanically, will not insure good crops.

#### Wild Carrots.

I have a piece of swamp land that was cleared last fall and seeded to timothy. There is considerable wild carrot coming up now. Is this poison or injurious to any kind of stock for pasture or in the hay?

Kent Co.

C. B. PURDY.

While wild carrots are becoming a very bad weed in many localities in the state, yet they are not claimed by any of the authorities as being poisonous to live stock, as are wild parsnips and some other weeds of similar nature. Whether these weeds which are just coming up would seed this year or not is an open question. Some authorities contend that the wild species is an annual in many sections, while others place it as a dependable biennial and still others maintain that it will grow for more than two years whether it produces seed or not, showing almost perennial habits. It would not, however, produce seeds before the hay crop is cut, and after cutting the plants can be dug out with a spud if not too numerous, while if sufficiently plentiful to warrant such a course, the seeding could be plowed to destroy them. This weed, however, is not a troublesome one in cultivated crops, and except for the seeding of the land with the seeds it will do no harm to pasture the field.

#### When to Plant Beans.

I have ten acres of sandy loam plowed last fall after corn crop, which I want to plant to beans. Would you advise planting early, say the last of May. The general run of farmers plant about the fifteenth to the twentieth of June, but if the land is ready what would be the object in waiting until the season is so far advanced. I want to put the land to wheat after the beans are harvested.

Isabella Co.

SUBSCRIBER.

From the first to the fifteenth of June, all things considered, is probably the best time to plant beans. If planted during the first half of that period they should ripen in August when the weather will ordinarily be better to harvest them without trouble or damage from rains, which is quite a factor in the profit derived from the crop. Then the beans will be off in season to make a thoro fitting of the land for fall grain possible. Where the ground has been fall plowed and well fitted for the crop, the soil could be gotten into good condition for planting at an earlier date than this, but beans should germinate quickly and grow rapidly for best results. After the first of June the ground is generally warm enough so as to bring about this desirable result, but this is not always the case. The writer once planted a field of beans early in June, and the poor stand secured owing to unfavorable weather following the date of planting made the reftitting and replanting of the field necessary. Of course, this would not often happen, and if conditions appear favorable during the early days of June there would be no objections to planting the crop at that time. In fact, it would be better than too late planting. Of course, the planting of beans, like the planting of any other crop, is something in which the judgment of the farmer should be exercised, and in which no fixed rule can be laid down. The writer that he was unfortunate this year in not getting his oats in before the cold wet spell which prevailed during the last days of April and the first days of May, but to his surprise the oats are now fully as large and look much better than oats which were sowed under exactly similar conditions nearly three weeks before. So while perhaps June 10 may be considered as an ideal time to plant beans, either earlier or later planting may be better in any given year.

#### MOON DOES NOT AFFECT CROPS.

Now that planting time is around, it should be of interest to farmers, suburbanites and others who indulge in these practices, to know that there is nothing in the current superstition about planting potatoes and other root crops in certain phases of the moon.

It is current opinion among many farmers that if you plant potatoes in the dark of the moon they will run to tubers, and if in the light of the moon they will run to tops. This is also said to be true of any root crop and it is planted accordingly.

There is usually a basis in fact for any superstition, and the moon superstition was so deep-rooted that a number of experts of the Department of Agriculture, while going around the crop, made it

their business to study the question and see whether there might not be a germ of truth, or, at least, some reason for the general belief that the moon's phases have an effect on animal and vegetable life. They have concluded after patient investigation that the moon myth is one of the comparatively few myths that dates back to pure savagery and has absolutely not a scientific leg to stand on.

The field workers of the department have found that at least 75 per cent of the farmers of the country put in their crops and do a good many other things about the farm governed absolutely by the moon's phases. The agricultural experiment stations all over the country have for years been defying the superstition and raising just as good crops, if not better, when the moon was one way as when it was the other, as farmers do when governed by the lunar light.

Washington, D. C.

G. E. M.

#### FERTILIZER QUESTIONS.

The black soil here is rich, giving a heavy growth of straw which lodges and makes a small yield of grain, especially on new land. What kind of fertilizer will be best to stiffen the straw. And how much would it require per acre. Also, I have some land from which the humus was all burned off. Would you advise using commercial fertilizer on this soil and how much per acre.

Midland Co.

J. L. SAGE.

Where a black soil grows a heavy growth of straw and is liable to lodge and does not fill well with grain, it is a pretty good indication that the soil contains too much nitrogen in proportion to the phosphoric acid and potash, hence a commercial fertilizer rich in phosphoric acid and potash would tend to stiffen the straw and help to fill the grain. Potash has much to do with the stiffness of the straw and phosphoric acid has to do with the plumpness of the berry. I would not use any nitrogen at all in a fertilizer for this kind of land. You can use a combination of phosphoric acid and potash. One that contains 9 or 10 per cent of phosphoric acid and 3 or 4 per cent of actual potash ought to give splendid results, and of course a fertilizer containing only the mineral elements will not cost as much per ton as a complete fertilizer which contains nitrogen, because nitrogen is the most costly part of the food elements.

On the other hand, on your land where the humus has all been burned off this land would be deficient in nitrogen but would probably contain sufficient phosphoric acid and potash. It might be a little deficient in phosphoric acid, but it certainly ought to contain a liberal amount of potash. I would use a complete fertilizer, or one that contained only nitrogen and phosphoric acid, like bone meal. I should say that a fertilizer that contained 2 per cent ammonia, 8 per cent phosphoric acid and 1 per cent potash would be an almost ideal formula for this kind of land where the vegetable matter had been burned off, and I would want to get it seeded down to clover as soon as possible to get roots in the soil, and perhaps plow under a crop of green manure in order to put back into the soil some of the vegetable matter which was destroyed by fire.

COLON C. LILLIE.

#### ALFALFA.

Wherever I meet a group of farmers one subject is almost invariably brot up—Alfalfa.

I don't know that I ever saw so widespread an interest taken in the culture of any crop as is now taken in the growing of alfalfa.

Everyone wants the stuff if he can grow it.

It has been tested sufficiently so that its food value is quite well understood, and its extraordinary power of growing during a drouth and producing a good crop of hay, while all our other grasses are withering and drying up; and its ability to grow three crops in a season in this latitude, give it an importance second to none of all our crops.

I have been growing the plant in a small way for five years—mostly experimenting with it.

I sowed a little patch (¼ acre), without a nurse crop. It came up well, and stood the following winter well. The plot was a dry knoll, fairly fertile.

I let it grow until it blossomed out fully, then cut and cured it.

The leaves nearly all fell off, and I had a bunch of dry, hard stuff resembling ripe pig weed, very poor hay. Next season I decided to cut it earlier. As soon as the first stems began to blossom, I cut and put it up into small piles, leav-

ing it out two days—then drawing to the barn. We fed some of it to the horses and they ate it all, leaving no stems.

I have since fed it to sheep and cattle and hogs and they seem to relish it, and will pick it out from other hay.

I conclude that alfalfa should be cut early, while quite green, say when the blossoms first appear.

The next season I sowed another little piece (¼ acre) adjoining the first plot.

I mowed both plots three times and secured a good large load of hay each time.

The stand on the plots is good—very little of it having been killed out. It seems to stand the winter better than medium clover.

The land on which this experiment was made is very dry, sandy. No crop that I have raised on it, ever escaped damage from dry weather.

Last season I sowed one acre more, fitting the ground, which is also dry and sandy, early and well, and sowing ¼ bu. seed. After sowing and lightly harrowing in, I rolled it. On this acre I secured a good thick stand.

The weeds came up and threatened to choke out the little plants. I mowed off the tops of the weeds, leaving them on the ground.

In a few days the alfalfa shot up and I could have mowed a very fair cutting of hay, but that it would be a very good protection from winter, and left it.

It has been very well covered with snow, and the plants look fine. I am so well satisfied with it that I shall sow five acres this spring.

The worst thing I see about this crop is the curing. It must be cut green, and if the weather is wet or lowering it is very slow to cure out. A large field of it would be rather a stiff proposition. It is very heavy, when green, and in trying to lift a forkful a man will be "up against it." Perhaps it might be the proper thing to cover the bunches of hay with some sort of canvas cover and leave it out for four or five days. What can you suggest on this curing topic?

I see that some are advocating the use of caps or covers. Do you know what such caps will cost? I understand they are made with wire pins at the corners, so they may not be lifted off by the wind. A ten acre field would require a large number of covers, but unless they are too expensive, it might pay to get them.

Mecosta Co.

A. VAN ALSTINE.

#### DRY POTATOES FOR FOOD.

Consul Frank S. Hannah sends a report to the Department of Commerce and Labor, relative to some recent experiments in the drying of potatoes under the auspices of the German Imperial Interior Department, which may offer a new field for farmers. The potatoes are reduced by this process to about one-quarter of their original weight and can be kept in a good condition in this compressed form for an indefinite length of time. The military authorities have made thoro experiments with this product and have become convinced that its nutritious value is fully equal to that of corn, and that the dried potatoes can take the place of one-third of the former ration of oats. The fact that the potatoes are reduced to one-fourth of their original weight brings about a corresponding reduction in the price of freight, so that it will pay to grow more potatoes than has formerly been the case.

G. E. M.

#### IMPROVED PEA BEAN.

The improved type of Pea or Navy Bean now being introduced by the Alfred J. Brown Seed Co., of Grand Rapids, Mich., is meeting with great favor among bean growers who make a specialty of growing pea beans for profit. As there is only a limited amount of seed to be had, it would be well for those who have not already placed their orders, to do so at once.

While the price at which these seed beans are being sold, viz., \$4.00 a bushel, is a dollar and a half more than common seed beans, the cost of seed per acre is very little more, as it takes less seed. A peck to a third of a bushel will plant an acre if planted in hills two and a half feet apart each way, allowing four to five beans to the hill, and a half bushel or even less will plant an acre if drilled in two and a half feet apart.

Quite a number of the elevators thruout the bean section of the state have these seed beans for sale, or they can be obtained direct from the Brown Seed Co., if spoken for soon.

#### Two Fine Haying Tools.

Hay makers will be interested in the two good haying tools the Sandwich Mfg. Co., of Sandwich, Ill., are advertising in this paper. The right kind of a rake and a loader to load the wagon without pitching, are very important when the hay is ready. These are the two tools referred to. The Sandwich people have a good thing in their side delivery rake, a combination tedder and rake which gathers the hay without roping or twisting. Their clean sweep loader is claimed to be the best thing in an automatic loader yet brot out. Farmers highly appreciate it because it picks up the hay and handles it gently. There is no threshing or pounding, no kicking, and it does not gather up trash. It is a great thing to be able to load clover and dry hay without threshing off and wasting much of the best part of it. The Sandwich people have a catalog on these two great hay tools they would like all hay makers to see. You had better send and get your copy. Every hay maker ought to know about this rake and loader. The book is free, but mention this paper when you write.

#### Apples—Get Full Value from a Large Yield.

With the present favorable outlook for a large apple crop this year, farmers are already commencing to make arrangements for taking care of the yield. As has been the case in former years, and will no doubt continue to be, cider making will occupy an important place on the program, and many fruit men will soon begin to think about buying new machinery for that purpose. The name of Boomer & Boschert, of 472 Water St., Syracuse, N. Y., has been associated with cider-making machinery for so long that the name and the product are alike well known, as the presses made by this firm are famed for strength, durability and satisfactory performance. Many of our readers will be anxious to receive a copy of their catalogue, which illustrates a great variety of presses and appliances for making cider.

#### How About Oiling the Harness.

Harness oiling is a rainy-day job on the farm and a regular part of stable work in the city. It's a vitally necessary part, too. There's no trouble about spoiling a harness—the question with horse owners is how not to spoil harness. A very little use in all kinds of weathers works a great change in the flexibility and "snappiness" of harness leather. It gets hard, dry, lifeless—crossed and re-crossed with little checks which eat into the leather and soon bring it to the breaking point. Eureka Harness Oil is the only oil worth using. We say that advisedly—"Eureka" is the most economical harness oil, and here—outside the fact that it never becomes rancid and contains nothing injurious to leather—is the real reason. Of course, if you use oil that keeps a harness soft and pliable twice as long as another, it's the cheaper of the two, and that's why it pays to try Eureka Harness Oil.

#### Hay Men Attention.

Figure what it costs each year to stack your hay. That is money thrown away, for you can bale your hay from the windrow as cheaply as to stack it, and get a better grade of hay. If you bale 100 tons from stack you lose \$1 a ton from the waste from top, bottom and sides of stacks, and by handling the hay twice, especially alfalfa, you lose the small leaves, break it up, and lower the value one grade. Wouldn't you prefer to save this money, put it in a good hay barn and store your hay so you could be ready for the market when at its best? For further particulars on windrow baling and labor saving in making hay, ask Auto Fedan Hay Press Co., 1511 W. 12th St., Kansas City, Mo., whose ad. is on page 596, and they will cheerfully and gladly answer all questions on these subjects.

#### A Good Fence.

The Cleveland Fence & Wire Co., Cleveland, O., are manufacturing a particularly strong, serviceable fence in their style A. The lock is put on in such a way as not to bend the lateral wire inside the lock—all contraction and expansion is taken up between the uprights and the lock, therefore cannot be loosened. The uprights are hard steel wire, very firm and rigid, making it impossible for hogs to root it up from the ground, or for heavy animals to crush it down from the top. An attractive booklet illustrating this and other styles of farm and ornamental fence and the London Fence Machine, an old favorite now called the Cleveland Fence & Wire Co., Cleveland, Ohio.

Last season the Aspinwall Manufacturing Company, of Jackson, Michigan, first offered to the trade generally their New Double Cylinder High Pressure Sprayer, which has met with wonderful success. This machine was designed especially to meet the requirements of the potato growers desiring a sprayer of extra high pressure, and among its many advantageous features, has an index plate for regulating pressure, also syphon agitator to keep the mixture from clogging, and the nozzle arrangement in front in constant view of the operator. While primarily a potato sprayer it is frequently used for beans, cabbage, strawberries and other plants and vines. Catalogue fully descriptive of the sprayer, also other potato machinery made by the company will be mailed on request.

Freeport Wind Mill & Gas Engine Co., of Freeport, Ill., is a new \$50,000 company recently organized to manufacture these specialties and other farm machinery.



## FERTILIZER FOR POTATOES.

Having a desire to try some commercial fertilizer on our late potatoes this year, of which we plant from four to six acres, will you kindly advise me as to the proper proportion to buy. One piece of land is "beech and maple" clay loam in fair condition—a clover sod, made a fine crop of hay last season, but has heaved out badly this winter. This soil is not heavy clay, but contains considerable sand. Another piece of ground is on the "burr oak" land of southern Cass county—an old farm, but in good condition, but certainly lacking in some elements necessary for good potato raising.

Cass Co. G. H. REDFIELD.

I would use fertilizer on both fields and practically the same amount per acre, but I would use brands of different formulas because they are of different kinds of soil. On the clay loam I do not think it would be necessary to use as large a per cent of potash in the fertilizer as on the oak opening soil. I would not use over 2 per cent of ammonia in any potato fertilizer and I would be just about as well satisfied with one per cent as with two per cent. What you want is just enough of the nitrogen to give the potato a start and it will take care of the rest, altho two per cent would probably be a good investment. Now, on the beach and maple clay loam I would recommend 1,000 pounds per acre of a fertilizer that would analyze say, 2 per cent ammonia, 9 per cent phosphoric acid and 5 per cent actual potash. I would put this on broadcast after I got the land plowed and harrow it well into the soil, then plant the crop. I do not believe in putting very much of this fertilizer into the hill. I think this is a wrong idea. Distribution is one of the principal factors in getting results with commercial fertilizer. On the other field of oak opening land, I would use a fertilizer containing 2 per cent ammonia, 8 per cent phosphoric acid and 10 per cent potash, or twice as much potash in proportion as on the other field, and I think the experience of all users of commercial fertilizers on different soils will bear out my judgment in this respect. I would use the same amount, at the rate of 1,000 pounds per acre. If you have not used commercial fertilizers very much, and lack faith in using so large an amount for potatoes, then I would make some experiments. On a portion of the field I should certainly use at the rate of 1,000 pounds per acre, then on another portion you might try 500 pounds per acre, and note carefully the results. But bear in mind that you cannot tell the profits by just simply the looks of the growing crop, or the looks of the potatoes after they are dug. In order to figure out your profits, the potatoes ought to be measured or weighed, and if you do this and do it carefully, and take into consideration the extra amount of marketable potatoes where the fertilizer is used, I haven't any hesitancy in saying that the use of commercial fertilizers will be found profitable.

In order to get the best results in potato culture you ought to spray for blight because, if your potatoes are struck with blight, then the fertilizer cannot produce the results that it ought to. If they have healthy vines free from disease they will have greater power for using this fertilizer. In my opinion no one can afford to raise potatoes now without spraying all thru the season for blight in order to keep the vines healthy, because only healthy vines can appropriate the plant food after you place it in the soil. If you use fertilizer on your potatoes and then allow the blight to weaken their vitality, and you don't get the yield you ought to, you have no right to lay this to the fertilizer. It should be laid where it belongs, to the blight.

COLON C. LILLIE.

## MY EXPERIENCE WITH CLOVER ROOT-BORERS.

When the clover root-borers first began to destroy our crops here, (some 15 or 20 years ago), I learned that they did not destroy alsike so bad as they did the common clover and so I sowed some of it. The results were so satisfactory that I have sown it ever since. I usually use a four-year rotation, mowing my clover for two years, then plowing for corn or potatoes, to be followed by oats and seeded down again. Sometimes I sowed a mixture of red and alsike clovers and there is some timothy in the ground so I get a mixed hay. Often the root-borer or the winter will kill my red clover, but the alsike is always on hand the second year and produces about the same as the first year, not quite as much bulk, but it is finer and is not full of oat stubble, and is generally worth more per acre to feed than the first year's crop.

The borer does not seem to like the alsike very well and when it does attack a root the alsike has so many that it does not kill easily and heaving does not hurt it much either, so I do not fear the root-borer much on any ground good enough to grow alsike, and most of my ground is all right for that crop. But I am afraid of them on some sandy land that I intend to sow alfalfa on, tho I hope they won't learn to like that either.

Isabella Co.

F. G. SMITH.

## THE ROAD QUESTION.

I have been somewhat interested in noting the expressions of opinion that have been made in the press and thru petitions to the state legislature on the new road law. Most of these expressions have been of an adverse nature. They came from two classes of people, those that have been forced to live under the administration of road officers who disregarded the law or were incompetent for the office, and those who by nature are opposed to any change or innovation, especially if it touches their pocketbook. The second class of kickers are hopeless and so it is useless to discuss their grievances, but the first class is up against the real thing. In many portions of the state it is evident that some mighty poor sticks have been elected as highway overseers. This, of course, is the fault of the electors, at least partly, and can only be remedied at the next annual election, and it is also partly due to the lack of road education of the right sort that has been emphasized by the attitude of the state highway department since its organization. While this department has done a good work in Michigan, too much emphasis has been laid on the state aid road and how to build it, and not enough on the thousands of other miles of road that will not come within the range of the state aid law for years to come. I know whereof I am speaking for I have had considerable opportunity to watch the kind of education given by the department. Practically no advice has been given as to how to build up and maintain our common roads and this has been the case to a large extent on the part of the farmers' institutes and state press. As is usual in so many cases, Michigan is still behind the procession in the march of progress toward universally better roads. I note the recent law enacted in Iowa, showing how much more advanced education along this line is in that state.

This law is briefly as follows:

It requires, rather than permits, township trustees to drag all main traveled roads, including rural mail routes.

Trustees shall pay not to exceed fifty cents per mile for each mile actually traveled in dragging.

Requires the city councils of cities and incorporated towns to cause the main traveled roads within the corporate limits leading into the city or town to be regularly and systematically dragged.

Another striking feature is, it shall be unlawful for any person or persons to drive, ride or cause to be driven, any vehicle of any description, on or upon the south half of an east and west highway, or the east half of a north and south highway, after the same has been dragged and before such portion of the highway shall have sufficiently dried to pack under horses' feet, or frozen hard enough to carry, providing that nothing in this section shall apply to those instances where it is impossible to drive with safety on the west or north side of the road.

Provides penalties for violating and provision of this act. First offence, one to ten dollars; after offences, five to twenty-five dollars.

In other words, the state of Iowa has realized that the having of good roads in that state means the systematic use of the road drag.

A few years ago Prof. Taft secured D. Ward King, of Missouri, to work in farmers' institutes of this state, preaching his doctrine of good roads by means of the use of the road drag. He did a great amount of good, but his teaching was not followed up by others in later years and it has been even covertly laughed at by the state highway department. Now I am fully prepared to state that of the two kinds of road machines, the regular heavy road grader and any type of the simple road drag or scraper, as we are more accustomed to call it in this state, the latter machine is by far the safer one to place in the hands of the average man to work a road with. While I wish our state legislature would see fit to enact a law similar to the one I have just called attention to, yet I presume

such action is a little premature, for judging by what men in Michigan now do, I do not believe we, as a state, know enough to use such an enactment before it would die from disuse.

When the new law went into effect in this state abolishing the statute labor tax and substituting the money tax, it found Michigan pretty well filled up with the heavy road grader. We still have a large number of these machines scattered over the country, and of course the highway commissioners make use of them whenever possible. Now, not more than one man out of ten really knows enough to run one of these machines when they should be used and apparently not more than one in fifty knows when they should be used.

After a roadbed has been properly graded, there is no necessity for using it further, for the road can be kept in better shape with the small scraper or drag, than it can be with the grader and with less than half the expense.

I have a nice illustration of this idea right at hand. A certain piece of road in our county had been neglected or abused for a number of years. The highway commissioner put that stretch in the hands of a man who knew how to run a grader. He put the road in shape. It was not cared for as it should have been the latter part of last season or during the past winter, yet it was about the best piece of road of its kind of soil in the country till the commissioner saw fit to work it over some time last month. Then, instead of working it with a drag, they pulled out the grader again and humped it up in the middle, rolled in what stone could be found by the machine and left them in the track for the traffic to wear out or be worn out on. In going over the road with a load of hay ten miles from home, a large rock so located in the track that it could catch a wheel just right, caused the breaking of the rear axle of my wagon and the consequent upsetting of the load and all the extra labor and delay consequent to such an accident. This happened on a road that was in good shape before it was worked with the grader this spring.

With the kind of weather we are having in Michigan this year the best means we can possibly use for maintaining the highways is the drag used frequently, and when it is too wet to work on the farms. The Iowa law instructs or directs that the time to use the drag is when the top of the road is of the consistency of mortar, which is exactly contrary to the idea of most men who work roads. For Heaven's sake, let us have a few more brains injected into the road-making business, and let us have a large amount of agitation on this matter in the press, institutes and wherever it would be proper to take up the subject. And let us pray most fervently that our new state highway commissioner will lend the full weight of his department to making all the roads better instead of putting all the emphasis on building a few one or two mile stretches of extra good road at the expense of all the rest.

If we can have all this done it may be possible in the not distant future to be able to find stretches of road five or even ten miles to the stretch that will be uniformly traversable, a condition I challenge anyone to show at present in Oakland county outside of the toll roads.

Oakland Co.

E. M. MOORE.

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## Dip Your Sheep

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## THINK HARD

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"About four years ago I suffered dreadfully from indigestion, always having eaten whatever I liked, not thinking of the digestible qualities. This indigestion caused palpitation of the heart so badly I could not walk up a flight of stairs without sitting down once or twice to regain breath and strength.

"I became alarmed and tried dieting, wore my clothes very loose, and many other remedies, but found no relief.

"Hearing of the virtues of Grape-Nuts and Postum I commenced using them in place of my usual breakfast of coffee, cakes, or hot biscuit, and in one week's time I was relieved of sour stomach and other ills attending indigestion. In a month's time my heart was performing its functions naturally and I could climb stairs and hills and walk long distances.

"I gained four pounds in this short time, and my skin became clear and I completely regained my health and strength. I continue to use Grape-Nuts and Postum for I feel that I owe my good health entirely to their use. "There's a Reason."

"I like the delicious flavor of Grape-Nuts and by making Postum according to directions, it tastes similar to mild high grade coffee."

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## LIVE STOCK

### BREEDERS' PROBLEMS.

#### There is No Best Breed.

I am a beginner in the farming business and am interested in knowing what are considered most profitable breeds of hogs and sheep on a farm. No doubt others would be interested in reading a discussion by some successful hog raisers and sheep raisers of the different breeds of hogs and sheep, giving their preference and their reasons for preferring one breed to another.

T. E. MOON.

While any of the improved breeds of live stock excels for some special purpose or under some particular conditions, and while they may vary widely as to their adaptability under any particular condition in which the breeder finds himself, yet not even the most radical partisan of any breed would maintain that his breed is the best under any and all conditions. If such were the case, the public would surely, sooner or later, find it out, and the other breeds would suffer a decline that would be more than temporary. And even for the special purposes for which the special purpose breeds are universally conceded to be best, it is generally true that two or more breeds will be found hotly contesting for the fresh honors that are always being accorded to animals of merit.

