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FARMERS of Michigan secure a neat little income from the tomato crop. In round numbers the total is probably not far from \$4,000,000. It is difficult to learn the total acreage in the state since the state and federal statistics do not separate the tomato from other truck products, but the amount has been variously estimated and the average seems to be somewhere around 20,000 acres. The total gardening area of the state, according to the statistics taken by the federal government in 1909, was nearly 100,000 acres, not including potatoes. Since tomatoes are grown in practically every garden, and in many sections they are grown as a specialty to supply city trade, canning factories, etc., it seems safe to assume that a fifth or more of the area devoted to garden crops is occupied by tomato plants and as the receipts per acre would come not far from \$200 the estimate of \$4,000,000 is near the amount of income to our farmers from this crop.

The Market a Big Factor.

An important item in the development of tomato growing in any section, is the market. Where it is easy to dispose of all the crop at a price that leaves the grower a fair to good margin after expenses have been paid, there it proves an easy matter to interest the community in the business; but without such an outlet a general adoption of the tomato as a crop to depend upon for an income is not to be expected. However, there is scarcely a community where the right kind of a man could not make good with the crop, so much depending upon human skill and intelligence in its growing and marketing. But as a result of the need of a readily available market, the important tomato growing communities are within reach of the larger cities where the fresh grown fruits are quickly placed in the hands of dealers and peddlers, or else they may be found about points where canning establishments, or preserve manufacturing are located. It frequently happens that such concerns locate in sections furnishing tomatoes for city trade, and when the stock becomes so abundant that prices fall below a level where growers can afford to draw to the city and sell, the manufacturers take the surplus at prices that give a small margin over the cost of production and delivery. Such is the case in some of the tomato growing districts about the city of Detroit.

There are, no doubt, many localities where a very satisfactory market for tomatoes could be developed, providing the right kind of a business man took hold of the proposition and pushed it. This is especially true in resort districts. A majority of those who go on outings and make their homes at the many attractive lakes of the state, are able to pay good prices, and are glad to do so, providing a high class of goods is offered. Hence if one is so located and is able to grow a high grade of early tomatoes, he is certain to find the venture profitable.

Even Farmers Buy.

Even farmers themselves are getting to be large purchasers of tomatoes and other garden crops. In the small towns over the state it is surprising to find that a very large part of the garden product sold over the counters of the grocery stores goes out to the farm homes. The men engaged in general farming have their time and that of their help so completely occupied with the regular duties of the farm that in many cases they do not care to attend to the garden, and so the family either buys garden crops elsewhere or goes without; but when the good housewife of such a home comes to town and sees the well grown vegetables and fruits displayed before the grocery stores, she usually buys. This demand together with that from the residents of

Tomato Culture in Michigan

the small town makes a fair local market for a few tomato growers in every community and the person who is ambitious to grow this crop should look about to determine the probable home demand before giving the matter up or moving elsewhere to get a better market.

Home Canning Increases Consumption.

There is still another way in which tomato crops are sold that promises to increase the amount grown, and that is

able economic importance now, the future is certain to show a larger income from its growth. But there is another element that is working toward that same end, and that is the ability of growers to produce the crop at a less cost on account of better equipment and improved machinery.

Improved Equipment.

The building of suitable glass structures for the growing of plants is one means

crops are always more economically grown. Then, too, these greenhouses enable the owner to use his help to much better advantage, as the men's work will not be interfered with by stormy weather. Another economical advantage is that the plants can usually be started earlier, which enables the crop to be marketed when better prices prevail.

The Transplanter.

The tomato planter is also a boon to the large grower. A picture of one of these machines is shown in operation. By its use the cost and labor of transplanting the young tomatoes in the field are greatly reduced. A good man will set about 3,000 plants a day by hand. With the above machine three men and a team will put in 25,000 plants a day and it is safe to say that the men will be less weary after following the planter for the day than they would be after setting the plants by hand from morning till night.

The illustration gives the reader an idea of how the machine works. The field is marked out with a corn marker, the same as for planting corn, except that the rows are made a little wider apart. The driver of the team hitched to the planter, guides the horses so the machine strides one of these marks. A plow on the machine cuts a furrow as deep as wanted along a mark. Behind the plow are two wings that draw the dirt back into the furrow and hill it up. Between the plow and the covering wings is a small space of a foot or more where the plants are inserted by the two men seated low on the rear of the machine. First one will drop a plant at a cross mark and then the other at the next mark, when the first man will take the third mark, and so on, each man dropping a plant at alternate hills across the field. This makes it necessary for one man to drop one plant about every eight or ten feet, depending upon the distance the cross rows are apart, and this task can be done, after the men become accustomed to the work, with ease as fast as an ordinary team will walk. The barrel seen on the machine in the picture is filled with water in which fertilizer has been dissolved. By the aid of a valve control placed where it can be tripped by a touch of the foot of one of the men dropping plants, a little of the water containing the fertilizer is run into the furrow where the plant is established. When the soil is properly prepared the planter will do better work than men can do by hand. There are fewer of the plants that fail to grow, the dirt being packed about them so well by the wings that it is almost impossible to pull them out without breaking the stem.