But there is much in adaptability for the purpose to which the animals are to be devoted and the conditions under which they are to be maintained. Here is a wide latitude for the exercise of the prospective breeder's judgment, and this is a question which he should carefully consider before selecting a breed. For life is too short for the breeder who would attain the highest success to make mistakes in his first selection. The thing to do is to select a breed and then study the types to be found in that breed, for there are many types in all of the improved breeds; more in some than in others of course, but no breed is absolutely uniform in type, nor is the standard type of today certain to be the favorite in the breed next year or in a decade. So the farmer who would invest in improved live stock with the object in view of becoming a breeder for the production of animals to sell for breeding purposes should study all of these points closely, before selecting the individuals which are to be the foundation of his future breeding operations. But the selection of the breed should come first, and in this matter the wise farmer will exercise just as great care. First having determined the kind of stock which he prefers to breed, he should carefully study the market in which he must look for purchasers, the feeds with which he must produce them, the care which he is prepared to bestow upon them, etc. Having studied these points carefully, he should make selection from the breeds which are adapted to these purposes and conditions. If he finds that two or more breeds would, in his best judgment, fill the requirements in this respect, as will more often than otherwise be the case, then it will be best for him to cater to his fancy in this respect, as he will be likely to succeed better with the breed for which he has a natural preference, other things being equal. To illustrate; it would not be good sense for the man who intends to go into the dairy business or the breeding of dairy cattle to select Herefords or Angus as a breed from which to develop these animals, as the whole tendency of these breeds has been away from, rather than towards the development of dairy characteristics. Like comparisons would hold good, only to a less degree, with other breeds which may be characterized as special purpose breeds. But in the wise economy of live stock improvement the middle ground has been chosen by the patrons of general purpose breeds so called, and often the farmer breeder will prefer some of the breeds having these characteristics to a marked degree. For instance, a sheep that will produce a fair fleece of good wool and a good carcass of mutton may be preferred by some to the special purpose wool or mutton sheep, and the medium grade of hogs may be more to be desired than the special purpose lard or bacon type. True, the uniformity of these breeds is generally not quite as constant as that of the special purpose type, and yet they may be better adapted to the conditions under which the farmer may be placed.

But whatever the breed chosen, it should be selected with all these points in view, and then stuck to with that constancy which is a great factor in success

in the breeding business. In case there is a temporary change of popular sentiment with regard to any breed, which is an incident in the history of practically every breed, the breeder who has chosen it for sound reasons should not waver from his allegiance, for he can depend upon it that if his reasons were good the pendulum will again swing back and that he will profit from the varying moods of his fellow farmers and breeders. But if he has not chosen wisely, the case may be different, and in the end he may find that he has lost valuable time and wasted strenuous effort in trying to adapt to his conditions a breed which is not suited to them. But it is certain that all of the improved breeds of live stock are good, else they never could have earned the distinction of being so designated, and that a failure in making a success of them is the fault of the breeder or the result of an unwise selection at the outset, the conditions under which they must be maintained being considered.

### UNTHRIFTY LAMBS.

There are numerous causes of the lack of thrift in lambs that are traceable to some influence due to improper nourishment or disease that should command the attention of flock owners at this particular season. One of the best and most reliable means of determining the milk qualities of ewes is to note the thriftiness of their progeny during the nursing period. Ewes, like dairy cows, vary widely in their milk producing qualities. Some ewes are excellent milk producers and capable of rearing twin lambs, while other ewes in the same flock are incapable of properly nourishing one lamb. Such ewes as the latter are common in many flocks and in no few instances are the direct source of several unthrifty lambs. Ewes are very unlike other animals in that little can be determined by their flesh condition. I have several ewes in my flock that are capable of properly rearing twin lambs every season and these ewes are always in good flesh. Even during the nursing period these ewes apparently gain in flesh when on good pasture and still supply plenty of nourishment to their growing progeny.

Every flock owner has unquestionably observed individuals in his flock that at lambing time have large well developed udders and for a few days produce a larger milk flow than consumed by the new born lamb. Two or three weeks later, to one's astonishment, these same ewes are nursing unthrifty lambs. The question naturally presents itself, what is the trouble? It is apparent that the cause lies in some form of derangement of the milking system. I know of but one solution to the difficulty, and that is to mark such individuals in the flock and dispose of them as soon as possible. When a ewe drops her young and for the first two weeks supplies plenty of nourishment and later dries up, it is an habitual fault in the individual and cannot be remedied by any method of feeding.

Young lambs are susceptible to numerous ailments. Among one of the most common is a weak digestive system. Some lambs are dropped low in vitality and unable to properly digest their nourishment. As the lambs grow older they take on an unthrifty appearance which they seldom outgrow. Nodular disease is also a very common ailment of young lambs and produces unthriftiness. This ailment is caused by a worm that finds its way into intestines and burrows into the mucus lining of the digestive organs where it makes its home, feeding upon the gastric juice. This worm multiplies very rapidly and soon consumes the vital fluid of the digestive tract. This disease can be alleviated by drenching the lamb with a prepared dip advertised in the columns of The Farmer. Flock owners should always be on the watch for nodular disease as it is one of the most deadly of sheep parasites.

Where there is an apparent lack of thrift among the entire lamb crop there is every reason to believe that the trouble lies in not supplying the ewes with the right kind of food. During the spring months pastures are very succulent. They appear luxuriant, but lack the elements of proper nourishment. Ewes that have been accustomed to a grain ration before turned to pasture are very apt to fall off in the quality of milk flow unless the grain ration is kept up. It is for the benefit of the growing lambs that the grain ration is primarily used and not to encourage flesh formation on the ewes. An excellent grain ration for milking ewes can be compounded from oats, peas, barley, wheat bran and a little oil meal.

All but the latter ought to be produced on the farm.

Every flock owner should give special attention and care to the unthrifty lambs in the flock. A little extra feed, or perhaps a little medicine, will overcome the trouble and materially increase the profit realized on the entire crop next fall. Uniformity in the lamb crop means a great deal as drovers and feeders are always ready to give a little more for an even, uniform bunch of lambs. The time to grow the lamb crop even and uniform is during the nursing period when the amount of nourishment supplied them is regulated thru the ewes. Lambs that obtain a good start before weaned seldom fail to come along splendidly after being separated from their dams.

Shiawassee Co.

LEO C. REYNOLDS.

### YOUNG PIG MANAGEMENT.

In his new work, "Swine in America," F. D. Coburn gives some pertinent and timely advice with regard to the feeding and care of young pigs, from which we quote as follows for the benefit of Michigan Farmer readers:

"A hog is half made when past the weaning period without a stunt or kink in its growth. Every check or halt in prosperity thru its first two months is more expensive than at any later period. Too much rich, feverish milk of the dam, causing thumps or other ailment, may leave harmful results, perhaps as much so as scant feeding or other neglect of the sow. More injury may be done to a pig's growth in two or three days than can be repaired in a month, even if he is made the subject of special care which, where many are raised is not the rule nor easily practicable. 'Good luck' with pigs calls for attention, and that not occasional, but frequent and regular.

"From the first week after farrowing until weaning time the sow will be little else than a milk machine, and to be a high-power machine in perfect operation she must have proper care. Nothing else is so well calculated to make pigs grow as a bountiful supply of wholesome sow's milk, and the pigs that have plenty of other feed with the milk of a well-slopped sow for eight weeks will ordinarily have much the start of those weaned at five or six weeks, no matter how much food and attention the earlier weaned pigs may have had.

"At eight or nine weeks old most pigs are, or rather should be, fit to take away from the sow; some litters are individually older at seven weeks than others at ten, and better fitted for weaning. Sometimes it is necessary to wean when the pigs are five or six weeks old, and in other cases it may be advisable to wait until the pigs are ten weeks or even older. In the corn belt the period will generally average longer than in New England. Breeders who wean at early ages generally do so in order to more profitably raise two litters a year.

"Provided with and taught to eat suitable feed some weeks beforehand pigs are not noticeably checked in their growth by weaning, but those that have been dependent mainly upon the mother's milk, when abruptly taken away from it, frequently seem to have their growth partially suspended for weeks. Many breeders successfully let the sow wean her pigs, as she will in time, and the change is so gradual that no pause in growth indicates when the milk diet ceased. A modified application of this, in which the pigs are separated from the sow at an age suiting their feeding and the conveniences of the breeder, will not infrequently be found advisable, but by no means should the pigs be allowed to remain with a sow until she is virtually devoured by them, as is sometimes done.

"It is not a good plan to take away all the pigs from the sow, unless one or two of them can be turned with her some hours after, to draw the milk she will have at that time, and again, say after a lapse of 24 hours. The preferred way is to leave about two of the smallest with her for several days, and after that leave only one for two or three days more, by which time the flow of milk will have been so gradually diminished that no injury to the sow will result by keeping them entirely away from her. This extra supply of milk helps also to push the smaller pigs along in growth and put them more nearly on an equality in size with their thriftier mates."

The Michigan Farmer is by far the best agricultural paper we know of after trying several. The magazine section is a great improvement. We enjoy it very much.—Wm. Teneyck. Middleville, Mich.

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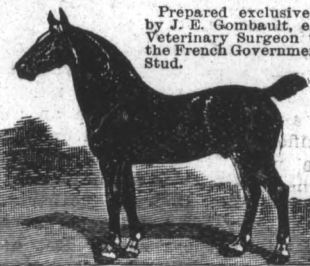
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## DEVELOPING THE BOARS.

I noticed in the Michigan Farmer of May 15, an interesting article, page 539, by W. Milton Kelly, on "Developing the Young Breeding Swine." The advice given is, in general, good, but there are differences of opinion in regard to some points made. To me it seems that there is danger of getting impressions from some of the advice given, in regard to the age at which one should begin to develop, and the age at which selections should be made, that may lead some to make serious mistakes in the matter. I am not going to condemn the practices of breeders who do not follow the methods I have followed, but desire to drop a few hints that may be worthy of consideration.

I conclude from the tenor of Mr. Kelly's article, that he is instructing the breeders of pure-bred swine, a class of men usually open to suggestions, that they may consider of value to them and at the same time ready to criticize advice that is not in accord with their opinions that have been fixed by observation and experience. There are several classes of breeders, and each and every representative one has ways that are distinctively his own, and they all have reasons for doing things their way, which to them seem to be better than the methods followed by the other fellow.

There is one point in the article to which I wish to call attention, referring to the beginning of the developing of the young boars, which he says "should commence at weaning time." I have for some time had the impression, after visiting a great many breeders of all breeds of swine, that most breeders commence developing the pigs some time before they are weaned. The little shallow trof, separated by some kind of a partition from the mother's, in which some dainty feeds are given the little pigs, after they are three or four weeks old, is such a common appurtenance, that we expect to see it on every farm where pure-bred swine are raised.

The advantages of beginning to develop the pigs at an early age, and while they are running with the mother, are numerous and ought not to be overlooked. It gratifies the appetite of the pigs at a time when they need more than the mother's milk. It helps to enlarge the stomach and promotes a more rapid growth than can be obtained in any other way. If the right kind of feed is used that is slightly laxative, like middlings, it is a good preventative of the pig disease called the "thumps." It relieves the mother, very much, and when weaning time comes the pigs can be weaned from the mother, and need not be checked in their growth, in the least. It is the plan that promotes early growth, and the stock can be carried to early maturity, and be kept in better form, than by letting the pigs grow along slowly, and then feeding them to put on fat to shape them up. The best form is made by growing the bone and muscle while the animal is young, and feeding well enough to have an intermingling of fat, which insures excellent quality.

Another point made by Mr. Kelly in the opening paragraph, is the statement that "the boars that are to be developed for breeding purposes should be selected at weaning time." That advice may be in part pretty good, but in some cases dangerous. Some of the boars that have flagrant faults can be thrown out at weaning time, but unless Mr. Kelly can see farther than some of the noted breeders of the country, he might throw out some that might prove to be exceptionally good. It is not always the fat pig that turns out best in after life. A noted case will illustrate:

It is generally conceded by the Berkshire breeders of America, that N. H. Gentry, of Missouri, is one of the most astute, far seeing and level headed judges, and breeders of swine, in the United States, if not in the world. It is well known that Mr. Gentry bred, and developed, a boar which he called Longfellow 16835, that was in his day a great show boar, and an animal that, as a breeder, did more to improve the Berkshires in America than any other boar that can be mentioned. While at East Elma, N. Y., in 1898, I chanced to meet the man who owned Mr. Gentry's herdsmen at the time Longfellow was bred and developed. He told me that it was by mere chance that Longfellow was saved. He was not an attractive pig when young. Mr. Gentry offered to sell him to a neighbor for \$25. He did not sell anything for less.

When Mr. Gentry was making up his show herd for the year, he selected a pig

called Handsome Prince, to fit up for show, as the young show boar of the year. During the period of fitting the hogs, Handsome Prince went off his feed, and had to be discarded. At this time Longfellow had begun to "shape up" and he was put on "high feed," and started with the herd. During the short period of time allowed, Longfellow proved himself a great feeder, making wonderful growth, and when ten months of age, and began to be shown, he weighed 475 lbs., and won all the high honors for which he competed. His subsequent history and doings most Berkshire breeders have in mind.

Another instance is worthy of mention to show that some of the best breeders are unable to judge of the possibilities in a young boar at weaning time. The Berkshire boar Masterpiece 77000, was not considered of great value when young. He was sold for a moderate price as a pig, and was not appreciated until he had been sold into the third man's hands, and then his merits were not fully realized until he had been sold into the present owner's hands. Today he is one of the most noted animals known to the breed.

It would not be difficult to multiply instances, if it were necessary, to show that at weaning time, which is, or should be about eight weeks' of age, that there is danger of making mistakes in making a sweeping and final decision in casting out, or retaining, boars for service. A careful and critical breeder will be constantly studying the merits and demerits of the stock he is raising, and offering to farmers as breeders. Changes in young stock are constantly going on, and many of them one cannot account for, but they should be carefully watched, and a final judgment can be safer made after the pig has changed to his hog form. To some it may seem easy to predict what a pig will make, by looking at him when following the sow, but with the careful breeder it is safer to know just what he is, when approaching his mature form.

Wayne Co.

N. A. CLAPP.

## LIVE STOCK NOTES.

Secretary of Agriculture Wilson was in Chicago last week in conference with the meat and animal inspectors of his department. Each one of the 150 inspectors in attendance from all parts of the country was called upon to give in detail his experiences during the past year, and the whole series of talks were summed up by Secretary Wilson into a lesson or lecture on the general work of the department. Most of the discussion was on the plants of the Union Stockyards of Chicago and the smaller plants scattered around Chicago. These meetings are considered confidential, but the secretary denied that the session of the inspectors was likely to result in any changes in the rules of the department governing the inspection of meats and packing plants, and expressed himself as well pleased with the manner in which the work is carried on. A great revolution has been accomplished in the packing house methods in the last few years, and the industry is now on a satisfactory basis in the main. "These meetings are a sort of school for inspectors," said the secretary. "They are of untold benefit to the men. The work is done quietly, and perhaps the packers do not realize how much this department is helping them, but there are a thousand and one ways where the inspectors are able to suggest some improvement."

The sentiment in the hog trade is conservatively bullish, and operators in provisions and dealers in hogs at the western stockyards look for a continuance of recent prices. This belief is based upon knowledge that there is a shortage in the hog supply and on the continued large consumption of cured hog meats and lard, despite their unusual dearthness. There is also a very large call for fresh pork products, which are cheaper than any other meats. There is a rapid reduction in the stocks of provisions in western warehouses, and this naturally greatly aids in strengthening prices for hogs and all hog products. Corn planting will occupy the time of the farmers for the next few weeks, and this is expected to further restrict marketings of hogs temporarily, but no burdensome offerings appear at all likely subsequently. Farmers should see that their hogs are made good and fat before sending to market.

Those who have traveled thru the central west recently are unanimous in reporting fat cattle well shipped out, and it is out of the question, they say, to look for anywhere near normal supplies during the coming summer months. This is the case in Indiana, Ohio, Illinois and Iowa, and cattle buyers will have to depend to an unusual extent on Nebraska, Kansas and Missouri for supplying their wants. Furthermore, grass cattle from west of the Missouri River will be late, owing to the backward spring. And all reports are that the supply of unfinished cattle is small and that farmers generally are afraid to risk paying the present greatly inflated prices asked in western markets for feeder cattle. Paying extravagant prices for cattle to place in feed lots has been the bane of the trade for several years, altho there are some stockmen who manage in the long run to make it pay.

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## WHAT GRAIN TO FEED WITH SKIM-MILK TO CALVES.\*

What is the best meal to feed with separator milk when weaning calves, and how much?

Eaton Co.

E. W. D.

I have two fine Jersey heifer calves and I want to raise them for cows. Would like a ration to be fed with separator milk which, in your judgment, would be most likely to develop the milk and butter qualities in these heifers to the fullest possible extent and at the same time make them grow into nice, well-developed cows when they come to maturity.

Saginaw Co.

WM. H. COOK.

E. W. D. will find that it is difficult to get a substitute for the butter-fat in whole milk, if he wants to make veal of his calves. We can make a good growing ration with skim-milk as a basis, but when it comes to a fattening ration for veal calves, calves that are fat and that make good veal at from four to six weeks old, you are up against a serious proposition. As a matter of fact, I have never found anything that would take the place of the new milk. Only last year I had four calves out of grade cows which I had purchased for winter milkers. I undertook to make veal out of them by feeding skim-milk and combinations of grain. We got good growth, but they were six months old before we sold them. Perhaps others can do better. You can fatten a calf on whole milk in about four to six weeks so that he will sell for veal, but when you come to substitute skim-milk for whole milk it's a different proposition altogether, and your calves will be more apt to be much more than six weeks old when they are fit for the butcher.

Now, answering E. W. D.'s and Wm. H. Cook's inquiries jointly, I would say that, according to my experience, the best meal to feed young calves with skim-milk is flaxseed meal cooked and made into a jelly. We have had the best success with this of anything we ever tried. We formerly used just oil meal made into a jelly, but it is liable to give calves scours, and skim-milk is an unbalanced food. It is rich in protein but not rich in carbohydrates. Oil meal is the same kind of a food exactly. The fat has been taken out of it to make commercial oil and you are combining two foods rich in protein. If you feed enough of it to give a good growth you have an unbalanced ration and it is apt to throw the digestive apparatus of the calf out of order and the result is indigestion and scours and the calf will not do well.

Now, corn meal makes a very good grain to feed with skim-milk but this ought to be made into mush. When made into mush it is liable to sour. If it is fed raw, it is so heavy that it will settle to the bottom of the pail and the calf won't get very much of it and a large per cent it is thus wasted. Ground oats makes a very good feed and if the oats are dry and finely ground, and are stirred in with the milk, they are eaten and relished by the calf. Wheat middlings also make a very good meal. This is very fine and mixes with the skim-milk so that the calf drinks the most of the middlings. You must not feed too heavily of the middlings, however, as they will cause scours also.

For the last year or two we have confined ourselves to ground flaxseed meal made into a jelly. Now, flaxseed meal contains about 30 per cent fat. It is rich in fat and that is just what the separator takes out of the milk. We have had less sickness among the calves, they have all been thrifty and have kept in better condition since feeding flaxseed meal than formerly. So my advice is to feed flaxseed meal. For a young calf make the flaxseed into a jelly or mush and feed a teaspoonful with the skim-milk, gradually increasing this until you are giving a teaspoonful of the mush to each calf. That is as much as any calf ought to have unless you want to fatten them, and then I should give them all the flaxseed mush they would eat up clean.

Now, to carry the dairy calves along so that they will make the best kind of cows, I would give at first about 4 lbs. of skim-milk and a tablespoonful of ground flaxseed mush at a feed twice a day, and I would encourage them to eat roughage, such as clover hay and a little corn silage, cornstalks, or anything that has bulk. What you want is to develop in the calf the capacity to consume a large amount of roughage. The diet in this respect should be unlike the diet for the fattening calf. The fattening calf you can stuff on richly concentrated foods, providing it does not injure him, and get him fat as quickly as possible,

but the dairy calf you do not want to get fat. You want to feed it a balanced ration. You simply want it thrifty, and then encourage it to eat bulky food. Consequently, I would never give the dairy calf over 5 lbs. of skim-milk and a cupful of flaxseed mush twice each day. For the balance of the ration I would give bulky feed, such as clover hay, corn silage, or any kind of roughage it will eat. After weaning from the milk ration I would give them a small amount of grain, but I would encourage them to eat as much as possible of bulky rations as this will bring the dairy heifer calf to cowhood in the best possible condition.

COLON C. LILLIE.

## GRAIN FOR PIGS.

I have quite a bunch of young pigs and have plenty of milk for them but would like to know what kind of grain is best for them.

Otsego Co.

G. B.

For feeding young growing pigs that have plenty of skim-milk there is nothing better than ear corn. I have never found anything better. You can make a perfectly balanced ration with skim-milk and ear corn by feeding in the proportion of 1 lb. of shelled corn (of course you can estimate the weight of the cob), to 3 lbs. of skim-milk. In that proportion you have practically a balanced ration, an economical one, one that can be digested and assimilated with little loss, and one that your pigs will thrive on.

## GOVERNMENT WORK IN HORSE BREEDING.

\*While cattle breeding has had some attention from farmers thruout the country, perhaps in no other one line of work has there been such a lack of systematic study and in the practical application of known principles as in horse breeding. The methods of farmers in this country for many years past have been haphazard, to say the least. They simply bred and reared horses without any regard to the demands of the consumer. Many farmers were taught a lesson during the years from 1893 to 1896, for nearly every one had unsalable horses on his farm—horses that, while sound, or practically so, at the same time were of no class, and which could not be sold even at very low figures. This depression caused the breeders to believe that the horse market was gone forever, and they quit breeding and disposed of their surplus stock. In a few years these same men were in the market as horse buyers, when horses were very scarce and hard to secure even at very high prices. The same old slipshod breeding methods were renewed and the officials of the Department of Agriculture saw that unless a campaign of education was begun history would repeat itself.

In view of these facts, the department decided to undertake the development of a breed of carriage horses on an American foundation. Specific work in horse breeding by the United States Government was first made possible by the inclusion in the appropriation act for the fiscal year ended June 30, 1905, of an item of \$25,000 for experiments in animal breeding and feeding in co-operation with state agricultural experiment stations. When this appropriation became available the exact nature of the work to be undertaken was decided upon only after careful consideration. The officials of the Colorado Experiment Station were anxious to take up work in horse breeding, believing that Colorado soil and climatic conditions provided excellent opportunities for the production of horses of quality, substance, and great endurance. Finally, carriage-horse breeding was decided upon, because carriage horses are, as a rule, the most valuable class on the market; that as a result of the strong demand the supply was gradually diminishing and that notwithstanding all the importations of the carriage type from abroad, the preferred horse was the American horse. Most important of all, however, was the feeling that steps should be taken to correct the practice of castrating valuable stallions and selling valuable mares for other than breeding purposes. Among the number of stallions and mares purchased was the stallion Carmen, (formerly shown as Glorious Thundercloud), bred by Ex-Secretary of Agriculture Norman J. Colman.

In addition to the horses purchased by the department, several mares have been presented to the Colorado station and placed in the stud subject to the same restrictions as the others. The entire work is co-operative. The station provides all buildings, improvements, and

land as an offset to the cost of the stock. All other expenses are shared equally by the department and the station. Under the terms of the agreement for the work foals bred after purchase become the property of the station, but the station may not sell them or use them for breeding except at the station, without the approval of the department. The department retains an option for the purchase of any and all progeny, and any funds derived by the station from sales and service fees must be used in the conduct of the work. The stallions may be used on mares owned by private individuals which are approved by the officer in charge.

## SILO FOR A BASEMENT BARN.

I am thinking of building a silo on the front side of a basement barn, making it 10 feet wide and 30 feet high, the upper 22 feet to be staves and the lower 8 feet, which will be under ground, of cement. I would like to know whether such a silo is practical and whether ensilage would keep in same. How much would have to be fed per day in summer to keep silage from spoiling?

Barry Co.

F. A. SMITH.

I think the plan proposed is entirely practical. You can have the first eight feet of stone or concrete. I have a silo built that way. The first eight feet is a stone wall, but it can just as well be made of concrete, and perhaps better, because a concrete wall is better and more durable than a stone wall. But this stone or concrete wall must be plastered on the inside with rich cement mortar to make it smooth. Otherwise, the silage will not keep. The only trouble in putting the stave silo on top of this stone or grout wall is that you will not be able to make a very good joint between the staves and the cement wall. It is almost impossible to have the staves come even with the wall. You could put on studding, lath on to the studding and then plaster and thus have a cement lined, or lath-and-plastered silo with the wooden portion perfectly even and straight with the stone portion but you can't do that with a stave silo.

You will want to remove, in summer, a depth of about two inches at each feeding over the entire surface of the silo in order to keep the ensilage in good condition. If you don't do this part of each feeding will not be in good condition on account of too long exposure to the air.

## LIVE STOCK NOTES.

Further corroboration of the reported increase in the consumption of beef thruout the country is found in the recent improvement in the demand for cattle in Chicago and other western markets. The increased demand has extended to all classes of cattle, and even the commonest steers have brought much higher prices than were paid a few weeks ago. The advance in the class of steers selling at \$6 and over in the Chicago market has been the most marked, however, and even prime heavy beefs have sold decidedly higher, with a \$7.30 top, altho the best call has been for fat light-weights. Prime little yearling steers are great sellers these times, and a few days ago Armour & Co. paid \$6.90 per 100 lbs. for 25 head of choice cattle in the Chicago market, that averaged but 772 pounds. At the present time distillery-fed cattle are being marketed freely at good prices, and so are Texas cattle. These Texas meal-fed cattle have found ready buyers at \$6.10@6.45.

Limited supplies of early spring lambs have been showing up in the Chicago market recently, hailing from Indiana and Kentucky largely, and, as is usual with early offerings, their quality was apt to be none too good. The spring is later than usual, in the southern states, as well as in the states farther north, and no considerable supplies of spring lambs are expected from Kentucky and Tennessee before July. Meanwhile, such limited supplies of Colorado woolled lambs and shorn sheep and lambs as are offered on the markets of the country are bringing prices that look extravagant when compared with former years. Prices for lambs of late have broken all former high records, despite recent reactions resulting from an unwillingness upon the part of buyers to pay full prices. The wool is a big item this year, since that staple is in big demand at high prices, and this explains the eagerness of the packers in buying woolled in preference to shorn flocks.

The growth, development and increased popularity of the Grand Rapids Veterinary College, have made necessary some important changes in the administrative and teaching staffs in order to properly care for the increased work of managing the college. Hon. Colon C. Lillie, who needs no introduction to Michigan Farmer readers, has been made president of the Board of Trustees and business manager of the college, and assigned to the chair of Zootechnics, which he is well qualified to fill. Dr. Schuh has been made director and given complete charge of the course of study and two new professors will be added to the teaching staff. A new laboratory and class room will also be provided. These important changes should add not a little to the patronage and support of this already popular college.

## What's It Worth?



## Kendall's Spavin Cure

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Dr. B. J. Kendall Co., Dear Sirs:—Please send me your "Treatise on the Horse." I have 30 mules and have found Kendall's Spavin Cure to be the greatest liniment ever used. It has been worth \$500 to me in the last three years.  
Yours truly, J. P. Goodwin.

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DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

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THE MICHIGAN FARMER, Detroit.



## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### HOW TO GET BETTER MILK AND CREAM FOR CREAMERIES.

In talking with a representative of a large butter and egg commission house of Philadelphia, he expressed the opinion that Michigan creamery butter is not of as good quality today as it was two or three years ago. As a remedy, he proposes that the state put on inspectors enough to visit every dairy farm in the state, giving these inspectors authority to compel every farmer to properly wash his hand separator, properly clean his milk pails, properly care for his cows, in fact, give the inspector authority to compel the farmer to produce milk and cream from which a good quality of butter can be made when it reaches the creamery.

I suggested to this representative that it would be extremely difficult to get the legislature of Michigan to pass any such law, or to provide sufficient inspectors to do this work. I pointed out that it would be a tremendous task to attempt to visit every dairy farmer in the state, that the expense would be so great the people would not stand the taxes, that it would be impracticable and that it would be unconstitutional to pass a law of this sort; also, that it could not be enforced and therefore it would be utter folly to attempt anything of that sort. You can't pass a law that will compel a farmer to wash his hand separator. You can't pass a law that will compel a farmer to wash a milk pail. It is his separator and his cow, and his milk pail, and he doesn't have to wash them unless he wants to. You could pass a law which would give inspectors the right to condemn milk delivered from a given farm if the product was unwholesome. That would be going at the proposition in a different way and would be entirely different from going to the farmer's home with authority compelling him to wash his milk pails or his hand separator for a certain time or in a certain manner. That would be infringing on personal rights and personal liberties, and you have no right to do it. But if that farmer produces milk which makes an unwholesome food, he has no right to offer that food for general consumption by the public.

Here is where we want the authority. We want authority to condemn milk or cream that is not suitable to be made into butter or cheese for general consumption, and under proper restrictions we ought to have this authority, but it is a very important question and one that should be gone at very carefully, because we are dealing with valuable property and are putting one man's judgment up against another's. What one man would consider a proper food, another might not.

#### Problem Can Be Solved from the Market End.

I suggested to this commission man that the commission houses buying butter and cheese in Philadelphia and New York and other great centers of population could do more towards compelling the farmer to take better care of his milk and cream, and with less friction, than any law that could be passed by any state legislature. The whole question could be solved by the commission men showing the backbone and the moral courage to buy butter and cheese on their merits, paying well for quality. If the butter was carefully graded, if good butter received what it ought on the market, and if the poor butter sold only for what it ought to bring, this discrimination would react back to the creamery and the creamery would be compelled to pay a lower price for poor cream and poor milk. Consequently a farmer would be compelled to clean up and take better care of his milk and cream and the result would be that in a short time we would have a marked improvement all along the line. Now, why don't the commission men do this? They say they are discriminating. Yes, they do discriminate some. Butter that grades "extra" is quoted at a certain price. Butter that is graded "firsts" sells for two or three cents a pound less, but it ought to sell for ten cents a pound less; and butter that scores below 90 ought not to sell for more than half as much as butter that scores 94 or 95. If they would discriminate in this way we would have less butter that scored below 90.

Now, the reason they don't do this is

that they want to do a large volume of business; they are afraid that if they score the butter too low, that if they don't pay almost as much for poor butter as they do for good, they won't get the poor butter to handle and consequently they won't have the volume of business to make the money they would like to make. They don't want to offend a creamery by telling the management that their butter is poor and paying them a low price for it, because they are afraid that this creamery will send its butter to some other commission merchant and he will have the handling of it. Now the commission man gets almost as much for selling poor butter as he does for selling good. He gets a certain per cent commission, and consequently he is loth to turn down poor butter when it is offered. He would like to have all good butter, to be sure, because that gives better satisfaction to his trade, but he is not willing to do his part in order to bring about this improvement. He doesn't pay what he ought to for fancy butter, and he pays too much for poor butter. By doing this he puts a premium on the poor butter. Now, when the dairy inspector goes out to a farmer and tells him he ought to clean up and take better care of his milk and his cream, so that it will make better butter, the farmer simply says, "What difference does it make?" He gets practically as much for his cream, which is handled improperly, as does his neighbor who takes a lot of pains, and you are face to face with a condition which is hard to argue against. If you can tell the farmer that, if he will produce gilt-edge milk or cream, he will get five or ten cents a pound more for his butter, then there would be some incentive for him to clean up.

#### Commission Man and Groceryman Give Careful Producer No Encouragement.

In this respect the commission merchant in New York and Philadelphia stands in exactly the same position as the country groceryman who buys dairy butter. Now, why does the country groceryman pay just as much for poor dairy butter as he does for good dairy butter? For exactly the same reason that the commission merchant pays almost as much for poor creamery butter as he does for good creamery butter—because he doesn't want to offend his customers. A., B. and C. each bring in a crock of dairy butter. One crock is good butter—A. No. 1. The next is medium and the third is rotten. Now, Mr. Groceryman pays just the same price for each crock. It isn't right, and yet he does it because he wants B's trade just as well as A's. Perhaps B. buys five dollars worth of goods from his store where A. buys one. He figures that, even if B. does make poor butter, he can afford to pay a good price for it because he gets the rest of his trade. In a business way, this may be so, but he is certainly not improving the quality of butter that B. makes by paying him as much for his poor butter as he does A. for good butter, and that's the trouble with the commission man.

There is no reason why every producer could not make good dairy butter if he knew how and would try. Some of them don't know how, but most of them do. A great many of them don't try. I heard a farmer's wife say one time at a farmers' institute that she had given up trying to make nice butter. She said she did try to make nice butter and did, but she took it to the store and couldn't get any more for it than somebody else could who she knew didn't make good butter. Consequently, what was the use of her trying to make good butter when she wasn't rewarded for it. And there is some sense in that argument too. Now, on exactly the same principle, the farmer says, what's the use of my working from morning until night trying to keep my separator clean and good, and washing and scrubbing my separator and milk pails, and keeping the cow stable and the cows clean, and going to all this extra fuss when I can get just as much for my cream now as I could if I went to a great deal more expense in producing it; and, from a business standpoint, there is some sense in this argument.

Now, the dairy and food commissioners in the different states of this Union have a hard problem when they try to get the farmer to produce milk and cream that will make gilt-edged butter. You can argue with the farmer as much as you wish, but unless you have the authority to say that he can't put such cream on the market, or unless the market end of the proposition will help out by refusing to pay a good price for the poor stuff,

# SWEEPING THE FIELD

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The old cow laughs for she feels sure of a "square deal" now; and the wise raven quoths, quoths he: "Tis well done, let the good work go on."

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The top of the supply can, on the largest dairy Tubular, is only 3 feet 3 inches above the floor. Observe the plumb bob on the back of this Tubular "A" for quickly leveling the machine and keeping it level--another exclusive Tubular advantage.

Your wife will appreciate that, and also the light, quickly washed dairy Tubular bowl which contains one tiny, instantly removable piece very much like a napkin ring in shape and size.

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Avoid wishing you had bought a Tubular by buying a Tubular. Built in the world's greatest separator factory. 1908 sales way ahead of 1907--out of sight of most, if not all, competitors combined. Our handsome 1909 Tubular "A" is making 1909 better still. Write for catalog No. 152.



To oil the Tubular, simply pour a spoonful of oil into the gear case once a week. The gear wheels throw this over themselves, and the ball bearing supporting the bowl.

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you are practically helpless. The commissioner is in a position to be criticised by both the market end and the producing end of the proposition; he is in the middle and gets a stone from each way. The commission man would like to have the dairy and food inspector do all the dirty work and get all the curses by compelling farmers to produce nothing but gilt-edged milk and cream, but he doesn't want to take off his coat and do his share of it. If he would do his share the whole problem would be solved, for the creamery would have to grade its cream and make different qualities of butter and pay patrons according to quality, and then the patron would do his part and the consequence would be that in a short time we would have nothing but good cream and good milk and, consequently, nothing but good butter.

#### AN ICE BOX FOR MILK.

Please tell me how to make an ice box for keeping milk in.  
Manistee Co. E. M. B.

For keeping small amounts or small quantities of milk, I know nothing better than the common, ordinary refrigerator, or a box made on that plan. The box ought to be well insulated and there should be a place in the upper part of it to put the ice, and a connecting department below so that the milk can be put under the ice, because the cold air from the ice will settle to the bottom. But for keeping milk in any quantities I think that a tank which can be filled with ice water will be more practical than a dairy refrigerator. You simply have a tank that will hold water enough to come up to the top of the can in which the milk is placed, and then you keep ice in this tank of water. In other words, keep ice water around the milk, which is much better than cold air, and much more practical. Of course, you can save ice by having a cover to this tank, or you can have the tank surrounded by an outside covering or house which will protect it from the air and thus save some ice, but a tank of ice water is what you want to keep the milk in if you would keep it successfully for any length of time.

#### VALUE OF PICKED SWEET CORN FOR COWS.

Please tell me the feeding value of a ton of green sweet corn ears as they are picked from the stalk with husks on, (same as the canning factory requires for canning purposes), the corn to be fed to milch cows.  
Newaygo Co. C. RUNNELS.

I am frank to say that I do not know the feeding value of sweet corn picked from the stalk for canning purposes. I have no data which will help me very much in this respect. I am sure, however, that it is not as valuable as a food for dairy cows as a great many people imagine. In the first place, it is about 80 per cent water, thus leaving only about 20 per cent of dry matter. The sweet corn, after it was dry, would contain about 80 or 90 per cent of dry matter and 10 per cent of moisture, but as it is picked from the stalk ready for the canning or for the table, it contains only about 20 per cent dry matter.

Now, sweet corn is a little bit richer in protein and fat than common dent corn, but not very much. It contains so much moisture, say five times as much moisture when picked from the stalk as it would have when cured, that it would certainly have only about one-fifth the feeding value that it would if this same corn was thoroly dry. Now, the husks that are picked with the ear are no more valuable than so much stalk, or corn silage—just about the same value. And the green husks on an ear of corn weigh considerable, 20 per cent would be husk because they contain a large per cent of the moisture at that time.

Ear corn, or shelled corn, at the present time is worth about 1 1/4c per lb., or \$25 per ton; that is the market value of it, and, taking into consideration the husk that surrounds the ear and the fact that it contains only about 20 per cent of dry matter while shelled corn or ear corn contains 80 to 90 per cent, I would figure that a ton of this green sweet corn would not be worth over \$5 or \$6 for feeding dairy cows. There is, however, another element which ought to be considered, and that is, the palatability of this sweet corn. It is very palatable; the cows like it very much and anything that is very palatable is apt to do the cow more

good than the chemist would figure out from its food value. I have no doubt that a few ears of this green sweet corn would be so well relished by the cows that they would do better than they would if dry corn was fed, but of course this would not apply to the whole ration because it would not have the food value of the dry corn.

#### FISHY FLAVOR IN BUTTER.

Buttermakers in general have long suffered heavy loss from fishy flavor, a well-known depreciating factor in the butter trade of different countries. It is not uniformly present, but occurs more frequently in some countries than in others. For example, it is much more common in butter from Australia than in the Danish product. In the United States it is prevalent in certain sections of the country, especially in the newer dairy localities, and one such region is known to commission men as the "fishy belt." The cause of this trouble has been a mystery and butter experts have been at a loss to account for its appearance, although many theories have been advanced. Since 1905 the Dairy Division of the Bureau of Animal Industry has been working on the problem, and its investigations have just been reported by L. A. Rogers, in a circular issued by the Bureau, and it is believed that his conclusions regarding the cause and prevention of the trouble will be of practical value to buttermakers.

Of the undesirable flavors of butter the various oily flavors may be classed as the most objectionable and troublesome. They range from a slight suggestion of oil to a strong flavor of machine oil. In the latter case the inferior quality of the butter becomes evident even to the indifferent consumer. Fishy flavor, which is one of the most common of the oily flavors, gives to butter a peculiar oily taste suggesting mackerel or salmon. Butter is frequently described as fishy which is merely oily or otherwise off flavor, but the typical flavor of fishy butter is never mistaken for any other.

While many things connected with the buttermaking industry have been ascribed as the cause, Mr. Rogers is of the opinion that fishy flavor is not produced by the action of any one factor but, so far as he has been able to ascertain, the immediate cause is a particular substance produced by the oxidation of one of the combinations of the acid developed in the ripening of the cream. In other words, it is caused by a slow, spontaneous chemical change to which acid is essential and which is favored by the presence of small amounts of oxygen.

It has been a generally accepted theory among buttermakers that sour cream makes the best butter. This idea is reversed by the investigations, which bring forth the conclusion that butter made from sweet cream does not contain the elements that go to make fishy flavor.

In all the experimental butter made in the last three years, there has been no trace of fishy flavor in that made from pasteurized sweet cream churned without the addition of a starter. In butter made from pasteurized cream, with starter added but without any subsequent ripening, there has been no fishy flavor, with one or two doubtful exceptions. On the other hand, many lots of experimental butter made from well ripened cream developed marked fishiness.

It is evident, therefore, that there is a direct relation between the acidity of cream and the development of fishy flavor in the butter. However, as the work progressed it became apparent that the acidity, although having a determining influence on fishy flavor, was not the sole cause. With this factor controlled it was impossible to make butter with any certainty that it would become fishy. Frequently butter made from cream with a high acidity showed no trace of this flavor.

It was found that overworking the butter increased the tendency to fishiness, and this flavor could be produced with reasonable certainty by overworking high-acid butter. All butter contains considerable quantities of air, and this is increased by the working, thus producing conditions more favorable to oxidations.

Fishy flavor may be prevented with certainty, says Mr. Rogers, by making butter from pasteurized cream, without ripening. The addition of a starter to pasteurized sweet cream without subsequent ripening improves the flavor of the fresh butter without adding enough acid to cause fishiness. Pasteurization of sour cream will prevent the development of fishy flavor.

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The Lawrence Pub. Co.,  
Detroit, Mich.

DETROIT, MAY 29, 1909.

## CURRENT COMMENT:

With the recurrence of In Memoriam, the day set apart for the payment of a fitting tribute to the nation's dead heroes who measured up to the extreme test of human love and loyalty by giving their lives for their country in its time of need—it is both fitting and proper that our minds should dwell in reverent memory upon their sacrifice, the fruits of which it is our good fortune to enjoy. What sentiment could be more beautiful and what ceremonial more fitting to the day and the occasion, than the strewing of beautiful flowers, nature's emblem of purity and a future life of fruitfulness, upon the graves of these departed heroes; and what could promise more for the future of our nation than the fact that the children usually take a prominent part in the appropriate service of the day, thus inculcating in them a reverence for the patriots of other days which cannot but be instrumental in the strengthening of their forming characters. There must be much of comfort to the friends of these dead heroes in the tribute thus paid to them on Memorial Day, but there are many of their compatriots whose graves will not be decorated on that day, save as nature provides her wild flowers to grace the hallowed ground about their unknown graves. These should not be forgotten in the observance of the day. Our first-page cut portrays an example of public tribute paid to these fallen heroes who ne'er returned to friends or home or fireside. The poem dedicated to The Unknown Dead which accompanies it beautifully expresses a sentiment which should be cherished on Memorial Day, and which should be exemplified in memorial services wherever practicable. The ranks of our Grand Army are yearly being thinned. 'Twill not be long before for the last of them, these sad but loving rites must be observed. So let the day be observed in fitting reverence. Let the children one and all participate in the exercises, and gather as well as distribute flowers which on that day will be used as an emblem of a nation's noble sentiment. Let the parents join with them in attendance at the ceremonies of the day, to the end that they may receive the greater impression of the day and its significance. Let us all do our part in keeping the memory of our soldier dead forever green, for whatever may have

been their faults, they not only atoned for them, but made each and all of us their everlasting debtors thru their sacrifice to a principle. Time has softened the harsh differences which made their struggles necessary. Because thousands sacrificed themselves to an erroneous principle does not make them less our brothers now, so in our Memorial Day service let there be no bitterness and no censure, but honor and homage to all the soldier dead.

The new statistical abstract of the United States, which will be issued

in a few days, gives some interesting figures touching the increase of wealth and production in the United States, which make possible some gratifying comparisons from the farmer's standpoint as will be noted from the following summary:

The wealth of the United States in 1850, according to the figures of the Census Office, was 7 billions of dollars, speaking in round terms; in 1860, 16 billions; in 1870, 30 billions; in 1880, 43½ billions; in 1890, 65 billions; in 1900, 88½ billions; and in 1904, 107 billions; the average wealth per capita being, according to the same authority, in 1850, \$308; in 1860, \$514; in 1870, \$780; in 1880, \$850; in 1890, \$1,039; in 1900, \$1,165; and in 1904, \$1,310. The wealth production on farms, according to the estimate of the Department of Agriculture was in 1897 \$4,250,000,000, and in 1907 \$7,412,000,000. Among the valuable articles produced on the farm are included wheat, of which the farm value in 1908 was set down at 617 million dollars, a larger sum than in any previous year in the history of our production; cotton, of which the value in 1906, the year of largest valuation, was 722 millions; hay, in 1907, 744 millions; and corn, in 1908, 1,616 millions—these being in all cases values on the farm.

From these figures it will be noted that the farm value of the agricultural products of the country in 1907 was nearly double the farm value of such products in 1897, and with the marked increase in the average price of all farm products at the present time in comparison with 1907 it is probable that the farm value of the agricultural products of the country for 1908 was more than double that of the same products a decade previous, the estimates made by the secretary of agriculture in his annual report for 1908 giving the farm value of all farm products as \$8,000,000,000 in round numbers.

The doubling of the value of farm products in ten years means the doubling of the earning power of the farms of the country, at least, since the higher cost of labor and the increased cost of living would scarcely double the cost of production, and would probably leave more than double the margin of profit in the production of the farm products represented in this grand aggregate of value. Of course, the value of farm land as represented in the market includes the value which attaches to a home, in which it differs from other industrial properties the value of which is based entirely on their present or prospective earning power. But the comparative rate of the increase of agricultural wealth with the other wealth of the country, which these figures show to have taken place during the last decade, is unquestionably favorable to the former, and the lack of any surplus of these lines of production at the present time is a condition which would seem to insure a continuance of high prices for some time to come, and investments in agricultural lands should be increasingly profitable. Surely the farmers of the country are to be congratulated on their present prosperous condition and their prospects for the future.

With the close of the legislative session the work which has been accomplished and the laws which have been enacted during the session become a proper subject for review. As has been noted in these columns the session of the legislature just closed has been of more than usual importance to the state for the reason that the adoption of the new constitution made necessary many changes in the statutes and many new laws to conform to its provisions. One of the more important instances of this kind was the provision of a larger measure of home rule for the minor municipalities of the state, which will in the future eliminate from the consideration of the legislature the mass of local bills which have delayed the consideration of important public acts in previous sessions of the state legislative body. Then, aside from this legislation made necessary by the adoption of the new constitution, there were many pressing questions to be considered and settled for the next two years. One

of the most knotty of these problems was the liquor question, but after much discussion and the trying out of the strength of the opposing factions on different bills, this question was finally settled in a manner which appears to be fairly satisfactory to the public. This law is so framed as to accomplish the gradual reduction of the number of saloons, and to give the cities and villages or townships in which they are located a greater measure of power to tax and regulate them. A provision of the law which will be appreciated in many instances is that providing that when a liquor dealer has been twice convicted of violating the law his license will be revoked and he will be barred from again engaging in the business. Supplementary legislation along the same line abolishes the free lunch and gives greater power to officers in searching for and seizing contraband liquors in dry counties. The most important taxation legislation enacted during the session was that providing for the taxation of telegraph and telephone companies on an ad valorem basis. This brings all property in the state on the same basis of taxation and will add something like \$100,000 to the amount received by the state from these properties. Another feature worthy of mention in tax legislation is the fact that non-residents are given the right of appeal from the assessment of their property made by local assessors. The abolishing of contract labor in the prisons of the state is another far-reaching action taken during the legislative session just closed. In fact, there are a long list of these which might be mentioned, and commented upon separately did space but permit. On the whole, the work done and the legislation enacted during the session may be considered as highly satisfactory. The following summary includes in a general way, the object and effect of the more important acts passed by the legislature. Space does not permit a more general discussion of them in this issue, but some of them may be commented upon in detail in future issues, provided there seems to be a general interest in or demand for such discussion:

Telephone and telegraph companies brot under ad valorem tax law; will increase state's receipts over \$100,000 yearly; allowing non-resident taxpayers to appeal to state tax commissioners from action of local assessing officers; allowing appeal to three non-resident supervisors from action of supervisors in equalizing county valuations; exempting bonds of cities, townships, counties, villages and school districts from taxation; re-enactment of railroad commission bill, broadening commission's powers and removing doubt of law's constitutionality; railroad employees exempted from construction of "fellow-servant" idea; allowing townships to form unit school district; permitting country school districts to pay tuition or scholars who have passed eighth grade to nearby high schools; encouraging county manual training and agricultural schools—state to pay \$4,000 a year, but aid limited for this session to but one school, that at Menominee, being the only one in the state; highway laws codified, making it easy for highway commissioner to learn his duties—many obsolete parts of present laws repealed; good roads appropriation set at \$150,000 yearly—\$25,000 a year increase; declaring tuberculosis an infectious disease and prescribing rigid rules for reporting and isolating cases; giving state board of health supervision over water supplies; allowing state board of health some power in keeping streams free of sewage, but exempting existing city sewage systems; making stricter laws for conduct of saloons, general provision for gradual reduction to one to 500; "search and seizure" bill, giving prosecutors greater rights in searching for contraband liquor in dry counties; providing for election of drain commissioners—all drain petitions must be approved by township board and townships may issue bonds for drains; providing for construction of dams in drains; codifying military laws and arranging for reorganizing of department—bill carries \$15,000 for armories, not more than two to be built yearly; banking examiners may act as receivers for banks in trouble but at no increase in salaries; savings and commercial deposits to be kept separate in banks whose savings deposits are less than \$300,000; state banks in towns of 2,500 people or less allowed to reduce commercial reserve from 7½ to 3½ per cent, and savings reserve from 5 to 2½ per cent; allowing supervisors to name a county depository providing that interest shall go to county, and exempting treasurers from liability for loss; abolishing contract labor and providing for board to devise means to work convicts on state account; stock and bond issues of public utilities corporations to be supervised by railway commission; department heads allowed to grade clerk's pay from \$800 to \$1,200, provided average for department shall not exceed \$1,000 per clerk; labor laws codified—most important change a provision that women shall not work more than 54 hours per week and not more than 10 hours per day; closed season for black bass between February 1 and June 15, size to be not less than 10 inches and allows not more than 10 to be caught in one day; primary election bill; bringing vessels that ply in inland waters under practically same restriction as vessels under federal control in great lakes; giv-

ing minority stockholders representation on boards of directors; to pay portion of cost when cattle are killed by order of boards of health because of having infectious diseases; providing that binder twine must be labeled with name of maker, weight of package and quality; making penalties for sale of impure spraying compounds; making Lincoln's birthday, February 12, and Columbus day, October 12, legal holidays; public domain commission to handle state tax lands and reforestation matters; three bills granting to cities, villages and counties powers of local legislation contemplated by the new constitution.

Something of the difficulty and detail to be encountered in the revision of the tariff schedules has been noted in these columns, but it is probable that the reader who has never given particular attention to the consideration of this subject has no very adequate conception as to how these schedules are made up, the sources of greatest revenue from them or the many classifications to which different rates are applied in the several general classes of dutiable goods.

To the end that the reader may be assisted to a better understanding of this complicated subject, and to better appreciate the manner in which the duty is distributed as to its final payment, we give below some figures relating to the tariff history of the country, and a single example of the application of the rates in the schedules, as prepared by the Bureau of Statistics of the Department of Commerce and Labor of the U. S. Government:

Twelve articles or classes of articles pay three-fourths of the 300 million dollars per annum collected as tariff duties by the Government of the United States. The duties collected under the existing tariff law have averaged 300 million dollars per annum during the past three years, the largest sum being in the fiscal year 1907, when the total collections amounted to 329 million dollars. In that year, 1907, sugar paid 60 million dollars duty; cotton manufactures, 39 millions; leaf tobacco, 22 millions; manufactures of fibers, 22 millions; manufactures of silk, 20 millions; manufactures of wool, 20 millions; raw wool, 16½ millions; spirits, wines, and malt liquors, 16 millions; manufactures of iron and steel, 12 millions; earthen and china ware, 8 millions; chemicals, drugs, and dyes, 7½ millions; and fruits and nuts, 7 millions—the total for these twelve articles or groups of articles being 250 millions, or just three-fourths of the 329 million dollars of tariff duties collected in that year.

The amount of customs or tariff duty collected in 1821 was 19 million dollars, in 1830 28 millions, in 1850 40 millions, in 1860 53 millions, in 1870 192 millions, in 1880 133 millions, in 1890 221 millions, in 1900 229 millions, in 1907—the largest sum ever collected from tariff—329 millions, and in 1908 283 millions; the annual average in the past three years being in round terms, 300 millions per annum. The duties collected amounted in 1821 to 35 per cent of the value of the total merchandise imported, in 1830 to 45 per cent, in 1850 to 23 per cent, in 1860 to 16 per cent, in 1870 to 42 per cent, in 1880 to 29 per cent, in 1890 to 29 per cent, in 1900 to 28 per cent, and in 1907 to 23 per cent of the total value of the merchandise brot into the country.

The share of the imported merchandise which paid a duty on entering the country has varied greatly. From 1820 down to 1833 less than 10 per cent of the merchandise entering the country came in free of duty. From 1833 to 1844 the share admitted free of duty ranged from 25 to 50 per cent of the total. From that date to 1857 the share imported free of duty ranged from 9 to 17 per cent of the total. From 1857 to 1863 the share imported free of duty ranged from 20 to 27 per cent. From 1863 to 1867 the share imported free of duty ranged from 12 to 19 per cent. From 1867 to 1873 the proportion entering without payment of duty ranged from 4½ to 8½ per cent of the total. Beginning with 1873 the share of merchandise imported free of duty steadily increased, commencing with 27 per cent in that year and reaching 56 per cent of the total in 1892, 59 per cent in 1894, 48½ per cent in 1896, 49½ per cent in 1898, 47½ per cent in 1905, and 44½ per cent in 1908.

The share which the customs duties have borne in producing the revenues of the country has also varied with varying conditions. From 1791 on down to 1848 small sums were collected as internal revenue, seldom, however, reaching as much as 1 million dollars. In 1863, however, the present system of internal revenue was established, the receipts therefrom in that year being in round terms, 38 million dollars, while the customs receipts were 64 millions. In that period from 1864 to 1868 the internal revenue receipts averaged 217 million dollars per annum, and the customs receipts, 137 millions per annum. With the close of the civil-war period internal taxes were modified, and the annual average of internal-revenue receipts during the period from 1869 to 1897 was 133 million dollars per year, and the customs receipts 181 millions per year. During the Spanish-American war period from 1898 to 1902 the receipts from internal revenue averaged 264 millions per year, and the customs receipts 212 millions per year. With the modification of the internal-revenue taxes following the close of the Spanish-American war the receipts therefrom again fell below those of the customs, and the annual average of the internal-revenue receipts in the period between 1903 and 1908 were 245 millions, while those from customs was 284 millions.

It must not be supposed, however, that



because a dozen articles or groups of articles pay three-fourths of the tariff duties collected, the making of a tariff and the determination of rates of duty and the amount of revenue likely to result therefrom is by any means a simple matter. The rates of duty levied are not applied merely to groups of articles as a whole, but apply at different rates and in different terms to various grades and qualities of articles forming each group, and in many cases to the various grades of a material bearing a single name. Under the title of cotton cloth, for instance, the rates of duty on cloths not exceeding 50 threads to the square inch, counting warp and filling, are 1 cent per yard if the material is not bleached, dyed, or colored, but 1½ cents per yard if bleached, and 2 cents per yard if dyed, colored, or printed. If the number of threads per square inch exceeds 50 and does not exceed 100 the rates are still higher—1¼ cents per square yard on that which is not bleached, dyed, or colored and does not exceed 6 square yards to the pound, but 1½ cents per square yard on that exceeding 6 square yards to the pound and 1¾ cents per square yard if it exceeds 9 square yards to the pound; for that which is bleached still another rate obtains for the various grades; and for that which is dyed or colored another and still higher rate.

For cloths exceeding 100 and not exceeding 150 threads to the square inch the rates are yet higher for the various classes, whether unbleached, bleached, or dyed, and also in proportion to the number of square yards per pound. For other grades, exceeding 150 and not exceeding 200 threads to the square inch, the rates are higher. For those exceeding 200 and not exceeding 300 threads to the square inch the rates are still higher; and for those exceeding 300 threads to the square inch even higher rates are named for the various classes and grades. On cotton cloths alone the duties collected in 1907 were but 5 million dollars. The class of cotton goods which pays the largest sum is that of laces, which paid in 1907, 24 million dollars, out of 39 millions paid by cotton manufactures as a whole. This class of cotton laces includes laces, lace window curtains, ties, pillow shams, bed sets, napkins, and other articles made wholly or in part of lace or in imitation of lace; veils and veiling, embroideries, edgings, insertings, and many other articles; and pays a duty of 60 per cent. Lace window curtains, pillow shams, and bed sets made on Nottingham lace curtain machines if they have 6 points or spaces to the inch, counting between the warp threads, pay 1½ cents per square yard plus 20 per cent of the value; if they contain 7 points or spaces to the square inch they pay 2 cents per square yard and 20 per cent of the value; and so on, the rate increasing with the number of points or spaces to the inch (or in other words, with the increase in fineness of the lace), until those having 18 points or spaces to the inch pay 7½ cents per square yard plus 20 per cent of the value.

The above complicated features of the "Cotton Goods Schedule" of the existing tariff law are stated somewhat in detail as an example of the difficulties which confront the maker of the tariff and the officers of the Government who determine the amount of duty to be collected and actually collected on the thousands of articles and many thousands of grades of different articles imported; and to further indicate that while it is true that twelve different articles or classes of articles pay three-fourths of the duties collected, the details of fixing the rates of duty, and of determining the amount of duty which should be paid and of calculating the amount actually collected, are, after all, most difficult and tedious, and explain in some degree the difficulties of the task of making a new tariff, of collecting the duties which it names, and of stating in concrete form the results of these operations.

#### HAPPENINGS OF THE WEEK.

##### Foreign.

A member of the English parliament recently startled that country by declaring that the German government was secretly placing men, arms and ammunition in London.

In the presence of many chiefs and 20,000 soldiers, Lidi Jeassue, the 13-year-old grandson of King Menelik, of Abyssinia, was publicly proclaimed heir to the throne of that country. He was two days before married to 7-year-old Princess Romanie and it is claimed that the union has great political significance since it unites the families of two dynasties, and very influential chiefs.

A court at Paris sentenced 15 royalists to a short term in prison for attempting to form a parade after a dinner given in honor of the Duke of Orleans.

Docks and warehouses valued at \$1,500,000 were destroyed by fire at Lille, France, last week.

The Cuban government is facing a most serious situation—the revenues from regular sources appear in no way sufficient to meet the ordinary expenses of the government. The government fears to take steps toward retrenchment as practically all of the work being carried on is necessary for the immediate welfare of the inhabitants and for the commercial interests of the island.

Influential Jews from different sections of the world are planning for a Jewish colony to be located on the territory between the Tigris and Euphrates rivers. An expedition will be sent to gather information about this territory, called Mesopotamia.

A conference will be held in London in June to consider plans looking toward the establishing of a system of signals for gathering information about meteorological conditions that will enable vessels to be forewarned of storms while crossing the ocean. By a system of relays it is that that records at different points can be gathered by boats and sent to points along the European coast and on this

side, where the information can be studied and a report of same sent back to the vessels in the same manner.

In order to settle partisan differences it has been proposed to the general assembly of Mexico that two vice-presidents be elected.

The national geological society has prevailed upon Prof. Starr of the University of Cornell, to make another trip to Alaska for the purpose of further studying the glaciers of that land.

Recent vessels in the New York harbor report great difficulty in passing the large ice fields that are now lying in the course of traffic between this country and Europe.

The Chinese government will use the revenues derived from the Pekin-Hankow and the Northern railroad to purchase the English road between Shanghai and Nankin.

The Philippine general assembly last Thursday declared a second time for the independence of the islands.

The Italian government is planning to build new battleships for her navy. Those now in contemplation will be the largest in the world.

##### National.

Over 500 miles of railroad has been tied up in the state of Georgia because of a strike by the white firemen against the employment of negro firemen. The state has been asked to send troops to aid the employers but the governor states that there are not sufficient troops in the state to cope with the situation.

Sunday fully 25,000 persons attended services in Brooklyn in honor of the soldier and sailor dead.

The Union Pacific railroad has just placed an order for 100 new locomotives. Henry H. Rogers, vice-president of the Standard Oil Company, died May 20, at his home in New York City. He was one of the most influential financiers of the country.

The assets of A. Booth & Co., fish dealers, who went into bankruptcy during the 1907 panic, sold recently for \$1,000,000 at public auction.

Cattlemen raided a sheep ranch near Atchu, Col., last week and killed 3,000 head of sheep.

The 1909 session of the Michigan legislature adjourned May 19.

Former Congressman Landis, in speaking of the effect of the Panama Canal upon the United States, said before the Detroit Bankers' Association that the undertaking would be to the disadvantage of the United States unless our merchant marine is given more support.

The national house of representatives passed the Philippine tariff bill Monday. The steamer Western States ran down a tug in the Buffalo harbor Monday morning and three men were drowned.

The sailors and midshipmen of the Japanese battleships Sayo and Aso, will be permitted to land at Seattle and go on parade with their side arms at the Alaska-Yukon-Pacific Exposition.

The Florida legislature has authorized a committee to investigate the Western Union telegraph office at Tallahassee to determine whether members of that body have been favored with favors from the corporation or not. This body also passed a bank guarantee law differing little from the law now in force in Oklahoma.

The naval department is experimenting to determine whether it is possible to use fuel oil for naval purposes. The new battleships will be equipped so that they can use the oil in case it is found feasible to do so.

The Detroit common council has provided for the purchase of voting machines for all the precincts of the city. Tests were made at the last general election and the machines were found satisfactory.

At the meeting of the Wayne county medical society it was declared by Dr. McCaskey, of Indiana, that the tuberculosis of cattle was identical with that of the human being and that the disease could be communicated from beast to man.

The Illinois senate lacked a single vote of passing a bill for woman suffrage last week.

A war is on between the Detroit city council and the Belle Isle ferry boat company because of a difference upon rates of fare to and from the island.

Kent Co.—The entire program at the May meeting of the Grand River Valley Horticultural Society was devoted to weeds, their beauty, uses and the money there is in some of them, as well as means of eradicating the harmful kinds. Mrs. W. K. Morley read a paper on "Growing Weeds for Money," and some of the values given were as follows: Lobelia leaves, 15¢ to 20¢ per lb; seed also sells well; burdock roots, 3¢ to 8¢ per lb; seed, 5¢ to 10¢; poke weed, 5¢ per lb; stramonium, 100,000 lbs., imported annually; boneseed, 2¢ to 8¢ per lb; golden seal, \$1.30 to \$1.50 per lb. It was stated that the value of stramonium per acre would be double that of cotton.

The May issue of the Dairy Bulletin, published by the Vermont Farm Machine Co., to make better known the merits of the U. S. Cream Separator, is an unusually interesting and informative publication. Besides being well illustrated with half-tone engravings, there are several well written articles that will appeal to every farmer and dairyman, (owners of Guernseys will be particularly interested in this issue), besides complete descriptions of the various models of U. S. Separators. A copy of this publication may be obtained free for a post card request by addressing the Vermont Farm Machine Co., Bellows Falls, Vt.

##### Just As Recommended.

"Received the Michigan Farmer sewing machine O. K., and found it just as you recommended it. I like it very much and thank you for same.—Edith Empkie, Port Austin, Mich."

This was one of our \$19.00 Michigan Farmer machines, which we recommend equal to any sewing machine manufactured, regardless of price.—Editors.

## The Right Way to Load Hay is With the Light Draft Great DAIN Loader



Don't pull your horses to skin and bones, dragging along an awkward, cumbersome, straining machine when you can buy the neatly-designed, easy-running, smooth-working DAIN LOADER.

In addition to hauling easily the Dain Loader rakes clean, lessens work for the man on the wagon, is simple in construction, reliable and lasting.

It excels in these vital points owing to perfect mechanical principles embodied in its construction. The PATENTED ROCKING PITMANS that operate the rakes are hammock mounted, and swing free and easy like a pendulum. By means of two straight GEARED drive chains the pitmans are worked at exactly the RIGHT SPEED to cause each series of rakes at every stroke to LAP BACK on the stroke of the preceding series.

**The Overlapping Strokes of the Rakes Insure Gathering the Hay Cleanly** and in even UNIFORM quantities and explains why the Dain Loader runs steadily, pulls easily, and gently elevates the hay from swath or windrow without wadding, tangling, pounding or jamming. Loaders that rake in a slipshod manner are invariably deficient in speed, they wad and drag hay, pull heavy, strain and break.

The wheels set under the Dain Loader, and hay can be gathered as close up to fences or obstructions as it can be cut with a mower.

The Dain Loader narrows at the top, and is provided with a HINGED WIND GATE which guides the hay directly into the middle of the load at all times.

This excellent feature is greatly appreciated by users as it prevents hay from blowing or working off the sides of the load.

Dain Loaders, like Dain Mowers, Side Delivery Rakes, Stackers, Sweep Rakes and Presses, are carefully built of highest grade material and consequently are durable and reliable.

The great success the Dain Loader has achieved, and its thousands of highly pleased users, is undisputed proof of its superior merits.

Ask your dealer to show you the Dain Loader. Also write for our Special Loader Literature and booklet, "ALL ABOUT HAY," containing valuable facts and information.

**DAIN MFG. CO., 814 Vine Street, Ottumwa, Iowa**



**The Dain Loader Has no Cylinder or Drum to Wrap or Wind.**

Each rake adjusts to the meadow surface independently of the others, leaving trash or manure undisturbed. Instead of having a return carrier which pulls hay off the wagon, the Dain Loader has elevating bars that push the hay toward the front of the wagon. This force delivery feature greatly lessens the work of building the load, and

**Saves one man's labor every day the Loader is used.**

## Eclipse LIGHTNING RODS Will Protect Your Property From Destruction



**Last Year 65% of the Farm Losses in Michigan Were Caused by Lightning, Not One Loss on a building Protected by Lightning Rods.**

Now, Mr. Farmer, are your buildings properly rodged to protect your property, your stock and your family from lightning.

If not, you should insure protection by putting lightning rods on all your buildings this spring.

The job only has to be done once and you should see to it that it is done right.

See that the rods are 98 per cent pure copper wire and made by a reliable firm—by a firm that gives a guarantee that can be collected if necessary.

Eclipse Pure Copper Lightning Rods are made by a Michigan corporation doing business in every county in the

Write us today (a postal will do) and get our catalog.

**ECLIPSE WIRE FENCE CO., Lansing, Mich.**

state, and the guarantee we put out is binding. You do not have to go to another state to collect it.

The wire used in our cable is made and guaranteed by the American Steel & Wire Co. to be 98 per cent pure copper.

To protect you further, we guarantee the work of our agents, and see to it that all rods are put up correctly.

Eclipse Rods and specifications are endorsed by the leading fire insurance companies of the state.

You owe this protection to your family and you owe it to yourself to see that you get the best protection that money can buy.

## The Potato Digger Dowden

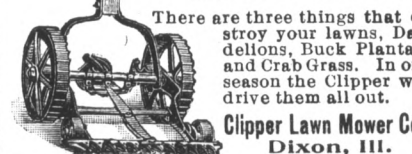
For Fast, Clean Work is the



Simple, strong, always in order. Works in all soils, all depths, hillside and level. No cutting and none missed. Potatoes always clean, lying on top of ground. Works well in heavy tops.

**DOWDEN MFG. COMPANY**  
973 Elm Street, Prairie City, Ia., U. S. A.

## The CLIPPER



There are three things that do destroy your lawns, Dan delonias, Buck Plantain and Crab Grass. In one season the Clipper will drive them all out.

**Clipper Lawn Mower Co., Dixon, Ill.**

**GIRLS** Experienced Overall Operators earn from \$7 to \$15 in 48 hours. No work after 4:30 p.m. or 12 o'clock on Saturdays. We have competent instructors to teach Beginners. Constant employment guaranteed. Highest Union Wages. H. E. STOEPEL, Maker, 1020-1080 Beaufait Ave., Detroit, Mich.

**FARMERS!** Greatest discovery in years: every farmer should know it, send stamp for particulars. W. F. WILSON, 808 Third St., Plainfield, N. J.

## MONEY IN MINERAL LANDS.

Are there minerals in your lands? Can you tell? If you own lands and wish to know their mineral value, write the undersigned enclosing 10c in stamps. **BAMBERG & SMITH, Armory Bldg., FLINT, MICH.**

**WANTED**—A middle aged man and wife, no children, on an Old Mission Peninsula farm, Grand Traverse Co. The man for general farm work, and the woman to do the housework in a family of three adults. Give wages desired and references in first letter. Address, Dixon, or Mich. Farmer, Detroit

**For Sale—2 King Onion Toppers** Good as new. Will sell at a sacrifice. Inquire of A. FLING, Plymouth, Richland County, Ohio.

## 320 Acres of Wheat Land in WESTERN CANADA

Will Make You Rich

**160 ACRE FARMS IN WESTERN CANADA FREE**

Fifty Bushels per Acre have been grown. General average greater than in any other part of the Continent. Under New Regulations it is possible to secure a Homestead of 160 acres free and an additional 160 acres at \$3.00 per acre.

"The development of the country has made marvelous strides. It is a revelation, a record of conquest by settlement that is remarkable." Extract from correspondence of a Missouri Editor, who visited Canada in August last.

The grain crop of 1908 will net many farmers \$20 to \$25 per acre. Grain-raising, Mixed Farming and Dairying are the principal industries. Climate is excellent; Social Conditions the best; Railway Advantages unequalled; Schools, Churches and Markets close at hand.

Lands may also be purchased from Railway and Land Companies. For "Last Best West" pamphlets, maps and information as to how to secure lowest Railway Rates, apply to Sup't of Immigration, Ottawa, Can., or to the authorized Canadian Government Agent.

M. V. McInnes, 6 Ave. Theatre Block, Detroit, Mich.; O. A. Laurier, Marquette, Mich.

Please mention the Michigan Farmer when you are writing to advertisers.



## HORTICULTURE

### THE COST OF SPRAYING.

I have been asked by a number of persons what it is worth per tree to spray orchards, and have received several letters from persons who wish to spray for neighbors. Any one who has had experience in spraying will realize how impossible it is to give a definite answer to such questions, especially if one is not acquainted with the trees. The following are a few of the variable factors:

1. The materials used. Lime sulfur generally costs more than the later sprayings, and it makes considerable difference whether one uses arsenate of lead or Paris green.

2. The price of materials. Those who buy in large quantities and are located in fruit sections can get much cheaper prices than those having few trees and who have to get materials of those who retail in a small way. In some cases the latter prices are more than double the former ones.

3. The size of the trees. A very large tree will take as much material as a dozen small ones, or as much as a hundred a year or two old.

4. The time of year. A tree in full leaf requires more material than one just starting. More spray is also used in spraying for scale than in spraying for scab or codling moth, as all parts of the trunk and branches must be sprayed from both sides to get all the scale.

I find that when we first began to spray we used less material than we do now, and I think this is universally true. For example, we computed that the owner of an orchard of 75 medium to large sized trees would need at least 75 gallons of commercial lime sulfur mixture, about 15 50-gallon barrels of spray. Amateurs did the work and that they did it very thoroughly from both directions but did not use 50 gallons, while we used nearly 100 gallons on the same number of trees. I find that when we first began spraying we used but four or five barrels on an orchard where we now use eight to ten, the trees are no larger.

On large trees we have used as high as one-third of a barrel to the tree, but we average about ten to twelve gallons. On medium sized trees, say 20 to 25 years old, we use from five to eight gallons. Apple trees two or three years old can be sprayed thoroughly with from a quart to a half gallon.

Now, if we compute a 50-gallon barrel of spray material it will cost as follows:

3 lbs. blue vitriol at 7c .....	21c
3 lbs. arsenate of lead at 12c .....	36c
6 lbs. lime at 1/2c .....	3c

50 gallons Bordeaux-arsenate spray..60c  
Large growers will probably get these materials some cheaper, small growers may pay more, but I assume this a fair average for this season. This would bring the cost of materials for a large tree about 12 cents and a medium one six cents per application.

I find in looking over our ledger that in spraying small orchards such as the average farmer would have, the labor cost is about the same as the cost of materials. Figuring on this basis, this would bring the cost per application of Bordeaux-arsenate at 25c per large tree and 12c per small tree. If four applications are given during the season this would mean 96c per large tree and 48c per small tree. Unless lime-sulfur is used the first and last application can be given more cheaply, so that perhaps 75c would be a fair cost of the four applications for a large tree, and half this amount for a medium tree. Of course, these are only estimates based on the amount of material we have used and its cost of application per tree, but I believe they are a fair average for a thoro application.

If I remember rightly, reports from a hundred Michigan growers sent in to Prof. Taft last year gave the average cost of four applications per tree as 25c. This refers to trees of all sizes and is probably fairly accurate for small to medium trees. For large trees it is certainly too low. It is doubtful if all of these growers kept an accurate account of the time and materials used on their trees. Our figures last year for an orchard of large trees was somewhat more than a dollar per tree for four applications. These trees are very large however.

If Paris green is used instead of arsenate of lead these figures will be reduced somewhat, with Paris green at 30c per pound, and one-third pound to the bar-

rel, Paris green and Bordeaux would cost about 40c per barrel, which would reduce the above estimates by one-third. The cost of spraying is not sufficiently large to deter us from the practice for fear of loss. The 100 growers referred to above realized \$6.00 per tree for the work.

In making our estimates we have computed the price of labor at \$1.50 per day for man and \$1.00 for team, not allowing extra wages for foreman, or anything for use of pump. Those intending to spray for others by the tree should figure these things in and allow a little for profit.

With a good-sized pump and the equivalent of four vermored nozzles two men with one line of hose and the nozzles on one rod, or three men with two lines of hose and two double vermored nozzles will put on about eight barrels per day. If trees are quite small fewer barrels will be applied per day, if everything is handy and trees are large, ten barrels might be applied, but eight is a good day's work with a hand pump.

Those who have not had experience in spraying and wish to spray for others might spray at so much per hour, and the cost of materials to be paid by the owner of the orchard. After a time they can arrive at a satisfactory price per tree and learn to estimate the material required for a given orchard.

Those who wish their orchards sprayed by others can well afford to give a fair price if they know the work is in charge of a competent and painstaking man, but incompetent workmen may do more damage than good.

Calhoun Co. S. B. HARTMAN.

### GARDEN WORK FOR EARLY JUNE.

It is a good time now to plant the late autumn and winter squashes. Earlier plantings are more liable to attacks of the black squash borer and they are about the worst enemy of the squash. The later the planting can be done and bring them to maturity before frost, the better. The first week of June, however, is about as late as is safe to hold them in ordinary seasons. I have planted as late as June 15th and brot them thru safely, but it is somewhat risky. With this late planting there was no trouble whatever with the bugs, while earlier plantings were seriously injured.

As to the soil preparation, there is no end to the amount of fertility they will assimilate; but it should be well prepared and chiefly applied in the hill before planting. During the earlier stages of growth they will require careful watching as the striped cucumber beetles will be ready for them as soon as they are fairly up. In general, they are not so much to be feared as the squash bugs, but sometimes they seem never to tire of their destructive work. Last season they did serious damage to my crop by working in the blossoms, an experience I have never before met. They did serious damage and the only relief I found was Bordeaux mixture well loaded with Paris green. This mixture, of course, served the double purpose of destroying the beetles and insuring against the blight. The best effects will be realized by boiling the Paris green in, say, a gallon of water to the pound. Boil for one or two hours and stir well and the solution can be added to the spray mixture in any strength desired. It is much better for all purposes and will save nearly half in amount.

The squash bugs do not eat but simply bore and suck the sap, so they are easiest handled by a contact of spray. Spray with kerosene emulsion and the eggs usually deposited on the under side of the leaf can easily be destroyed. They are also easily trapped by boards or shingles laid near the hills. In the late afternoon they leave the vines and burrow in the ground for the night; but if boards or shingles are laid near the hills they will go under them, and can be easily found and destroyed in the early morning.

With this week begins the active use of the sprayer, and the Bordeaux should in all cases be used in preference to water solution or dry mixture. I know of no foliage that it injures or harms if applied at any time. The blight and other fungous diseases are so troublesome now that there is no safety in trying to grow vine crops especially, without its use. Some of us perhaps, have escaped these troubles up to the present time and thus come to think that our crops bear a charmed life, but we are liable at any time to get our eyes opened, and the only safe way is to begin dodging before we get hit. The Bordeaux as a preventive is worth five times its value as a

remedy, so its early and constant use is greatly to our advantage. With the hydrated lime the making is very simple and the arsenites can be added or left out altogether, as desired.

### Early Varieties of Sweet Corn for Late Use.

From now up to July 1st for late fall use, corn can be planted at intervals to suit convenience. The White Cob Cory and Old Colony are excellent varieties for early June and if planted at the same time will give a good succession in their order. The latter is one of the best second early sorts I have ever grown, the only fault being that it does not remain in edible condition as long as some other sorts, but it has excellent table qualities and is a heavy cropper. For the later plantings, say from mid-June to July 1st, the Early Minnesota is the most dependable sort. It is an extra good table sort and is a good yielder for so early a kind and will be the most certain of any sort to keep out the way of the frost. The lateness of the season is going to make late sorts very uncertain this year and our safety will lie in confining ourselves largely to quick growing varieties for the late autumn use.

### Late Potatoes.

The great bulk of this crop will be planted early in the month, and as for me and my house, if delayed until now the earlier in the month I can plant the better I like it. I prefer taking some chance with the bugs rather than so many with the early autumn frosts. It seems, however, to be the accepted time; but by all means, if most of us must wait until June let it be done early. So the ground should be prepared and things in general made ready. There is much as yet unrevealed in the science of successful potato growing and what seems to be the right way to grow them will like enough get entirely upset this year and our pet theories will get a setback. There is evidently much in the subject that even the best growers know very little about. It is a very broad and far reaching subject and one which every grower may study with profit.

Wayne Co. J. E. MORSE.

### SAVING GARDEN SEEDS.

I have a little to say about saving garden seeds. Many seem to think it is a very difficult thing. I save nearly all the seeds I use, only buying new when I want better stock, or fail to gather some kind. It makes a great difference in the expense of planting a garden. In the fall when I gather the vegetables I save the largest beets and put them in a box and cover with sand; also turnips and carrots and rutabagas that I want for seed, and in the spring when I plant the garden I set them at one side of the garden so deep that the tops come about on a level with the surface of the ground. I save the largest parsnips when digging in the spring and plant the same way. Three or four of each kind will grow all the seed needed for a couple of years, and all but the parsnip will germinate after the second year quite as well as the first. When gathering lettuce I leave some of the best looking plants to go to seed and I set out the largest onions I have and let them grow seed. When gathering the onions in the fall that I raised from seed sowed in the spring I save all of the small ones and set them out in the spring. They soon grow large enough to use and those not used are sure to make large onions for next winter as they get a good growth, before the weather becomes so hot and dry. To grow cabbage seed bury the stumps of the cabbage just before the ground freezes in the garden about eight inches deep, and it would be a good plan to cover the top after covering with earth, with straw or leaves. In the spring set them like a tree would be set, with just the roots covered and packed hard enough so they will not tumble over.

J. DeCov.

### FRUIT PERFECT. PYROX STUCK TO FOLIAGE.

W. H. Lafuse, Liberty, Ind., writes: "The season here was so rainy and farm work so pressing that we did not get much spraying done. The work done on the apple orchard, however, with Pyrox was very satisfactory. The fruit was almost perfect and the spray remained on the foliage until the leaves dropped off. I shall give it a more thoro trial next year." "Pyrox" does not wash off the foliage like Paris Green, but sticks like paint thru even heavy rains. We endorse it. Address this paper or Bowker Insecticide Co., Boston, Mass.



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## POULTRY AND BEES

## SUMMER CHICKS.

Why should we not hatch chicks in summer as well as in spring? There is no reason that it cannot be done successfully if one has a shaded yard with plenty of grass. The main objection to mid-summer chicks is that the heat kills them. It will if they are not protected from the sun during the hottest part of the day. I have successfully raised chicks that were hatched in the hottest month of summer, but I was well prepared and gave the chicks careful attention.

A grassy enclosure away from the main poultry yard is best for summer chicks. Here they have the yard to themselves and will not be bothered by the grown chickens. Feed them just as you would the earlier chicks, but pay particular attention to having their soft feed, if you use any, sweet and clean, for this is the time of year that bowel trouble is easily started in a flock. Probably more chicks die from this cause than from any other, the lice are also responsible for many losses. The safest plan when growing small chicks in hot weather, is to use only dry feed. I have found the prepared chick feeds sold by dealers both economical and convenient. It is also necessary to keep the coops scrupulously clean in summer. Mine are cleaned daily and the dirt and sand renewed often.

Keep the summer chicks growing. Give them all they want to eat, feeding a variety of food. Sometimes leg weakness develops. To prevent it feed meat scraps, bran and milk and keep an abundance of grit before the chicks always.

Gapes seem to be less prevalent than formerly. At least, my chicks are seldom so troubled. If any chicks are affected the tiny red worm which is the cause may be expelled by causing the chick to sneeze.

Give the summer chicks all the range you can until they are six weeks old, then confine and fatten as quickly as possible. They will grow to market size in less time than early spring chicks and at much less expense.

Ohio.

N. S. GREEN.

## FEEDING BROODER CHICKS.

The question of what to feed brooder chicks is often a perplexing one, and especially to the beginner. Some want to know about chick foods, and others how to feed a mash of soft food, while others want a simple grain ration. If a variety of food is given, chicks can be successfully raised by any of these methods, provided they are not overfed and are cared for regularly and kept in clean and healthful surroundings.

Chicks can be grown by the feeding of rolled oats, cracked wheat and corn, with the addition of beef scraps or other animal food, but probably it is not as well as to have a chick food made of a variety of grains, seeds, meat, etc. If one buys a quantity of chick food at a time it is probably cheaper than the common grains and gives much better results for the reason that the chick food is always the same and is uniform—that is, mixed in the same proportions. The one point to look out for is that the chick food is pure, fresh and wholesome and is not musty.

If a simple grain ration is desired, give rolled oats for the first feed in the morning, cracked wheat in the middle of the forenoon, cracked corn at noon, rolled oats in the afternoon and wheat at night. When the chicks are four weeks old the feeding may be reduced to three times daily and the rolled oats omitted, feeding whole wheat, cracked corn and beef scraps.

Some poultry raisers feed young chicks a small amount of beef scraps from the start, but I have learned that there is danger in it if too much is given, as bowel trouble is likely to result. The chicks will hardly make a full meal of beef scraps, so a feed of grain should precede, when the chicks are apt to be hungry.

For those who wish to prepare their own chick food I have found the following to be very good: To make 100 lbs. I divide it about as follows: Cracked corn, 15 lbs.; millet seed, 15 lbs.; buckwheat, about 5 lbs.; beef scraps, 5 lbs.; grit, 5 lbs.; charcoal, 5 lbs.; oat flakes, 20 lbs.; cracked wheat, 25 lbs., and usually 5 lbs. of rape seed. This makes a total of 100 lbs. of what I consider excel-

lent food. If, however, some of the ingredients cannot be had, others of the same nature can be substituted. Cracked cowpeas, sorghum seed, kaffir corn seed, and others are all good to use in chick feeds in small quantities. The grains must all be pure and wholesome and free from taint and must.

I prefer making my own mixture, adding the grit at grit prices, as chick size grit at the price of chick food is not economy, or at least that has been my experience. I do not feed a mash of soft food to young chicks until they are well feathered out, or about six weeks old. I have found that young chicks do better when dry fed, but after they are well feathered nothing will make them grow faster than a mash, properly made, to which is added a sufficient amount of animal food.

Whatever method of feeding is adopted, the chicks must have a constant supply of water, but so arranged that they will not make a bath tub out of it. Charcoal is very essential, as it aids digestion, neutralizes the gases of the stomach and helps to prevent bowel trouble. When chicks are given a grass run they will supply themselves with green food, altho dandelion leaves and rape are relished by them in addition.

After chicks have left the brooder and are placed in colony houses they are apt to be under fed, especially if on free range, so to prevent this many have adopted the hopper method of feeding. A hopper with compartments for mixed grains and feeds of different kinds is placed in or near each colony house. The work of attending to the growing stock consists of occasionally filling the hopper, and keeping the houses perfectly clean. This reduces the work, of course, and when on range the chicks grow rapidly. Chicks in confinement are apt to gorge themselves by this method, however.

Illinois.

Mrs. N. M. RUSHING.

## REARING DUCKLINGS.

There are two methods of rearing ducklings. One is to keep them in absolute confinement, where they never learn to swim from the time they are hatched to the time they are killed; the other plan is to let them have entire liberty on water, where, of course, they will grow very well, but not so rapidly as they will grow under confined conditions. The ducklings that are kept shut up in limited pens will require a drink of water two or three times a day in order to satisfy their thirst and to keep their bills clean. They must not be fed on barley meal and then allowed to swill as much water thru them as they like; and just in the same way, it is quite useless to feed ducklings on barley meal if they have free liberty on water, because directly they have had the barley meal they go off to the river or pond and wash it thru them by drinking water liberally, so that it practically does them no good. Ducklings kept on water should be fed entirely on hard grain, and for choice there is nothing better than good oats.

Ducklings can be kept on a river and fattened very nicely if they have a feed of oats about twice a day; but it needs to be borne in mind that when they are brot up on water they cannot be fattened off in the same way as ducklings which have been kept in confinement.

To bring them right off the water would mean they would begin to pine at once and would be quite unfit for market. Therefore, if they are brot up on water they must be taken straight off and killed, without any intermediate period for attempted fattening. Ducklings kept in confinement should be ready for market when they are about ten weeks old. If they are not ready then they will begin to moult, pin feathers will appear, and they will not be fit for market until several more months have elapsed.

Canada.

W. R. GILBERT.

## "SHAKE" SWARMING.

Entire prevention of swarming in the production of comb honey is a difficult proposition. Most methods do not prevent but merely control this law of nature for increase. There are many kinds of swarm-controlling practices in vogue. One of them I will consider; it is known as "shaken" swarming.

First we will consider when this treatment is to be applied. There are a few, only a very few, apiarists who shake, that is, apply this particular method to all colonies at about the commencement of the nectar flow. They do this regardless of whether the colonies have made preparations to swarm or not. I

don't consider this the most profitable way, but it does not require so much work. If a colony does not want to swarm I much prefer to leave it alone. You see the largest yields mostly come from colonies that do not swarm but which quietly attend to their knitting. If such are interfered with the yield is reduced, just as with natural swarming. Wait until the swarming season opens. Then each colony is to be looked over once a week to ascertain whether preparations for swarming have been made or not. Now, suppose a colony is found with queen-cell cups, and eggs in one or more of them. If this colony still has room in the brood nest, and of course there must be plenty of room for surplus storing, it may give up the idea of swarming if the incipient queen cells are destroyed. If such a colony at the next examination has advanced queen cells it should be treated, as all colonies having queen cells ready to seal or already sealed are to be shaken.

First, a hive is to be prepared as for the reception of a natural swarm. Then smoke well the colony to be treated. A natural swarm fills itself with honey before issuing. So be sure and disturb the bees well by smoking so this artificial swarm will be in the same condition as a natural one. After the bees have filled themselves, remove the hive, set it a little to one side and put the prepared hive in its place.

Now the real treatment begins. Remove comb after comb, shaking and brushing off the bees in front of the new hive. If the bees have been induced to fill themselves well with honey they will run into the new hive like a natural swarm. It is, of course, necessary to get the queen into the new hive.

As there is brood to care for, all of the bees must not be shaken out of the old hive. Leave about a quart, as nearly as this can be estimated. Another thing, if a queen is to hatch from one of the cells, don't shake the frame it is on. Brush off the bees but be careful not to injure the cell.

The combs of brood are returned to the old hive and it is placed beside the new one with the entrances at right angles. About a week after the first shaking, this parent hive is to be gone over again and shaken as the first time, leaving as many bees. Do this at about sunset, smoking both hives well before shaking. At this second shaking break off every queen cell.

Twenty-one days from the day of the first shaking all bees will have hatched; then they are to be united as before. The combs left can be used as extracting combs or some other use will be found for them.

The way described does not provide for increase. If this is wanted the old hive need be shaken but once and then given a separate stand so that the queen may hatch and build up the colony. If the queen is old it is a good idea not to shake the bees the last time, but let the young queen become fertilized. Then kill the old queen and introduce the young one.

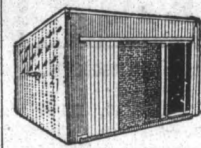
Now let us go back to the colony just shaken into the new hive. It should be left without surplus apartments for two days so the bees may make a start at housekeeping. Then the super of sections can be put on. If the super is put on at once the brood nest will be started above in the sections. This makes a bad muss, as I know from experience. A queen excluder could be used between the brood chamber and the super to prevent the queen from going above, but I have had poor success with this. The bees were very reluctant to commence a brood nest below. Giving a frame of brood will make the bees work, but there are objections to this, for sometimes queen cells will be started and the bees swarm out, thus defeating the object of all this work.

Now, why shake bees instead of allowing them to swarm naturally? Well, by following this plan there need be no watching for swarms. The swarming problem is more nearly under the apiarist's control. It is worth quite a good deal to be able to do all the swarming one half-day in the week than to have a swarm now and then during the whole seven days. If a colony swarms and returns when I am not at home, I can treat it by shaking at evening, or the next morning. This finishes it and there is no need of watching for it the next day. As it is so necessary to success I will repeat as to the importance of getting the bees to fill themselves with honey. If they enter the new hive with empty sacks they are liable to abscond.

Wisconsin.

F. A. STROHSCHNEIN.

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## MARKETS

## DETROIT WHOLESALE MARKETS.

May 26, 1909.

**Grain and Seeds.**  
**Wheat.**—Prices still keep climbing. There is nothing in the reports received that looks encouraging to the consumers of wheat; everywhere the crop is showing signs of shortage and the improvement we were able to note a week ago in the southwest has been defeated by unfavorable conditions since. Liverpool and other European markets have aided the trade on this side to command the high prices now being asked. The chief reason for the strong advance the past week appears to be the effort of "shorts" to get hold of wheat to fill orders for May delivery. After they have covered it is probable that an easier feeling will prevail. The visible supply is becoming very small. One year ago the price for No. 2 red wheat was 99c. Quotations are:

	No. 2	No. 1	No. 3	Red.	White.	Red.	July.	Sept.
Thurs.	1.50	1.50	1.47	1.16	1.10	1.10	1.10	1.10
Fri.	1.52	1.52	1.49	1.17	1.11	1.11	1.11	1.11
Sat.	1.53	1.53	1.50	1.18	1.12	1.12	1.12	1.12
Mon.	1.55	1.55	1.52	1.20	1.14	1.14	1.14	1.14
Tues.	1.55	1.55	1.52	1.19	1.14	1.14	1.14	1.14
Wed.	1.55	1.55	1.52	1.19	1.13	1.13	1.13	1.13

**Corn.**—While the Chicago market has made new high marks in quotations during the week largely on account of the bullishness due to shorts covering their May contracts, and in face of receipts much heavier than estimated, the local trade has been conducted on a basis below the ruling values of a week ago. The weather has been favorable for doing farm work and the outlook for getting the corn crop started in good shape is much brighter than seven days ago. The high values and small stock precludes any large movement. One year ago the grain sold on the Detroit market at 74c per bu. Quotations are:

	No. 3	Yellow.
Thursday	76 1/2	77 1/2
Friday	76 1/2	77 1/2
Saturday	76 1/2	77 1/2
Monday	76 1/2	77 1/2
Tuesday	76 1/2	77 1/2
Wednesday	76 1/2	77 1/2

**Oats.**—The advance began several days ago continues. The ration made from oats is so costly that the consumption is being restricted wherever possible. The weather has improved and many of the later sown fields are more promising than those gotten in earlier. The market is very firm at the new figures. Last year at this time No. 3 white oats sold at 56c. Quotations are:

	No. 3 White.
Thursday	62
Friday	63
Saturday	63 1/2
Monday	64 1/2
Tuesday	64 1/2
Wednesday	64 1/2

**Beans.**—Another advance has been made in the nominal quotations for beans. The business is lifeless, the higher bids not calling buyers to the front. The nominal quotations are:

	Cash.	Oct.
Thursday	\$2.55	\$2.05
Friday	2.55	2.05
Saturday	2.55	2.05
Monday	2.55	2.07
Tuesday	2.55	2.07
Wednesday	2.55	2.07

**Cloverseed.**—Cash seed is being given no attention. Futures are fairly active with advances in values. Quotations are:

	Prime Spot.	Oct.	March.
Thursday	\$5.75	\$6.45	\$6.60
Friday	5.85	6.55	6.70
Saturday	5.85	6.55	6.70
Monday	5.85	6.55	6.70
Tuesday	5.85	6.65	6.80
Wednesday	5.85	6.65	6.80

**Rye.**—On account of small supplies there is little doing in this trade. The price is 92c for cash No. 2, an advance of 2c over last week's quotation.

## Visible Supply of Grain.

	This week.	Last week.
Wheat	22,420,000	24,160,000
Corn	1,192,000	1,648,000
Rye	7,570,000	7,373,000
Oats	265,000	313,000
Barley	1,557,000	1,951,000

## Flour, Feed, Provisions, Etc.

**Flour.**—Prices advanced. Market is firm. Quotations are as follows:

Clear	6.60
Straight	6.60
Patent Michigan	6.65
Ordinary Patent	6.70

**Hay and Straw.**—Prices unchanged. Carlot prices on track are: No. 1 timothy, new, \$14.50@15; No. 2 timothy, \$13@13.50; clover, mixed, \$13@13.50; rye straw, \$10@10.50; wheat and oat straw, \$9 per ton.

**Feed.**—Steady. Bran, \$31 per ton; coarse middlings, \$31; fine middlings, \$31; cracked corn and coarse corn meal, \$31@32; corn and oat chop, \$30.

**Potatoes.**—This market has been quite active for the past two weeks and while prices have not advanced they are firm as given. Good stock is quoted at 90@95c per bu. New potatoes from the south are quoted at \$4.75 per bbl.

**Provisions.**—Family pork, \$21@21.50; mess pork, \$19.50; light short clear, \$19.50; heavy short clear, \$22; pure lard, 11 1/2c; bacon, 14 1/2c; shoulders, 9 1/2c; smoked hams, 13c; picnic hams, 8c.

**Dairy and Poultry Products.**  
**Butter.**—Better prices are prevailing—the decline noted last week having been regained. The market is firm at the advance. Quotations are: Extra creamery, 25c; firsts, 23c; dairy, 19c; packing stock, 17 1/2c per lb.

**Eggs.**—Another slight advance was made this week. Market is steady and

active with receipts none too liberal to supply the demand. For extra fresh, case counted, 21 1/2c is being paid.

**Poultry.**—Chickens are coming in too slow to meet the demand and figures are marked higher. Other kinds are steady and easy. Quotations are: Chickens, 15 1/2@16c; roosters, 12@15c; fowls, 14 1/2c; ducks, 14@15c; geese, 9@10c; turkeys, 17@18c; broilers, 28@30c per lb.

**Cheese.**—New Michigan, 13 1/2@14c; York state, old, 17@18c; new, 14c; limburger, fancy old, 17@18c; new, 14c; schweitzer, fancy old, 20@21c; brick cream, 16c lb.

## Fruits and Vegetables.

**Apples.**—Market steady. Best grades are quoted at \$7@7.50 per bbl.

**Onions.**—Bermudas, \$1.50 per crate.

**Strawberries.**—24-qt. cases, \$3.50.

**Vegetables.**—Green onions, 10c per doz; radishes, 15@25c per doz; cucumbers, 60@75c per doz; lettuce, 10@12c per lb; head lettuce, \$2.50 per hamper; watercress, 25c per doz; spinach, 75@80c per bu; parsnips, 90c per bu; oyster plant, 40c per doz; asparagus, 75@80c per doz; rhubarb, 40@50c per doz.

## OTHER MARKETS.

## Grand Rapids.

The wheat market has climbed to \$1.55 this week. Oats and corn are also higher, oats being quoted at 61c, corn 77c. The butter market shows some eccentric features, since dairy is off 2@2 1/2c, while creamery is up 1c. Eggs are unchanged. Interest in old potatoes is waning, with the advance of the season, and at outside buying stations stock is moving slow at 60@65c. In live poultry, fowls and chickens are off 1@1 1/2c. Dressed hogs are firm at 9@9 1/2c. Prices paid on the city market for the new green stuff that is coming in are as follows: Onions, 7@8c doz; pieplant, 40@50c bu; lettuce, 8c lb; radishes, 20c doz. Greenhouse people are getting 50c per box for tomato and cabbage plants. There will be a large acreage of tomatoes in this section, and setting of plants is beginning.

Quotations follow:  
 Grains.—Wheat, \$1.55; corn, 77c; oats, 61c; buckwheat, 60c per bu; rye, 75c.

Beans.—Handpicked, \$2 per bu.  
 Butter.—Buying prices, Dairy, No. 1, 17 1/2@18c; creamery in tubs, 24 1/2c; prints, 25c per lb.

Cheese.—Michigan full cream is selling at 16@16 1/2c per lb; brick, 17c; Swiss, 17c; limburger, 17c.

Eggs.—Case count, 19@19 1/2c.

Potatoes.—60@70c per bu.  
 Cattle.—Cows, \$2.50@4 per cwt; steers and heifers, best quality, 3@5 1/2c; dressed mutton, 9@10c; dressed veal, 6@9c; dressed beef, cows, 5@7c; steers and heifers, 6 1/2@9c.

Hogs.—Dressed, 9@9 1/2c.  
 Live Poultry.—Fowls, 13@13 1/2c; chickens, 13 1/2@14c; roosters, 10@11c; turkeys, 18@19c; ducks, 14@15c; broilers, 1 1/4 to 2 lbs., 30@32c per lb.

## Chicago.

Wheat.—No. 2 red, \$1.54@1.55 1/4; July, \$1.17 1/2; Sept., \$1.10 1/2.  
 Corn.—No. 3, 75 1/2c; July, 70 1/2c; Sept., 68 1/2c.

Oats.—No. 3 white, 61@63c; July, 55 1/2c; Sept., 45 1/2c.

Beans.—Pea beans, handpicked, \$2.62@2.65 per bu. for choice; good, \$2.55; red kidney, \$2@2.15 for old.

Butter.—Steady. Creameries, 22@24 1/2c; dairies, 20@24c.

Eggs.—Steady. Firsts, 20c; prime firsts, 21 1/2c per doz.

Potatoes.—Lower. Car lots in bulk, 80@85c for average offerings.

## Pittsburg.

Potatoes.—Michigan, 90@95c per bu.

Apples.—Steady. King, \$6.25 per bbl; Spy, \$5@5.50; Spitzenburg, \$5@5.50.

Eggs.—Western firsts, 22c; do. extras, 22 1/2c; current receipts, 21 1/2c.

Butter.—Creamery, 26 1/2c; prints, 27 1/2c per lb.

## New York.

Butter.—Western factory firsts, 20c; creamery specials, 26 1/2@27c per lb.

Eggs.—Steady. Western storage packed, 23@23 1/2c; do. firsts, 21 1/2@23c; do. seconds, 20@21c per doz.

Poultry.—Alive, firm. Western chickens, broilers, 28@32c; fowls, 18@18 1/2c. Dressed, firm. Western broilers, 28@30c; fowls, 15@16c per lb.

Grain.—Wheat, No. 2 red, \$1.45 per bu; corn, No. 2, 85c; oats, mixed, 63c.

Potatoes.—Per 180 lbs., \$2.75@3.

## Elgin.

Butter.—Market continues firm at 25c per lb., which is an advance of 1c since last week. Sales for the week amounted to 710,800 lbs., as compared with 641,300 for the previous week.

## Boston.

**Wool.**—The favorable prices that buyers have offered farmers for the wool clip this year accounts for the unusual rapidity in getting the bulk of the crop into the hands of traders. Both in this country and abroad bullish sentiment prevails. Prices are improved and competition is getting more and more strenuous. Quotations for leading grades are: Ohio and Pennsylvania fleeces, XX, 34@35c; X, 32@33c; No. 1 washed, 39@40c; No. 2 washed, 39@40c; fine unwashed, 27@28c; fine unmerchantable, 29@30c; half-blood combing, 35@36c; three-eighths-blood combing, 35@36c; quarter-blood combing, 34@36c; delaine washed, 40@42c; delaine unwashed, 31@32c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 24@25c; delaine unwashed, 28@30c; half-blood unwashed, 33@35c; three-eighths-blood unwashed, 33@35c; quarter-blood 32@33c. Kentucky, Indiana and Missouri—Three-eighths-blood, 32@33c; quarter-blood, 32@33c.

## THE LIVE STOCK MARKETS.

## Buffalo.

May 24, 1909.

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

Receipts of sale stock here today as follows: Cattle, 120 loads; hogs, 8,800 head; sheep and lambs, 15,000; calves, 2,200 head.

The cattle market today was active and from 15@25c higher on all the desirable kinds. One small bunch of cattle sold as high as \$7.15. Fresh cows and springers sold from \$2@3 per head lower than last week.

We quote: Best export steers, \$6.75@7; best 1,200 to 1,300 lb. shipping steers, \$6.50@6.80; best 1,000 to 1,100 lbs. do., \$6@6.40; best fat cows, \$5.25@5.50; fair to good, \$4.50@4.75; trimmers, \$2.75@3; best fat heifers, \$6@6.50; light fat heifers, \$4.50@5.50; best bulls, \$5@5.25; bologna bulls, \$4.25@4.50; best feeding steers, 800 to 900 lbs., \$4.50@4.75; 700 to 750 lb. dehorned stockers, \$4.25@4.50; common stockers, \$3.50@4; light butcher steers, \$5.75@6; best cows, \$4.50@5.50; medium, \$3.50@4.50; common, \$3.00.

The hog market today opened ten lower than Saturday on everything except pigs, which were steady. At the close the yards are well cleaned up and the prospects look fair for the near future.

We quote: Medium and heavy, \$7.70@7.80; mixed, \$7.65@7.70; best yorkers, \$7.55@7.65; light yorkers, \$7.40@7.50; pigs, \$7.25, few strong weights, \$7.30; roughs, \$6.60@6.70; stags, \$5.50@5.75.

The lamb market today opened excited and prices 50c per hundred higher than Saturday, but the trade closed dull and strong quarter lower. We look for lower prices the balance of the week. We quote:

Top lambs, \$9.15@9.25; fair to good, \$8.50@9; culls, \$6@7.50; skin culls, \$4@5; yearlings, \$7.25@7.50; wethers, \$6.50@6.75; ewes, \$5.50@6; cull sheep, \$2@5; best calves, \$8.25@8.50; medium to good, \$7@8; heavy, \$4@5.

## Chicago.

May 24, 1909.

Received today ..... 20,000 45,000 10,000  
 Same day last year ..15,798 69,756 19,736  
 Received last week ..46,301 121,785 55,304  
 Same week last year, 68,587 168,909 87,054

Cattle have been in the usual demand for another week, but more were offered at times than could be disposed of readily, and sales on Wednesday and Thursday were mostly at least 15@25c lower than on Monday, when the demand was particularly strong for desirable offerings. After Monday the bulk of the steers sold at \$5.90@6.90, with a \$7.15 top, compared with \$7.25 on Monday, but prices were still much higher than in most former years at corresponding dates, except in 1902 when there was a great scarcity of cattle. Recent sales were on a basis of \$5@6 for inferior to fair light weights and at \$6.50@7.15 for good to prime shipping beefs, with a medium class bringing \$6.10@6.45 and a limited number of 1,275 to 1,400-lb. export cattle purchased at \$6.15@6.60. Distillery-fed cattle were marketed freely, and fair numbers of Texas meal-fed cattle were shipped in, it being regarded as a favorable time. Butchering cattle were in moderate supply and in good request, cows and heifers going at \$3.60@6.75, while canners and cutters sold at \$2.20@3.55 and bulls at \$3.25@5.50. Calves were lower after the early part of the week, selling at \$3.50@7 per 100 lbs., and there was a smaller outlet for milkers and springers at \$30@65 per head, with few sales near the top. The stocker and feeder trade has been on a restricted sale all of the time, and lower average prices prevailed, with sales at \$3.15@5.65 and little inquiry for feeders selling near the highest figure. Future prices for cattle are expected to be remunerative, as no large numbers are reported in feeding districts.

Today's cattle market was fairly active and steady, the best steers selling at \$7.20 and best calves at \$7.25.

Hogs have had their set-backs and rallies during the past week, with really little change in the surroundings of the market and no especially large receipts. Prices continued to be controlled very largely by the volume of the eastern shipping demand, and when this outlet was not very large the local packers were able to dictate terms to sellers. Recent receipts have averaged in weight around 215 lbs., compared with 216 lbs. a year ago, 234 lbs. two years ago and 226 lbs. three years ago. Hogs should be well matured before being marketed, but should not be held back after being in proper shape for being sold. These are rattling good prices and are much above the prices paid in most former years. There is a short supply, according to most reports, and the hogs will all be needed. Today saw a steady and active market, with a good Monday supply, sales being made of hogs at \$6.80@7.50 and pigs at \$5.65@6.80.

The sheep market, only a few weeks ago so buoyant, has lost its strength in great part, although prices were still very much higher than in most former years. The recent prices paid were record-breakers, due to meager offerings, and no one expected them to last very long or after spring lambs began to show up in considerable volume. Fair numbers of Tennessee and Kentucky spring lambs have reached the Ohio River markets recently, and considerable numbers have been reshipped from Louisville to Chicago packers direct. No large supplies of sheep and yearlings have arrived, and they sold relatively better than clipped or wooled Colorado lambs. Not many spring lambs were offered on the regular market. Today saw a sensational boom under meager Monday receipts, prime Colorado wooled lambs going at \$9.75, while clipped lambs brot \$6.50@8.60 and

spring lambs \$6.75@9.25. Prime clipped ewes sold at \$6.75, the best clipped wethers at \$7 and the best clipped yearlings at \$7.50.

Horses have been offered on the market at times recently in rather large numbers, but most of the time for several weeks the receipts have been rather moderate as compared with recent years, and for this reason sellers were in a position to maintain prices for desirable animals. For a week past there has been a brisk demand for eastern chunks and wagon classes at \$140@150 per head, and eastern dealers have not large numbers of drivers and saddlers at \$150@350, with the general demand in excess of the supply at times. Drafters were plentiful usually and active at \$175@215 and up to \$250 for a high grade. Mules sold at \$125@200.

## LIVE STOCK NOTES.

Hogs may be expected to continue high-priced property until a new crop of pigs can be grown. Although reactions in prices from time to time are inevitable, of course. The unusual dearthness of pork, lard, bacon, hams, etc., fails to check their consumption to any great extent, and the stocks of provisions held in western warehouses are much smaller than usual and rapidly diminishing. The pure food law is an element in increasing the demand for pure lard, for in former times many consumers purchased adulterated lard, not knowing that they were really buying a concoction in which cottonseed oil was a prominent ingredient. There is also an extremely large consumption of fresh pork loins and pork chops, as these are cheaper than other meats. Of late, the quality of many of the hogs coming to market has showed a falling off, and complaints are made at Kansas City that many of the hogs show indications of having been fed on green alfalfa instead of on corn or old alfalfa. Farmers are reported to be unwilling to feed corn owing to its scarcity and high prices in many sections.

H. L. Barnes, of Illinois, the owner of two banks, a large land owner and cattle feeder, well known to every trader in the Chicago market, was there on a recent Monday with a consignment of nine carloads of cattle and a mixed carload of hogs and sheep from his extensive feed lots. He sold his cattle averaging from 1,086 to 1,375 pounds, at \$6.20 to \$6.55 per 100 pounds, and was well pleased with the prices paid. Mr. Barnes is an expert judge of cattle, and during the year purchases a great many stockers and feeders. He does not agree with such cattlemen as claim that the year's feeding has been unprofitable, as he has had a greatly different experience, and furthermore he says his neighbors have all made money, in spite of the fact that corn has been selling around 75 cents per bushel. The majority of cattle feeders, he says, have only themselves to blame for the mistakes they make at the time they buy their feeder cattle, and such errors cannot be overcome when the cattle are marketed as finished beefs. Mr. Barnes predicts still higher prices and sufficient encouragement to cause heavy feeding next fall and winter.

Spring lambs are showing up in western markets in large numbers, and they have been weakening in price and have forced prices for Colorado woolled and clipped lambs lower sympathetically. Recent prices paid for lambs, both shorn and unshorn, had been the highest on record, and it was obvious that such inflated figures could not last for any length of time. It has been a wholly exceptional season for sheepmen, for so little feeding was done last winter that a mutton famine was brot about, and that article of food has been beyond the reach of most meat-eaters for some weeks. Good numbers of Tennessee spring lambs have reached Louisville on recent days, and fairly large numbers have been shipped from the Ohio River consigned direct to Chicago packing concerns. From this time on declining markets for sheep and lambs may be expected as the natural order of event, although this does not necessarily mean low prices for fat consignments by any means. The future receipts will naturally consist mostly of lambs, for very few sheep are left in feeding sections at the present time.

Moderate numbers of milch cows have been offered on the Chicago market recently, and eastern buyers have taken fair numbers at good prices for the better class, but since pastures have improved and milk yields are larger the country demand for cows has been falling off. Choice milkers have been selling at \$50@65 per head.

Of late the eastern shipping demand has been the main element of strength in the Chicago cattle market, for cattle prices have remained altogether too high to admit of any large export movement, and the western packers have been bearish in sentiment. The somewhat enlarged consumption of beef in various parts of the country is a help to prices for cattle, of course, but after all the principal cause of the materially higher prices that have been obtained in recent weeks for cattle must be credited to the much smaller receipts than in most recent years at corresponding periods. That prices have been satisfactory is shown by the free marketing of distillery-fed cattle, for owners of these are always smart enough to sell when values are at their best. There has also been considerable marketing recently of Texas meal-fed cattle at good prices. High-priced finished cattle this spring are traceable to dear feed, for the scarcity and high price of corn in many sections led farmers to market their cattle prematurely in order to avoid feed bills.

The recent high price of mutton has caused many southwestern owners of goats to ship them to market, and more have been offered in Kansas City than for a long period. The goats sell high, and their carcasses are always worked off on consumers as "lamb" or "mutton."



THIS IS THE LAST EDITION.

In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, 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.

May 27, 1909.

Cattle.

Receipts, 1,186. Dry-fed steers and butchers strong; grass cow stuff 15@25c lower; market active.

We quote: Extra dry-fed steers and heifers, \$6.25@6.65; steers and heifers, 1,000 to 1,200, \$5.75@6.25; steers and heifers, 800 to 1,000, \$5.50@6; grass steers and heifers that are fat, 800 to 1,000, \$5@5.35; grass steers and heifers that are fat, 500 to 700, \$4.50@5; choice fat cows, \$4.75@5; good fat cows, \$4@4.25; common cows, \$3@3.50; canners, \$1.50@2; choice heavy bulls, \$5; fair to good bolognas, bulls, \$4.50@4.65; stock bulls, \$4@4.25; choice feeding steers, 800 to 1,000, \$4.50@4.60; choice stockers, 500 to 700, \$4.25@4.75; fair stockers, 500 to 700, \$4@4.25; stock heifers, \$3.50@4.25; milkers, large, young, medium age, \$4@4.7; common milkers, \$2@3.5.

Warning.—Look out for grass cattle. They will go much lower.

Roe Com. Co. sold Caplis 13 butchers av 531 at \$4.50, 2 heifers av 740 at \$5.25, 2 do av 330 at \$4; to Sullivan P. Co. 2 bulls av 1,225 at \$4.50, 23 steers av 830 at \$5.65, 1 cow weighing 1,050 at \$4, 5 do av 990 at \$5, 2 do av 900 at \$3.50; to Hammond, S. & Co. 17 steers av 952 at \$6.15, 16 do av 820 at \$5.85, 1 cow weighing 900 at \$4.50.

Spicer, M. & R. sold Newton B. Co. 18 steers av 1,117 at \$6.15, 21 do av 931 at \$6.12, 10 do av 900 at \$5.85; to Sullivan P. Co. 1 bull weighing 1,280 at \$5; to Caplis 1 bull weighing 350 at \$3.50, 1 cow weighing 930 at \$3.50, 1 do weighing 830 at \$4.50, 1 do weighing 900 at \$4.50; 6 butchers av 703 at \$4.50, 9 steers av 816 at \$5.75, 10 do av 660 at \$5, 1 heifer weighing 630 at \$4.50, 3 butchers av 633 at \$4.50, 5 do av 706 at \$5; to Hammond, S. & Co. 1 bull weighing 950 at \$4, 1 do weighing 960 at \$4.50, 5 cows av 752 at \$4; to Mich. B. Co. 21 steers av 862 at \$5.90, 1 cow weighing 930 at \$4, 1 do weighing 900 at \$5; to Murray 12 steers av 563 at \$4.25; to Mich. B. Co. 4 steers av 1,037 at \$6.10, 1 bull weighing 1,150 at \$5, 5 cows av 960 at \$4.12, 12 steers av 983 at \$6.15, 7 cows av 760 at \$4.50; to Hammond, S. & Co. 8 butchers av 820 at \$5.50; to Sullivan P. Co. 11 steers av 1,125 at \$6.50, 4 do av 590 at \$5.90, 1 bull weighing 1,150 at \$4.75, 6 cows av 1,106 at \$4.40, 1 heifer weighing 840 at \$6; to Kamman B. Co. 7 steers av 891 at \$6; to Laccault 12 butchers av 715 at \$4; to Laboe 3 steers av 1,046 at \$6.25; to Sullivan P. Co. 3 cows av 1,023 at \$4.65; to Heinrich 1 steer weighing 1,110 at \$6.25; to Sullivan 2 bulls av 1,375 at \$5.

Bishop, B. & H. sold Caplis 4 butchers av 1,075 at \$4.60, 5 do av 430 at \$3.25; to Mich. B. Co. 2 do av 1,100 at \$4.85, 2 heifers av 720 at \$5.85, 17 butchers av 785 at \$5.65, 2 bulls av 800 at \$4.50, 3 cows av 910 at \$4.75, 2 do av 890 at \$3; to Bresnahan 18 steers av 1,357 at \$6.55, 6 heifers av 485 at \$3.85; to Sullivan P. Co. 2 cows av 1,135 at \$5, 2 bulls av 1,215 at \$4.75, 2 do av 810 at \$4, 1 bull weighing 1,500 at \$4.85; to Bresnahan 4 cows av 867 at \$2.50; to Mich. B. Co. 14 steers av 760 at \$4.60.

Johnson sold Kamman 4 steers av 823 at \$5.75, 2 cows av 900 at \$4.50, 3 do av 850 at \$3.60, 1 bull weighing 920 at \$4.25. Sandall & T. sold Regan 4 butchers av 670 at \$4.50.

Same sold Bresnahan 4 heifers av 580 at \$4.50.

Wilson sold same 3 steers av 900 at \$5.50.

Groff sold same 2 canners av 835 at \$2.50.

Sandall & T. sold Hammond, S. & Co. 3 heifers av 880 at \$4, 1 cow weighing 950 at \$4.50, 6 steers av 790 at \$5.65.

Robb sold same 6 cows av 1,080 at \$4.50, 2 do av 815 at \$3, 3 bulls av 973 at \$4.50, 7 steers av 814 at \$6.

Haley sold Sullivan 2 cows av 1,130 at \$5.

Lewis sold Fitzpatrick Bros. 8 steers av 823 at \$5.75, 2 cows av 900 at \$4.50, 3 do av 850 at \$3.60, 1 bull weighing 920 at \$4.25.

Sharp sold Thompson 5 butchers av 680 at \$4.20.

Groff sold Heinrich 20 steers av 1,050 at \$6.50.

Lewis sold Fitzpatrick Bros. 8 steers av 600 at \$4.90.

Roe Com. Co. sold Newton B. Co. 1 steer weighing 940 at \$c.

Receipts, 1,139. Market 25@35c higher. Best, \$7@7.25; others, \$4@6.50; milch cows and springers, \$3@5 lower.

Haley sold Mich. B. Co. 20 av 135 at \$7, 20 av 120 at \$6.25.

Sandall & T. sold Bresnahan 18 av 140 at \$6.50.

Wagner & Co. sold Friedman 5 av 120 at \$5, 16 av 135 at \$7.

Johnson sold Sullivan P. Co. 6 av 123 at \$6.75.

Robb sold same 2 av 150 at \$6.50.

Wickman sold same 20 av 140 at \$7.

Downing sold Gerish 10 av 137 at \$7.

Roe Com. Co. sold Sullivan P. Co. 2 av 100 at \$5, 16 av 135 at \$6.85.

Haley sold Thompson 5 av 85 at \$5, 15 av 140 at \$6.50.

Lewis sold same 2 av 145 at \$7.

Bergen & W. sold same 1 weighing 120 at \$5.

Haley sold same 2 av 235 at \$5.

Waterman sold Fitzpatrick Bros. 2 av 100 at \$5, 13 av 130 at \$6.50.

Stephens sold Newton B. Co. 10 av 147 at \$7.

Smith sold same 8 av 150 at \$7.

Spicer, M. & B. sold Newton B. Co. 24 av 140 at \$7, 8 av 150 at \$5, 42 av 140 at \$7, 1 weighing 200 at \$4, 69 av 125 at \$6, 1 weighing 150 at \$7.25; to Sullivan P. Co. 2 av 135 at \$5, 17 av 130 at \$6.75; to Newton B. Co. 8 av 150 at \$7.25, 1 weighing 100 at \$5; to Parker, W. & Co. 1 weighing 90 at \$6, 7 av 145 at \$7.25; to Sullivan P. Co. 8 av 140 at \$7, 15 av 130 at \$6.75.

Bishop, B. & H. sold Sullivan P. Co. 7 av 135 at \$7, 8 av 130 at \$7, 24 av 115 at \$4.25; to Mich. B. Co. 52 av 135 at \$6.50, 2 av 95 at \$5, 6 av 140 at \$7; to Strauss & Adler 11 av 110 at \$7, 4 av 115 at \$5, 9 av 150 at \$7.25, 3 av 112 at \$5.50, 10 av 144 at \$7.25; to Markowitz 20 av 150 at \$7.25; to Strauss & Adler 2 av 135 at \$5.50, 3 av 165 at \$7.25, 4 av 115 at \$6.50, 4 av 150 at \$7.25, 7 av 130 at \$5, 41 av 125 at \$7, 12 av 130 at \$7, 3 av 100 at \$5, 4 av 105 at \$5, 20 av 137 at \$7, 22 av 140 at \$7; to Parker, W. & Co. 14 av 125 at \$5, 47 av 135 at \$7.25.

Receipts, 1,010. Market 50c higher than last week.

Best lambs, \$8@8.10; fair to good lambs, \$6.50@7; light to common lambs, \$5.50@6; spring lambs, \$8@10; fair to good sheep, \$5@5.50; culls and common, \$3.50@4.50.

Robb sold Mich. B. Co. 5 lambs av 80 at \$7.25.

Johnson sold same 12 sheep av 85 at \$5.

Wagner & Co. sold Hammond, S. & Co. 11 sheep av 95 at \$4.25.

Haley sold Harland 5 lambs av 83 at \$7.40, 44 do av 70 at \$7.25.

Downing sold Thompson 12 sheep av 90 at \$4.25, 15 lambs av 65 at \$6.50.

Lewis sold same 18 do av 75 at \$8, 10 sheep av 115 at \$4.

Spicer, M. & R. sold Mich. B. Co. 9 lambs av 58 at \$7, 1 sheep weighing 100 at \$3.50, 11 lambs av 68 at \$7.50, 2 sheep av 120 at \$5.25, 4 do av 130 at \$4, 5 lambs av 93 at \$8, 3 sheep av 105 at \$5, 2 spring lambs av 60 at \$10, 4 lambs av 60 at \$6.50; to Sullivan P. Co. 20 do av 65 at \$7, 7 sheep av 90 at \$4.25; to Fitzpatrick Bros. 27 lambs av 70 at \$7.90, 5 spring lambs av 55 at \$8.50; to Eschrich 18 sheep av 67 at \$5; to Mich. B. Co. 18 lambs av 75 at \$7.40, 11 do av 77 at \$7.75.

Smith sold Sullivan P. Co. 5 spring lambs av 50 at \$9, 20 lambs av 70 at \$7.50.

Waterman sold Newton B. Co. 2 lambs av 70 at \$8, 2 sheep av 120 at \$5.

Kalahar sold same 3 do av 150 at \$3.50.

Weeks sold Young 33 lambs av 55 at \$8.50, 6 sheep av 115 at \$5.25.

Bishop, B. & H. sold Mich. B. Co. 70 lambs av 80 at \$7.75, 16 do av 58 at \$6, 1 buck weighing 130 at \$4, 2 sheep av 90 at \$4.50, 12 lambs av 73 at \$7.40, 18 do av 70 at \$6.25, 2 sheep av 115 at \$4; to Hammond, S. & Co. 135 lambs av 76 at \$8.10; to Parker, W. & Co. 131 do av 76 at \$8.10; to Fitzpatrick Bros. 25 do av 83 at \$7.50, 17 sheep av 90 at \$5.50, 3 lambs av 115 at \$8.50, 3 sheep av 100 at \$4.50, 16 lambs av 60 at \$6.75, 6 sheep av 120 at \$5.25.

Receipts, 2,579. Market 5@10c higher than last week.

Range of prices: Light to good butchers, \$7.30@7.40; pigs, \$6.75@6.85; light yorkers, \$7.10@7.25; stags, 1/2 off.

Bishop, B. & H. sold Hammond, S. & Co. 247 av 170 at \$7.35, 351 av 160 at \$7.30, 172 av 200 at \$7.40, 63 av 150 at \$7.20, 210 av 160 at \$7.25, 62 av 140 at \$7.15.

Sundry shippers sold same 157 av 188 at \$7.40.

Spicer, M. & R. sold Parker, W. & Co. 162 av 180 at \$7.40, 14 av 197 at \$7.25, 245 av 160 at \$7.35, 84 av 150 at \$7.15.

Roe Com. Co. sold same 47 av 190 at \$7.35.

Sundry shippers sold same 140 av 144 at \$7.15, 164 av 165 at \$7.35, 69 av 180 at \$7.30.

Bishop, B. & H. sold Sullivan P. Co. 89 av 160 at \$7.25, 54 av 140 at \$7.10, 89 av 160 at \$7.30, 10 pigs av 107 at \$6.90.

Roe Com. Co. sold same 9 av 269 at \$7.50, 37 av 188 at \$7.30.

Sundry shippers sold same 137 av 170 at \$7.30, 115 av 180 at \$7.40, 64 av 183 at \$7.35.

Friday's Market.

May 21, 1909.

Cattle.

Market strong at Thursday's prices.

We quote: Dry-fed steers and heifers, \$6.40@6.50; steers and heifers, 1,000 to 1,200, \$5.75@6.25; steers and heifers, 800 to 1,000, \$5.50@6; grass steers and heifers, that are fat, 800 to 1,000, \$5@5.35; grass steers and heifers that are fat, 500 to 700, \$4.50@5.50; choice fat cows, \$4.75@5.25; good fat cows, \$4@4.50; common cows, \$2.50@3.50; canners, \$1.50@2; choice heavy bulls, \$4.75@5.25; fair to good bolognas, bulls, \$4.50@4.75; stock bulls, \$4@4.50; choice feeding steers, 800 to 1,000, \$4.75@5.25; fair feeding steers, 800 to 1,000, \$4.50@5; choice stockers, 500 to 700, \$4.25@4.75; fair stockers, 500 to 700, \$4@4.50; stock heifers, \$3.50@4.25; milkers, large, young, medium age, \$4@5.5; common milkers, \$2.5@3.5.

Vickery sold Hammond, Standish & Co. 3 cows av 1,130 at \$4.40, 4 do av 1,005 at \$4.40, 2 steers av 1,085 at \$6.25.

Market steady at Thursday's prices; quality not so good.

Best lambs, \$7.50; fair to good lambs, \$6.50@7; light to common lambs, \$5@6; spring lambs, \$8; fair to good sheep, \$4.75@5.50; culls and common, \$3.50@4.

Bishop, B. & H. sold Parker, W. & Co. 4 lambs av 105 at \$7.50, 40 do av 65 at \$7.50, 9 do av 85 at \$7.50, 15 sheep av 110 at \$5.50.

Hogs.

Market 5c higher than on Thursday.

Range of prices: Light to good butchers, \$7.30@7.35; pigs, \$6.75@6.85; light yorkers, \$7@7.25; stags, 1/2 off.

Lucke sold Parker, W. & Co. 59 av 165 at \$7.30.

Roe Com. Co. sold same 44 av 180 at \$7.35.

Slage & C. sold Hammond, S. & Co. 121 av 153 at \$7.25.

Bishop, B. & H. sold same 236 av 170 at \$7.30, 173 av 195 at \$7.35.

VETERINARY

CONDUCTED BY DR. W. C. FAIR, CLEVELAND OHIO.

Advice thru 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 some one else.

Fistula of Withers.—On the right side of my horse's neck there is a sore that discharges pus and will not heal, this same horse passes thick urine. H. C., Metamora, Mich.—Apply peroxide hydrogen twice a day; ten minutes later apply equal parts iodoform, oxide zinc and tannic acid. Give a tablespoonful nitrate potash in feed daily until his urine changes; a few doses will be all that is required.

Spasm of Shoulder Muscles.—For the past two years my horse has been going lame occasionally, and by close observation I can detect a little hitch or limp most of the time; some of the time he is too lame to work and his shoulder seems to be sore. G. E. S., Sherman, Mich.—I am inclined to believe he suffers from spasm of the shoulder muscles or else the muscles are weak. Apply equal parts spirits camphor and alcohol to shoulder twice a day.

Sow Has Rheumatism.—I have a sow which is the mother of eleven pigs that are now five weeks old; she has trouble getting up and walks stiff and sore until she takes some exercise and warms out of lameness. S. M., Shelbyville, Mich.—Feed less corn, more oats and linseed meal, keep her bowels open, give 15 grs. salicylate soda at a dose in feed three times a day for ten days. Apply soap liniment to back and sore parts twice a day.

Lice on Cattle.—Eczema.—I have three cows that are covered with lice and I am anxious to rid them of the pests, for they have been lousy for more than a year. I also have a three-year-old sow that has lost the hair off her sides and back, have failed to find lice, and she is not mangy. J. M., Freeport, Mich.—Apply 1 part carbolic acid and 30 parts water to body once daily or apply 1 part coal-tar disinfectant and 15 parts water or any of the lice killers advertised in this paper will give you good results. Apply 1 part sulfur and 5 parts vaseline to bare spots on sow three times a week.

Dog Has Vertigo.—About six months ago my collie dog, which was then about four years old, was taken suddenly sick; he rolled and tumbled with head drawn to one side for a minute and staggered, then appeared to get over it. When he had this attack his limbs appeared to be quite stiff. M. E. B., Hillsdale, Mich.—Your dog either suffered from vertigo or else picked up a dog portion (nux vomica) which acted as a partial poison. Give castor oil or syrup of buckthorn as a cathartic and laxative. Also give 10 grs. bromide potash in feed or water twice a day.

Stomach Staggers.—Have a mare eight years old which has worked all spring and seems healthy and well; has good life, but has sick spells when eating, will stop, become rigid and go right over backwards, get up and go to eating again. Has never had any sick spells in harness. Is there any danger of her growing worse or losing her life? T. J. S., Kalamazoo, Mich.—Your mare suffers from stomach staggers and drugs will not do her as much good as grass. Her bowels should be kept open and at this season of the year it is not necessary to use laxatives if a horse has access to green grass. If she is fleshy, reduce her grain allowance until she loses some of her fat.

Roarer.—I recently purchased a 4-year-old mare; when exerted she breathes long and heavy, making a sharp noise; this soon subsides when she stands still a few moments. When drinking she coughs and the water makes a noise when running down throat. E. T. W., Pentwater, Mich.—I am inclined to believe that your mare has throat trouble, perhaps of a chronic character. She may never get well until you have her operated on for roaring. However, apply equal parts turpentine, aqua ammonia and sweet oil to throat once a day, the evening is the best time. Give 1 dr. iodide potassium at a dose in feed or water twice a day. If this treatment fails to help her give 1/2 dr. powdered lobelia and two drs. muriate ammonia at a dose in feed twice daily.

Indigestion.—I have a cow that has been sick for the past two weeks; she has been pastured in the woods and perhaps ate brush or weeds that sickened her. By giving her epsom salts and some other medicine, she appeared to recover, but was as bad as ever a week later. She has no fever, but has a soft puffy swelling under brisket. I lanced this swelling, but it does not go down much. She has no cough, but appears to be sore. T. J. H., Redford, Mich.—Give her 1 dr. powdered digitalis, 1/2 dr. ground nux vomica and 1 oz. phosphate soda as a drench night and morning. Apply 1 part bichloride mercury and 1000 parts warm water to swelling two or three times a day.

Rheumatism.—I am anxious to know what ails my pigs. A shoat was taken with extreme lameness in hind leg a short time ago. Now he is troubled in getting up. He walks quite lame, but after exercising seems to improve. A second pig is also affected; this one is very

stiff when he first gets up. There are 23 on skim-milk and corn and both appear to have a fairly good appetite. T. E. L., Grass Lake, Mich.—You have fed your hogs too much skim-milk and corn; this ration has produced an acid condition of the blood and it is possible that the bones are not as strong as they should be. Give each pig a teaspoonful of air slacked lime at a dose in feed two or three times a day. Feed some oats and oil meal and as soon as possible let them have some grass, also feed less corn. Also give each pig 10 grs. carbonate potash at a dose in feed twice a day. Keep them out doors in the fresh air and sunlight as much as possible.

I that has a diseased quarter of udder. I dried her last February for she did not give very much milk. About two months ago quarter of udder began to swell, now the whole udder is inflamed and small bunches have appeared on outside which discharge a white matter. Have given her aconite and saltpeter, also bathed affected parts with iodine and a salve made of kerosene and lard, but she is no better. She will be fresh in about a week. Her appetite is good and to all appearance is healthy. H. D. L., Reed City, Mich.—Dissolve 3 ozs. sulfate zinc in a gallon of tepid water and apply to udder twice a day. Be sure that her stable and bed is clean; besides, furnish her with a soft bed in order that she will not bruise her udder. Give 1 oz. hypophosphite soda at a dose in feed twice a day.

HAY & GRAIN

We want to hear from shippers of Hay and Grain—Our direct service to large consumers in this district enables us to get top prices for good shipments. Liberal advances to consignors.

Daniel McCaffrey's Sons Co., Pittsburg Pa. Ref.—Washington Nat'l Bank, Duquesne Nat'l Bank.

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

Fruit, Grain and Stock Farms for sale Co. Write C. W. Morgan, Shelby, Mich., for lists.

WE SELL LAND and require no payment except interest and taxes until end of third year. FLINT LAND COMPANY, Limited, Flint, Mich.

CALIFORNIA Oranges, olives, deciduous fruits, alfalfa. Sacramento Valley; pay \$50 to \$1000 per acre. Several choice bargains. F. L. SOUTHWICK, Room 801, Union Trust Bldg., San Francisco.

FARM, 59 1/2 Acres, Good land, all improved with few trees on, good house, barn, granary, toolhouse, horsehouse, well and windmill, some fruit, price \$3,000. Address O. L. BROWN, R. 4, Bellevue, Mich.

WHY PAY RENT when you can buy the Best Land in Michigan at from \$6 to \$10 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. STAFFORD BROS., (owners) 15 Merrill bldg., Saginaw, W. S., Mich.

FOR SALE—High grade farm lands in Oscoda County. Near Tustin, Michigan. These were hardwood lands and no pine stumps on the land. Soil is gravel and rich clay. Well settled country with schools and good roads. H. W. MARSH, Manistee, Mich.

SOUTH-EASTERN KANSAS Farms and Truck Gardens, near city of 20,000, good market, largest railroad shops west of Mississippi river, fine climate. Money to loan, mortgages bought and sold. Particulars, Circulars, Price. Write MUTUAL REALTY, 1931 Main St., Parsons, Kan.

IDAHO AND WESTERN WYOMING irrigated, improved lands on railroad, \$16 to \$30 per acre on easy terms. Good schools. Alfalfa, 4 to 5 tons per acre; wheat, 45 bushels; barley, 80 bushels, and oats over 100 bushels. Unexcelled home market; poultry and dairy business extremely profitable. Choice dry farming claims to be homesteaded. Timber for fuel and improvements and cedar post free. White pine lumber, \$14 per thousand. Large and small game and trout fishing; year around free range; fine climate and water. We pay part of your transportation. Come while you can make a good selection. Write today. NORTHWESTERN LAND CO., Rock Springs, Wyo., or Twin Falls, Idaho.

Michigan Lands

SEND for my free 32-page illustrated booklet and map of the Dempsey Lands in Mason and Lake Counties, Michigan; unexcelled for general farming and sheep and cattle raising. Best land at lowest prices in Michigan. Easy terms.

J. E. MERRITT, Manistee, Mich.

OCEANA COUNTY, MICHIGAN

I sell farms in this Co., the best in U. S., Fruit, Grain, Poultry, Stock. All sizes, easy terms. If the people of U. S. knew the advantages to be had here, in 24 hours there would not be standing room. Write for list and literature.

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Come to the South where they raise three and four healthy crops a year. Tidewater Virginia and Carolina—land of opportunity. Rich loam and perfect climate. Best corn, hay, potato and truck lands. Market weeks ahead of others. Zero winters unknown. Dry summers unheard of. Twenty acres equal sixty northern acres. Lands are cheap and can be bought on easy terms. Write for booklet.

F. L. MERRITT, Land and Indust'l Agt., Norfolk and Southern Railway, 20 Citizens Bank Building, Norfolk, Va.

A GENUINE BARGAIN.

193 acres—3 miles from electric line; 28 miles from Detroit; gravel loam; orchard, timber, good fences, windmill furnishes water to house and barn; 10-room house, cellar, barn 36x144 with wing 32x48, corn house with capacity of



## HOME AND YOUTH

MEMORIA IN AETERNA.

BY BERT LEACH.

For the blood that flowed in battle  
Drop for drop we give our tears;  
For the suffering of our heroes  
In those seething bloody years,  
When the clouds of war and hate  
Hid the heavens, when the state  
Rocked and reeled and all but sundered,  
While the gods of war all thundered,  
And the world looked on and wondered;  
For all these our tears shall fall  
While eternal peace is ours,  
But the memory of it all  
Lies today beneath the flowers.

On the hillsides there are roses,  
There are lilies in the dells,  
There are violets awaiting  
In a thousand leafy dells—  
Let us twine them in a garland,  
While the dew is on them yet,  
Let us place them o'er our heroes,  
Those we never shall forget.

For their blood we still remember—  
Mothers' hearts are bleeding still,  
There are widows' hearts still empty,  
For their places none can fill.  
And we ever shall remember  
They were brave and they were true,  
And when duty called to battle  
They their duty sprang to do.

From above the field of battle,  
Battle smoke has cleared away.  
Winds of north and south commingle  
In the crystal air today.  
North winds, south winds whisper low,  
And the early flowers grow  
Where the bloody sabers clashing,  
And the constant cannon crashing,  
Army onto army dashing,  
Thickly strewn the ground with dead,  
Filling countless homes with woe;  
Where this precious blood was shed  
Fresh and bright the flowers grow.

Peace is in the southern valleys,  
Peace is in the northern dells,  
From the northern woods, and southern,  
Loud the wild birds' matin wells.  
There are flowers growing freely  
Where the cannon rent the ground;  
There is peace proclaimed by nature,  
Clear by sight and sweet by sound.

Never may this peace be broken.  
Never may the flowers fall  
When the spring has bathed the meadows  
To perfume the hill and dale;  
May the wild birds' joyous singing  
In our woods be ever ringing;  
God loves peace, and He has given  
Us, the land once sadly riven,  
Peace like that which reigns in heaven.  
Let us, brethren, then forget  
All the bloodshed and the strife,  
Memories let us cherish yet  
But of peace and love and life.

But we cannot quite forget—  
Nay, nor would we if we could;  
Let us twine a floral garland  
Then for those beneath the sod.  
Let us drop a tear in silence,  
Let us chant a requiem low,  
Let us furl the battle standard  
As along the street we go.

Let us pray that we may never  
Fail to hold their memory dear.  
Let us twine the garlands for them  
As year marches after year.  
Let us comfort those whose fathers,  
Brothers, husbands, silent lie  
Till the time for their reunion  
At the portals of the sky.

## "LEST WE FORGET."

A Memorial Day Story.

BY L. AGNES COWLES.

It was the evening before Memorial Day. Quite unexpectedly I had been detained in the village of Oakland over night, and after I had eaten my supper I went out upon the veranda of the picturesque inn which fronted on the main street of the village.

It was an evening worthy of all that the poets have ever had to say of that season when spring is merging into summer. The sunset had been of unusual brilliance, and bars of red and gold and violet still stretched across the west. Above them shone the evening star. As I sat musing and dreaming, while I breathed the fragrance of lilacs and mock-orange, in which the village abounded, the lamps of the village hall, directly across the street, were lighted and a company of young people gathered and began decorating the interior with flags and bunting. Their voices and an occasional sound of laughter came to me pleasantly. They were deft about their work and had the manner of being accustomed to it. I could see quite plainly thru the wide-open doorway of the hall, and I was watching with interest, when "Aunt Dorinda," as the landlady of the inn was familiarly called, came out and took a chair near me.

"Your young people are getting ready for the celebration of Memorial Day," I remarked.

"Yes," Aunt Dorinda answered, "Oakland always celebrates Memorial Day in the letter and in the spirit."

"I don't suppose," Aunt Dorinda went on, and her tone was reminiscent, "that any town of its size sent more men to the Civil War than Oakland, and a good many of them never came back. Some were killed in battle, some died in the hospitals, and some in prison. A few came home to die, and a good many were crippled for life.

"One of Lawyer Tibbs's sons came home with an empty sleeve and before the war there was nobody for miles around that could play a piano or the church organ as he could. The Widow Emery's only son came back with one eye and his right leg gone, and John Turner, who had a wife and six small children, had both legs shot off.

"When the war was over there was hardly a family in the village that hadn't an empty chair or an invalid one, but, among us all there was not one bereaved like Barbara Trent.

"Perhaps you noticed when you drove into town, that large brick house at the upper end of the street. It has white pillars in front, and the yard is deep and shady and has lots of flowering shrubs. Dr. Trent lived there before the war and was known as the best surgeon in all the country 'round. Real often doctors from larger towns used to send for him when they had a difficult operation to perform.

"Barbara was his only daughter and her mother died when she was about ten years old. There was one boy, two or three years older than Barbara. Two handsomer children couldn't have been found if you'd looked the country over. I was about Barbara's age and we were in the same class at school. She was never a bit stuck up because she was the doctor's daughter, and everybody loved her, with her pretty face and her pleasant ways. Jack Leonard was old Jethro Leonard's son, and lived in the cottage at the other end of the village. Old Jethro didn't have a very good name. Some said that he would take what didn't belong to him, and he was never spoken of with any respect, but his wife was a good woman and a lady. The Leonards came to Oakland about ten years before the war. Jack was about thirteen then and as nice and upright a boy as anyone need ask for.

"From the time they were children every one could see that Jack Leonard and Barbara Trent were lovers, or would be when they were old enough to realize what their always being so happy together meant. It didn't dawn on Dr. Trent until their last year in school, and when it did he was terribly wrought up to think that old Jethro Leonard's son should dare even to dream of his daughter. He didn't stop to reason that the boy wasn't to blame for his father. When Dr. Trent really understood how things were, he forbade Jack ever to cross his threshold again, or either Barbara or his son Hamlin, ever to speak to Jack.

"Barbara revered her father as few children of this generation do, and his word had always been law to her, so she obeyed as few girls now would obey, and didn't speak to Jack, but she knew and he knew that they hadn't given each other up, and that when they were older they would do what they thought was right.

"It was about two years after this that the war broke out and Jack Leonard and Hamlin Trent enlisted the same day. Before Jack went away Barbara met him and said goodbye to him, and promised to marry him when he came back from the war, and then she went home and told her father what she had done. Nobody knew how the doctor took it, but Barbara was too much like him for him to have much hope that she would ever change her mind.

"Not long after that Dr. Trent began to think that it was his duty to take his medicine-case and his surgical instruments and go to the front, and so he left his sister, Miss Henrietta, and old Susan, who had worked for them for years, to look out for Barbara, and he went away to the war. There wasn't a woman in town that was braver or more cheerful than that girl, but one day, when a lot of us were at Dr. Trent's packing a box to send to our boys in the army, she put her arms around my neck, and laid her cheek against mine and said, 'Do you know, Dorinda, that every one I love best in this world, is away down South to be put up as a mark to be shot at?' And after that I realized how she was suffering.

"It must have been the next spring that Dr. Trent, his son, Jack Leonard and several others came home for a short furlough. They came one Friday night and the next Sunday morning the church was crowded, for every one knew that old

Dr. West would preach and pray and sing for those men in blue, and that the sermon would be one that would make the confederates quake if they could hear it. It was a beautiful day, warm and bright, and the lilacs and syringas were in bloom, as they are now.

"The church was pretty well filled when Barbara Trent came in with her father and brother. She was dressed in white, and her cheeks were flushed and her eyes bright. I wondered if she had seen Jack, and what her father thought about Jack's bravery, and I'd heard that he was wearing lieutenant's straps. After a little Jack and his mother came in and sat down in a pew just across from me. Her face was like Barbara's, with the happy look in her eyes, and I knew she was proud of her son. I wondered to myself, in a way I had of pondering about things, if his being so handsome and good and brave made up to her for the trouble and shame his father often brot. I saw her slip her hand into Jack's, and he held it, without seeming to care who saw him, and smiled down at her like a lover. The sermon was what everyone expected, for old Dr. West was stirred to the depths in those days, and his voice grew stern and his eyes flashed, when he spoke of those who would divide their native land and put to naught the great purpose for which their fathers had suffered and died, but it trembled when he spoke of the men in blue, those who were away and those who had come home for a few days, and there were lots of sobs all thru the church, wrung from hearts of mothers and daughters, sisters and wives and sweethearts, thinking of their own dear ones.

"The sermon was finished and they had sung a hymn, when Dr. West came down from the pulpit and stood at the altar railing as if waiting for some one. Every one looked surprised but there wasn't a sound in the house. I saw Jack Leonard press his mother's hand and lay it gently on her lap, then he got up and went up the aisle, as straight as a general and as proud as a king, and stepped up and took his place beside Dr. West, facing the congregation. He looked pale, for all the tan on his face, but his eyes were shining, and they were fixed on Barbara Trent.

"What happened next nearly took my breath away. Dr. Trent got up and stepped out into the aisle, and Barbara followed him, and with her hand on her father's arm, she went up to the altar to meet Jack Leonard. When Dr. West asked, 'Who gives this woman to this man in marriage?' Dr. Trent answered, 'I do,' and his voice was as clear and distinct as a bell.

"I shall never forget that couple as they looked when they came down the aisle together—young and handsome, beloved by all, and with life reaching out before them so full of hope and happiness.

"But the war wasn't over. No one ever knew why Dr. Trent changed his mind about Jack Leonard, but perhaps it was simply because he got his eyes open when he witnessed his bravery and learned his real worth. Tommy Worton, who was in the same regiment, told me that the doctor wasn't kinder to his own son than he was to Jack, after he and Barbara were married. I used to meet Barbara in those days, after all her loved ones had gone back to the war, and wonder at her cheerful face. My lover was with Grant's army and I felt that life was dark. Once, when I spoke about it and the awfulness of it all, she said, 'We must be brave, we must Dorinda, there is no other way. Our part is to stay at home and wait. Sometimes I think I should suffer less if I could only fight, if I could only do something to end this awful suspense!'

"It was only a few days after that when word came that Dr. Trent was very sick. He had been taken to a hospital in Washington, and Barbara went to him. He died an hour after she got there but knew her and blessed her. She brot him home and buried him, with only her Aunt Henrietta of her own kith and kin to be near her, for her brother was in a Southern prison. They would not let Jack come, but his mother came to Barbara then, and Barbara would never let her go away again, for old Jethro had died a few months before.

"Some time after Dr. Trent's death, Hamlin Trent was exchanged and sent home. There were a good many at the depot the day he came, and as long as I live I shall never forget how that boy looked when he was lifted from the train and carried on a stretcher to the easy spring wagon they had waiting for him.

## Long ago the Scotch learned this.

The sturdy old Scotchman must be amused at the recent "discoveries" that oatmeal is the best food in the world.

Our scientific men have been making experiments which prove that Americans eat too much fat and grease and not enough cereals.

The Scotchmen say: "Look at our nation as proof. The sturdiest nation on earth." Still we have one good point to make. We make better oatmeal than the Scotch.

They buy Quaker Oats and consider it the leader of all oatmeals to be had anywhere. Quaker Oats is sold in family size packages at 25c or at 30c for the package containing a piece of fine china. The regular size package sells at 10c. Follow the example of the Scotch; eat a Quaker Oats breakfast every day.

All grocers sell Quaker Oats.

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There was only pity on the women's faces, for they weren't thinking of anything just then but the boy himself and the way he had suffered, but there was white rage in more than one man's face, and I saw a flash in old Dr. West's eyes that made me remember, all at once, a sermon that he had preached about Sinai when I was a little girl.

"I remember how Barbara's lips quivered when she saw her brother, and she turned white as death, but she was smiling at him in a minute, and rode away in the wagon, sitting beside him, his hand in hers.

"Hamlin Trent had been a strong man, but the hardships he had endured were too much, and the Barbara had the best of everything for him, and cared for him untiringly, he gradually slipped away, and when the leaves fell, she laid his poor, tired body away near their father and mother.

"That was a dark winter for Oakland, but it seemed as tho the whole town was united like one family by the common anxiety and suffering, for the papers and the telegraph wires were bringing news of battles and prisons and wounds and death.

"I remember meeting Deacon Marsh in the postoffice one day. He looked white and worn, and his hand trembled when the postmaster handed him a letter from Washington. Every one of his five sons was in the army, and the oldest one had been wounded.

"Jack Leonard came home for a few days in February, and it was pathetic to see Barbara's face. It seemed to be always struggling between smiles and tears. Jack was looking brown and well and handsome, and no people could have been prouder of a hero in velvet and gold lace than the people of Oakland were of that boy in his spoiled uniform. It seemed as tho everybody went to the depot the day he went away, and I've tho since, it must have been hard for Barbara and his mother, when they must have wanted him every minute to themselves. When I heard the train coming, I went into the depot and hid my face in my hands for I couldn't bear to see Barbara say good-bye to Jack. Her father and brother were dead, and Jack might never come back. I could see it all in her face, tho she tried so hard to be brave.

"And Jack never came back—not alive. Just when the leaves were coming out in April, and the old town was looking as pretty and bright and peaceful as tho there weren't so many aching hearts in it, the news came one day that Jack Leonard had been shot and killed in battle.

"We were all at the depot again when they brot his body home, and Barbara was there, too, for she would come and Jack's mother came with her. It's strange what a difference the occasion makes in the looks and the sound of a thing. I've heard trains that made my heart leap for joy, as they came steaming and panting and ringing up to the station, but the locomotive that day looked like some great black monster, and every stroke of the bell was a funeral knell.

"There wasn't a sound, only the steam from the engine and some stifled sobs, when they lifted Jack's coffin and carried it, wrapped in the stars and stripes. They wouldn't put it into a hearse or a wagon, but carried it all the way on their shoulders to the parlor of Barbara's house, where they set it down on a table covered with flowers. Every one expected that Barbara would faint, tho she had always been so strong thru all her troubles—but she didn't. When she went into the parlor she walked up to Dr. West, slipped her hand into his, looked up at him and smiled and sighed and said, 'I shall be so glad when the war is over and father and Jack and Hamlin come home.'

"Then we all knew that the strain had been too much and that her mind was gone. For a long time all her friends kept hoping that she would get better, but she never did, and sometimes I've tho that it was a merciful dispensation of Providence. In most ways she was sane but for her the war was never over. Jack's mother and Dr. West both tried to explain to her, but she would only shake her head and smile and say, 'No, no, the war isn't over. Jack and father and Hamlin would come back to me if it were.' And she would always add, 'We must be brave.'

"In less than a year after Jack was killed, Barbara's hair was white, but her face was never unhappy, and she was always the greatest comfort to everybody in trouble. I heard somebody say once, 'You just can't be miserable where Bar-

bara Leonard is; she is always so sweet and cheerful.'

"In all the long years since the war there's been nobody in the town better loved. She grew old, but not just in the way that the rest of us did. It was only her body—never her spirit. Her Aunt Henrietta died and old Susan, and, about eighteen years after the war closed, Jack's mother, but she never seemed to miss them much. The daughter of a cousin of mine came to live with her and care for her.

"Last year, just three days before Memorial Day, they went to Barbara's room in the morning and found her lying with her head on her arm, like a child, a happy smile on her face, but when they tried to rouse her they found that she was dead. The war was over, at last, for her.

"The G. A. R. had planned to have Memorial services at the village hall, but they changed and had them at the church, and they and Barbara's funeral services were all in one. The church was decorated everywhere with flowers that were taken to the soldiers' graves afterward. I never saw anything like it, and there wasn't standing-room for all the people. The bishop was there and delivered the address, and there wasn't a dry eye in the house. He spoke about Barbara's happy girlhood, about her father and brother and lover, and how the war had taken them all away from her. He spoke of the long years since, and how her patience and sweetness and bravery should be a lesson to us all in the battle of life, and then he said that while we were all brothers and sisters and the strife of the sixties was almost forgotten, we must not forget the great sacrifices of the men and women who had saved our country then."

Aunt Dorinda paused, and I noticed for the first time that the lights in the village hall had gone out. All the world was quiet in the sweet May night, that seemed like a personification of Barbara Leonard's beautiful spirit; then from a distance, but quite distinctly, I heard a tenor voice singing, and the words were these:

"My country, 'tis of thee,  
Sweet land of liberty,  
Of thee I sing."

#### LITTLE ESSAYS.

BY CARL S. LOWDEN.

The fall and winter days are considered the most dreary days of all the year. But are they? And even if they are, will not the days of spring and summer seem more beautiful and golden by contrast. Remember, "there is always a good time coming."

Alarmists are frequently hooted at; but the alarmist is not always in the wrong. There is nearly always some small part of the grain of truth in everything, and there is some truth in the allegation that this great republic continues to grow more decadent morally. Numerous small boys are really "rotten;" and it is a rare occurrence now-a-days to discover a truly moral young man. The type seems to have almost vanished. Many of our educational institutions are impregnated with the malevolent virus of immorality; and the standard of civilization in regard to morals is undoubtedly falling.

#### LESSONS OF LABOR.

BY CHAS. E. JENNEY.

While you can, be up and canning,  
Do the work, then rest or play;  
Then to-morrow brings no planning  
For the might have of today.

Let no moment find you slighting;  
Do your share and never shrink;  
If the bread shall be inviting,  
Every bit of yeast must work.

When you could, had you been coulding,  
You would not be now the dunce;  
You would have no hasty pudding  
Had the corn not rustled once.

Let your practice always just be  
Cheerfully each task to meet;  
When the things are done that must be,  
Then may Pleasure lead your feet.

Does a squirrel in early Autumn,  
Sitting up with folded paws,  
Wait for Winter to allot him  
Scanty store for hungry jaws?

Plow and hoe, sun, rain and weeding,  
Golden pumpkins may imply,  
Still there's piling, sifting, kneading  
Ere we eat our pumpkin pie.

Life will be what we may will it:  
Bright with joy or dull with care;  
Shall we with complaining fill it  
If our load is hard to bear?

Wave the wand of cheerful diction,  
(Magic died not, long ago),  
Rub the lamp of toil till friction  
Sets the dark world all aglow.

## You can make rain in the Arkansas Valley

by opening irrigation ditch.

Water when wanted makes sugar beets that can't be beat. Alfalfa and fruit, too

I am employed by the Santa Fe Railway to help settle up the vast territory along its lines in the Southwest.

I am an optimist about that section, but am not a partisan with respect to any particular locality therein. It's my business and my wish to tell the truth about all of them.

There is a valley in western Kansas and eastern Colorado 200 miles long and seven miles wide, through which flows the Arkansas river on its way from the Colorado Rockies to the Mississippi.

It is bordered by upland prairies stretching many miles north and south.

The land in the Arkansas Valley proper is all privately owned. The owners will sell, many of them, for a reasonable price, in order to cut down their holdings. You don't need to occupy a big tract, because intensive farming is now profitable under irrigation.

On the uplands, where "dry farming" can be practiced successfully, are millions of acres of unoccupied Government land, which can be homesteaded. If you are interested in such lands, will be glad to post you further. They require only a small investment per acre and rapidly increase in value when brought under cultivation.

If you plan to become a homesteader, hurry up, because 365,000 acres were taken up in three years, and first-comers are getting the choicest lands.

Most of the new settlers buy small tracts "under the ditch" in the irrigable area of the valley, as it means sure crops and good water rights. There are 700 miles of canals fed by immense reservoirs. The price of land varies according to proximity to town and beet-sugar factory.

The sugar beet is a ready-money crop. Six factories in Colorado and one in the Kansas section stand ready to take the product of all the acreage the farmers will put in, assuring a return which the farmer can count on. \$3,000,000 were paid out in this valley for beets in one year alone.

Alfalfa is cut four or five times a season. It is a better food for live stock than corn and is the important crop here.

Fruit comes next. You know how popular Rocky Ford cantaloupes are—well, they are raised in the Colorado end of the valley. So many watermelons are produced that Watermelon Day, in the Fall, vies with the Fourth of July. Growing melon, squash and cucumbers for their seed is very profitable.

Cut out this advertisement and mail it to me with your name and full address. I will mail you illustrated land folders which tell the story in detail and send you our home-seekers' monthly, *The Earth*, six months free. Questions promptly answered.

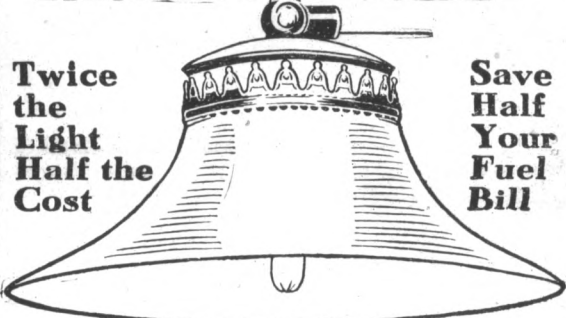
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A. T. & S. F. Ry. System,  
1171-M Railway Exchange, Chicago.



## Make Home Homelike

Twice the Light  
Half the Cost

Save Half Your Fuel Bill



SAVE one-half the money that lighting and cooking now cost you by generating your own illuminating and fuel gas. Throw out the dingy, eye-straining, work-producing, noisome lamps or their more dangerous substitutes. Cook your meals on a gas stove, with less work. A gas flame keeps cooking utensils clean and free from smudge, and does not blacken kitchen walls with soot and smoke.

### Fire Proof "F. P." Fool Proof LIGHTING PLANT

will increase the cheerfulness and beauty of your home, do away with the disagreeable filling of greasy lamps, lessen the work of preparing meals, and will save you money. An "F. P." Lighting Plant occupies no more room than a pantry shelf—can be put in the kitchen or elsewhere—needs almost no attention. It generates the brightest gas light known, and gives you a hotter fire for cooking than coal, coke or coal gas.

Send for our book "Make Home Homelike" and be convinced that you can have all the comforts of the city house.

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and they keep you  
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**\$1,650.00** BUYS THIS BEAUTIFUL HOME  
and 40 acres of best fruit and general farming land, including good barn, corncrib, tool shed and chicken house, all new. Rich soil, fine climate, good markets, abundant water, excellent neighbors and best schools.

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## SOME PRETTY CUSHION DESIGNS.

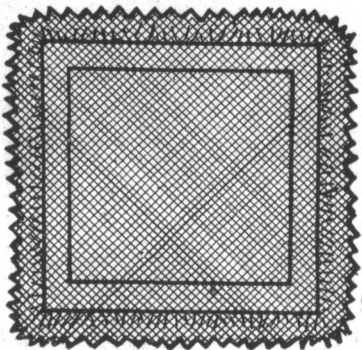
BY PEARLE WHITE M'COWAN.

Here are some pretty cushion cover designs suitable for use in the best rooms. No. 1 is made of plain scrim which comes at twenty-five or thirty cents a yard, and No. 2 ribbon in any of the light delicate shades. The scrim is cut into the desired size for cushion, and two and one-half or three inches from each of the four sides, threads are drawn to a width a trifle more than the width of the ribbon. The ribbon is then interlaced thru this, first under five or six threads, then over the same number of threads. If desired, threads may be drawn and a second row of the interlaced ribbon placed two or three inches nearer the center. Or, some of the ribbon may be shirred very full and formed into the shape of an initial letter, which may be sewed neatly in the center of the pillow slip. However, the pillow with just one row on each side is very dainty and sweet. Threads should also be drawn in like manner in the ruffle. Our illustration shows one with the ribbon run much nearer the inner than the outer edge of ruffle, as is usual. This is rather a novelty and is a very pleasing variation from the usual order. A bow of ribbon at one corner, or a huge rosette, as fancy may dictate, finishes this plain and dainty little pillow slip.

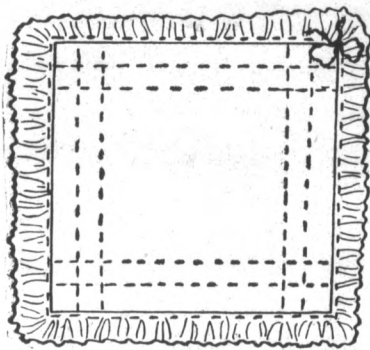
All these pillow slips should be left

the embroidery was all done in different shades of lavender and purple. That is, the petals were made of a spool of variegated sansilk ranging in color from white thru lavender to a medium shade of purple. The centers were worked in solid purple of a deeper hue. A second was carried out in the same manner with pink in its varied shades, while the interlining was also pink. A third was varied somewhat, with one flower of light pink and across on the opposite corner a flower of a deeper pink. In the other two corners was one of pale yellow and a second in a deeper shade. The ruffle was worked in yellow and underneath all was a light blue lining. Tho seemingly much mixed up the effect was entirely pleasing. Merely a blending and softening of colors, which made them entirely harmonious.

The fourth of this quartet is another dainty ribbon-run affair, which is not so easily laundered as the others of the group. It is made of fishnet, cut so that the strips of open work run cornerwise of cushion. Thru each row of this open work baby ribbon in one or two colors, as desired, is laced. The ruffle may be cut on the straight or bias according to one's taste, and the outer edge is turned over slightly and basted down. No. 2 ribbon in a shade to correspond with center trimming, is then put on in the same manner that a finishing braid would be applied, and neatly stitched down on both edges with silk of a corresponding



Design No. 1.



Design No. 2.

open at one side, and hemmed back on both edges. When the pillow is placed inside the open side may be buttoned together, or may be quickly "run" together with needle and thread.

Another novelty, recently seen, which is exceedingly pretty is a slip made of Brussels net curtain material, and pink sansilk. The old fashioned darning, which just now is so popular, was made use of in this slip. One side of the ruffle was cut in points and the edges folded over and darned down with five rows of the pink sansilk, which was used double. The cushion itself was covered with pink silkolene and the outer cover of net was darned as in illustration No. 2. If desired an initial may be darned into the center of pillow. This net lends itself readily to almost any design which the maker may choose to darn upon it, and it makes an unusually attractive pillow slip. It is impossible to do justice to its beauty in a mere illustration. The ruffle

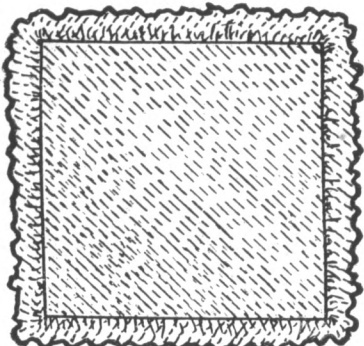
shade. This makes a very rich and striking cushion cover.

If a little care is exercised in washing the first three of our group may be laundered innumerable times without injury. They should be rubbed lightly between the hands in lukewarm water to which a little ivory soap has been added. Any pure soap will do. Ordinary laundry soap is too strong for delicate colors and fabrics. They should then be rinsed in clear cold water to which has been added a large handful of table salt, and when partially dry, ironed immediately. If desired they may be slightly starched after rinsing. They will keep clean longer if this is done.

## A NEW WAY OF EXTERMINATING THE MOSQUITO.

BY G. E. M.

The city of Tampa, Florida, has adopted a novel mode of warfare against the



Design No. 3.



Design No. 4.

to this cushion was laid in one-quarter inch pleats as it is almost impossible to successfully gather the material. The color of sansilk may, of course, be varied according to one's taste.

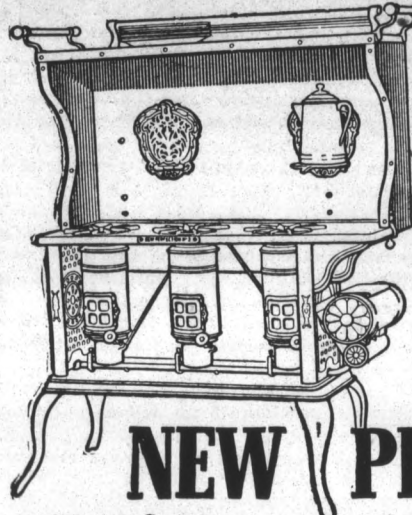
The Chrysanthemum pillow will appeal to the woman who loves to do embroidery, but has little time to spend upon the difficult and more intricate patterns. Every one knows the ease and rapidity with which shadow embroidery is done, and this is merely a sweet little pattern, which any one with ordinary ability may draw for themselves. The material used in this instance was plain white India linen. The hem to the ruffle was merely basted down and then "Kitty-stitched."

The colors may be varied according to one's taste. An exceedingly pretty one had an interlining of pale yellow, while

mosquito and one that is proving highly successful. There are many rain-water tanks and cisterns thruout the city for supplying water for lavatory and various other purposes, and these are favorite breeding places for mosquitoes. The warfare against the annoying pest consists in stocking these reservoirs with small fish to feed on the mosquito larvae. This method has been tried in one place and another in Florida, and has proved successful in every case. The fish eat the larvae greedily, keeping the tank water clear at all times. They live for years, even in tanks that are covered, and their living place one of darkness.

Question.—I wish to color a white straw hat black. Can some reader of The Farmer kindly give directions for same.—Mrs. R. Discolon.

## You Will Need an Oil Stove



## NEW PERFECTION Wick Blue Flame Oil Cook-Stove

is the only oil stove built with a CABINET TOP for holding plates and keeping food hot after cooking. Also has useful drop shelves on which to stand the coffee pot or teapot after removing from burner. Fitted with two nickeled racks for towels. A marvel of comfort, simplicity and convenience. Made in three sizes—with or without Cabinet Top. If not with your dealer, write our nearest agency.



The **Rayo Lamp** Just such a lamp as every one wants—handsome enough for the parlor; strong enough for the kitchen, camp or cottage; bright enough for every occasion. If not with your dealer, write our nearest agency.

Standard Oil Company  
(Incorporated)

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The Atlas E-Z Seal Jar—the best made and most convenient fruit container yet put on the market.

It has a mouth sufficiently wide to take in large fruits, like peaches and pears, whole.

It seals by a simple downward pressure of the hand, and when sealed, keeps its contents perfectly for any length of time. The

## ATLAS E-Z Seal Jar

(Lightning Trimmings)

is machine-made; of extra tough glass and very strong at top where common jars so often break. Being smooth finish on the lip, there are no fine glass particles to fall into the jar, as sometimes happens when putting cap on a hand-made jar. The

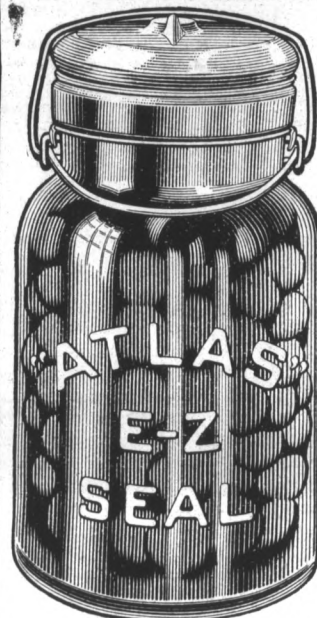
## Atlas Special Mason

has a wider mouth, but is made with screw cap.

Always ask your dealer for "Atlas" jars and take no substitute—then you have the best.

## A Book of Preserving Recipes

Sent free to every woman who sends us the name of her grocer, stating whether or not he sells Atlas Jars.



If your dealer cannot supply these jars, send \$3, and we will express prepaid thirty (30) quart size ATLAS E-Z SEAL JARS to any town having an office of the Adams or U. S. Express Co., within the States of Pennsylvania, New Jersey, New York, Delaware, Maryland, Virginia, West Virginia, Ohio, Illinois, Indiana or Michigan, or we will quote delivery prices in other portions of the United States by freight or express.

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Write a postal today for our complete new Book on Lightning. You'll learn how our rods pay for themselves in fire-insurance saving alone; what the government says about the increasing danger of thunder storms; how our rods are made, how much cable and other equipment you will need on your buildings, and how to put it up. Then you can order direct from our factory without enclosing a cent or obligating yourself in any way. Then, when you open up the goods, it's your privilege to return them if they don't please you. Send your name today for the Book and trial order blank. Address

The J. A. Scott Co., Dept. J, Detroit, Mich.

When writing to Advertisers mention the Michigan Farmer.



## GRANGE

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

### THE JUNE PROGRAMS.

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

"Every fault in your child is the lack of some virtue."—Elizabeth Harrison.

The Child—IV. His Growth.

Whistling duct, by two boys.

Soil Fertility—IV. Commercial Fertilizers.

Fifteen minutes of pure fun (furnished by a "Surprise Committee" of young people).

### THE GRANGE AND THE CHILD.

Odd, isn't it how we all get at things in crawfish fashion—that is, backwards? When men invent a machine, they make it in the clumsiest possible way at first and then simplify it by degrees as we come to use it. We women fill our houses with bric-a-brac and dust-catching ornaments and by weary experience come to see that simple lines and a few really good articles are most satisfactory and easily cared for. We concoct marvelous articles of wearing apparel and perpetrate startling atrocities in millinery, only little by little to learn the vanity and outrageousness of most of it.

The real values of life, the things we care most for, are the things we take action for last. See how the history of education illustrates this. It has begun way up in the air and is only in recent years applying itself to the common, bread and butter problems of living by teaching boys to swing sledge hammers, use tools and investigate natural qualities of water, soil, air, electricity and all those native forces that we must deal with in making a livelihood. It has been a roundabout way to get at first principles, but education is headed that way now.

Finally, in this circuitous fashion, the human himself was reached and methods of making him a better being have been taken up seriously. What a weary way we had to come to find the best physical remedies. Death's door had to be held open and many pass thru, before it was found that the best remedies are fresh air, rest and wholesome food.

Still backing up, backing up to the source of things, public interest and efforts have at last come to the child. It has been a slow, difficult process to awaken an interest, that really seemed to care, in the welfare of little children. Queer, strange, but it is true. Even in our farmers' meetings we have talked with more or less system about every other living thing on the farm except the child—colts, calves, chickens, even squash bugs. Bulletins have been issued and studied upon the San Jose scale, discussions have been listened to by the hour on microbes, and the home makers' courses in colleges have exploited all sorts of cookery, house sanitation and furnishing, wall tinting and papering, but are only now coming to study the real object of all this.

And on the programs of many of our Granges is being found this vital topic of the child, in one form or another. One lecturer writes that under the topic, "The Senses of the Child," the interest was fine and all participated in the practical discussion of it. In this same Grange the outgrowth of this assignment is a "Mothers' Meeting" to be held once a month among the women of the community. This is in a place where mothers' meetings had not been inaugurated by any other society. What a splendid bit of leadership this is! What a vitally needed piece of work! Do you not see how the opportunities for usefulness of the Grange in a community widen and multiply every day as the work develops year by year? JENNIE BUELL.

### POMONA MEETINGS.

Kalkaska County Pomona Grange, in session at Leetsville, May 18, gave liberal attention to working up interest in attendance upon the coming meeting of State Grange at Traverse City, planning for exhibits at it and urging the benefits that would be brought back to local Grange work afterward. The State Lecturer was present and spoke upon the present growth of the Order over the country and of some of the great things yet waiting to be done by the effort of organization among rural people.

#### Antrim County.

Antrim Pomona held one of its noteworthy meetings at Ellsworth, May 19

and 20. Despite busy times, a fair attendance was out to accept the hospitality of Ellsworth patrons. The program was strong and well balanced, touching each of the broad lines for which Pomona Grange work stands. A carefully prepared paper was read by R. E. Morrow on "History of most popular breeds of cattle," while E. R. Harris spoke of "Farming in Antrim County." Both of these farm topics were made practical for the local farmers and their needs. "Local Option," particularly from Antrim's standpoint, was presented by Attorney Chas. S. Gulle, and led to a discussion that showed the sentiment to be strongly convinced that the county will carry dry next spring.

The schools were represented by County Commissioner H. M. Coldren, whose topic was "The Child—requirements for healthy, mental and physical development," and who forcibly pointed out that scarcely a country school house is lighted, heated and ventilated as it should be. This led to an animated discussion. The Grange was discussed by the State Lecturer under the subject of "Grange Gains," and its influence was exemplified by the giving of the second degree by a team of young people from Ellsworth Grange. So creditably did this degree staff manage their work for the brief time spent upon it that they were invited by Pomona Grange to repeat part of the drill in the public meeting and were given seats of honor with Pomona officers.

Half of the lecturers in the county attended this Pomona, and at the close of the afternoon, gathered other interested workers in a conference with the State and Pomona lecturers. Means of building up stronger Granges thru lecture hour efforts, the use of the roll call, the handling of a Grange paper as a part of the program attractions, and self-help for the lecturer, were among the topics discussed, with many good points brot out. A business and fifth degree meeting was held on the morning of the second day.

#### Ingham County.

Drizzling rain did not prevent faithful patrons from attending the Ingham Co. Pomona meeting held at Alameda on Friday, May 14. As one good sister said, the children do not stay away from school because of rain, and when we were teaching in the rural districts we were at our post regardless of weather conditions. As the Grange is now our school and our opportunity for progress and improvement, and the county meetings few and far between, we can ill afford to miss even one of them. Owing to the heavy rain many were late and not much was done at the morning session.

After dinner Mrs. Abbie Dills, secretary of the Woman's Work Committee of Michigan State Grange, offered many good suggestions regarding woman's work in the Grange and afterwards read a paper that was surely helpful to all who heard it. (We hope to publish a synopsis of this paper later.—Ed.) State Speaker T. H. McNaughton, owing to pressure of work in the legislature, was unable to attend.

The question, "To what extent do monopolies and trusts affect the farmer, and in what way can he aid in abolishing the same?" brot about a lively discussion. It was conceded that farmers as a class do not stick together and organize as do men engaged in other callings and occupations. Also, that more effective co-operative work might be done if more farmers would take advantage of Grange co-operation. The subject of co-operative selling was also discussed, the consensus of opinion being that farmers in general do not get the returns they reasonably should from the sale of their products.

The subject, "Home Dairying," was taken up by the ladies, also, "Buttermaking—the old and the new way." With these topics interspersed with plenty of music and readings, a very enjoyable afternoon was passed.

Alameda is one of the old Granges of this county. During the last year the hall has been remodeled, sheds built and other improvements made. This year we have year-books with advance programs. We all like the plan very much. It means much work at the beginning but less later on; it gives the idea of permanency and duration, and lends a certain dignity that mere announcements could not give to such work. Care is taken to solicit advertising from only the most reliable business concerns and business men are glad to place advertisements in the year-book. Our programs in the year-book are not complete, being rather outlines which, two weeks previous to meetings, are filled in. Our next meeting will be held with Ingham Grange at Dansville. The state speaker will be L. W. Oviatt, of Bay Co.—Mrs. E. J. Creyts, Pomona Lecturer.

### COMING EVENTS.

#### Pomona Meetings.

Charlevoix Co., with Marion Center Grange, Thursday, June 3.

Lenawee Co., with Madison Grange, Thursday, June 3. Lecturers meet in conference at Adrian, 1 p. m., June 2.

Lapeer Co., with Burnside Grange, Thursday, June 3.

Ottawa Co., with Nunica Grange, Friday, June 4.

Wayne Co., with Flat Rock Grange, Friday, June 4. Prof. R. S. Shaw, State Speaker.

Sanilac Co., with Elk Grange, Wednesday, June 9.

Kent Co., with Oakfield Grange, Wednesday, June 23. Miss Jennie Buell, State Speaker.

Chippewa Co., with Rosedale Grange, in June.

Cass Co., with Redfield Grange, in June.

Calhoun Co., with Convis Grange in June.

Bay Co., at Pinconning, Tuesday, July 13.

## FARMERS' CLUBS

### OFFICERS OF THE STATE ASSOCIATION OF FARMERS CLUBS.

President—A. L. Chandler, Owosso.

Vice-President—Mrs. Clara L. French, Pompano.

Secretary—Mrs. W. L. Cheney, Mason.

Treasurer—D. K. Hanna, Caro.

Corresponding Secretary—Clayton Cook, Owosso.

Directors—D. M. Beckwith, Howell; D. M. Garner, Davisburg; T. B. Halladay, Norvell; E. C. Hallock, Almont; B. A. Holden, Wixom; Wm. H. Marks, Fair Haven.

Address all correspondence relative to the organization of new Clubs to Mrs. W. L. Cheney, Mason, Mich.

#### Associational Motto.—

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

#### Associational Sentiment.—

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

### HOW THE LOCAL CLUBS ARE CONDUCTED.

(Continued from last week.)

Col. Ives, for many years a delegate from the Ingham County Farmers' Club, stated that that organization dated back to 1872 and has come to be known as one of the institutions of the county. Whether it can be successfully maintained is no longer a question among its members. Free use is made of the local press in reporting its meetings. A feature of the conduct of this club is the list of honorary members which it maintains, a place in which list is won by the member having done something for the club. Speakers from a distance who respond to invitations from the club are rewarded by being made honorary members of the organization, an honor which is very generally highly appreciated by them. Obituary notices of such members have mentioned the fact of their membership in the Ingham County Farmers' Club. The club does not in any way cheapen honorary membership, but uses it as a means of promoting the welfare of the organization and of bestowing a worthy honor upon those who have earned it by some signal service to the club and the community. No topic is excluded from the discussions of the members, which discussions are broad and general, covering a wide range of public questions.

The delegate from the North Newburg Club, of Shiawassee Co., stated that his club has a membership of 25 families, and has an average attendance of from 65 to 75 members, while invited guests often swell the attendance to 100 or more. Officers are elected in June and December for a term of six months, the honor being passed around among the members. The annual membership dues are 50 cents for each family. Programs are prepared along lines of general interest. Political questions are not barred from discussion and it has been found that the members can discuss such questions frankly and without bitterness. An annual picnic is held in August and a county club picnic is also a feature of special interest to the club members of the county. The club has proven of great worth along social, as well as educational and economic lines.

The West Haven Club, of Shiawassee Co., was reported by its delegate as having a membership of 22 families, making a total of about 70 members. Meetings are held each month in the year with the exception of August, when a club picnic is substituted for the regular monthly meeting. In September a temperance meeting is held, at which the program is devoted to this topic exclusively. The December meeting is conducted by the young people. The officers of the club are elected annually, and in lieu of membership dues the expenses of the club are defrayed by a pro rata assessment levied on the members. The programs are prepared from month to month for the succeeding meeting. General as well as local subjects are discussed and visitors are invited to participate in the discussions.

The Ellington and Almer Farmers' Club, of Tuscola Co., was reported to have a list of 60 members. Monthly meetings are held by this club, and a picnic in August is an annual feature. Instead of a local club fair this organization makes an exhibit at the county fair in connection with the other two clubs in the county. The discussions are of a progressive nature, both agricultural and state topics being discussed. The ordinary expenses of the club are defrayed by an annual fee of 10 cents per mem-

ber, the expenses of the delegates to the annual meeting being defrayed by a pro rata assessment among the members.

The Surprise Farmers' Club, of Saginaw Co., was represented by Mrs. Curtis, who stated that the club had been organized eight years and had a membership of 100. Monthly meetings are held, altho the summer meetings are not as well attended as those during the winter season, especially by the men. Dinners are served in the winter season when all day meetings are held, and suppers in the summer when the members gather in the afternoon. An annual picnic is held in August, which is entirely of a social nature, no program being prepared for the day. Special meetings are turned over to the ladies. Good meetings are the rule and the club is a most helpful influence in the community.

The South Arcadia Club, of Gratiot Co., was reported by its delegate as being in a prosperous condition and growing every month. The month preceding the associational meeting six new members were added to the list. The annual membership dues are 25 cents for each member. The membership of the club now numbers 115. This club has done good work in trying to interest the boys. Competition is encouraged among them by offering prizes for the growing of corn, potatoes, etc. The club is trying to advertise its work thru the use of club stationery by the members. The farms of the members are named. The club holds monthly meetings and never misses one. The question box is a feature which is enjoyed by all. Roll call is responded to by quotations. Current events are made a feature of the meetings. An annual picnic is held.

The delegate from the Washington Center Club, of Gratiot Co., reported a membership for that organization of 75 adults, of which there has been for the past year an average attendance of 52 or, with children counted, of 80 to 100 persons. The club uses printed programs prepared for the year, and believes that any club that tries this plan will never go back to the monthly programs announced for a single meeting in advance. This club has no summer vacation, but holds all day meetings from October to April, and afternoon meetings for the balance of the year. The farms of the members are all named. A temperance meeting is held in March. A picnic is held in August and the members of this club would like a county club picnic in which the five clubs of the county would join. The men conduct the entire program at the April meeting and the February meeting is a ladies' meeting. This club has been organized for 12 years and there has been nothing but harmony among the members during that time. An inspection committee is considered a good thing by this club, as the prospect of having the farm looked over by them induces the men to clean up the premises frequently, and especially before they are to entertain the club.

(Continued next week.)

### CLUB DISCUSSIONS.

**Discuss House Plants.**—The Ellington-Almer Farmers' Club held a pleasant half-day session at the cosey home of Mr. and Mrs. G. S. Earle, on May 12. A surprisingly large attendance of members and also a number of invited guests were present, who also took part in the program, which was called to order by President Turner, who announced music as a preamble to all that followed. A talk on "House Plants and their Care," was led by Mrs. Nate George and discussion by Mrs. Frost. Mrs. Wilson, also several of the gentlemen gave evidence of interest in this matter. Following an excellent program the question box was in evidence. Nelson Hatch gave a descriptive account of a recent trip to the reunion of the survivors of the ill-fated "Sultana." Supper was then served by the ladies under the supervision of Mrs. E. J. Black, when the meeting was adjourned.

**Members Show Active Interest.**—Mr. and Mrs. James Campbell entertained the Ellington-Almer Farmers' Club at their pleasant home on Wednesday, April 14. The delightful weather prevailing induced nearly all the members to attend and take part in the splendid program prepared. President Turner being absent, James Wilson presided. The invitation to attend a "Historical Lecture," by Mrs. Marie Ferry, secretary of the Pioneer Historical Society, of Lansing, was read and accepted, but many were prevented from attending this rare treat. The program and question box gave ample proof of the interest manifest in this club organization, which was brot to a close by an address on "Words and Actions," by Elder Crandall. It was exemplified by examples familiar to us all and his remarks were heart searching in their earnestness. The order to adjourn came all too quickly and the next meeting in May with Mr. and Mrs. Earle, was approved.



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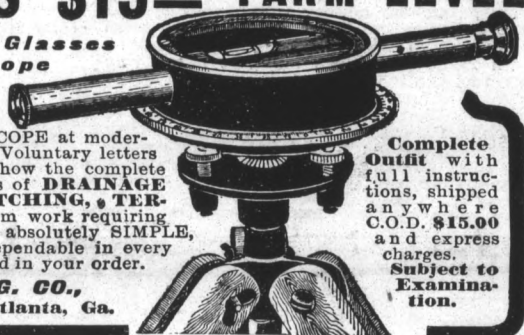
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