Spraying Has Become Necessary.

Another piece of machinery that is helping the tomato growers is the spraying rig. Sprayers equipped as for spraying potatoes is adapted to service in the tomato patch, and now that there is danger of blight and other troubles in many places the use of the sprayer will become common. By the use of the horse machine the spraying is done so rapidly that the work does not add materially to the cost of production, which cost is perhaps more than compensated for in the better crop that grows even where no bacterial diseases or other troubles affect the plants and where these troubles are present the saving may amount to the entire crop.

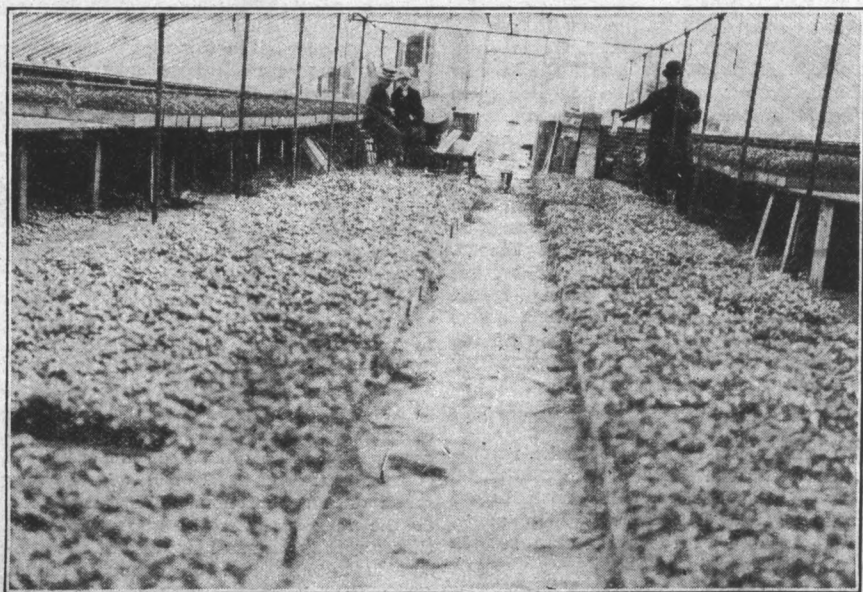
These considerations lead us to the conclusion that the tomato crop in Michigan is important, so important that when troubles arise either in the marketing of the product, or in its growing, those who have the care of the industry upon them go about to correct the difficulty, and to this end they have thus far been successful. We shall hope that some time in the future when statistics



Tomato Transplanter at Work—Machine and Crew Can Set 25,000 Plants a Day.

the home-canning method of getting them to the consumer. By this means it is possible to grow the crop at any point where the soil is suited, after which the tomatoes are canned, and held until they can be taken to the city and sold. The superiority of these goods over those usually canned at the large factories, makes it possible for a careful man to work up a trade that offers very satis-

in the hands of growers of many sections through which the cost of production is reduced. The inside view of the greenhouse published on this page shows tomato plants growing under conditions where they can be well protected and developed. This structure will house 100,000 plants at a time, it being 24x100 feet in size. By the use of cold frames outside, the owner is able to grow fully 200,



The Greenhouse is Used to Start the Tomato Plant. Over 200,000 Plants were Grown in this House Last Spring.

factory returns, and one that can usually be relied upon so long as the goods are kept up to a high standard.

Thus it will be seen from the increasing number of ways that the tomato crop is cared for and the widening demand that results from the more general use of it, that, while the plant is one of consider-

able economic importance now, the future is certain to show a larger income from its growth. Such houses as this puts in the hands of the man in charge, control of conditions, and if the man is acquainted with the plant's requirements he will be able to get them in better shape than where they are left to the accidents of the weather. Better plants mean larger crops, and larger



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of farm crops are taken that the officials will see to it that an inventory is made of some of these side lines, like tomato growing, of which Michigan excels in so many and that the income to the farmers from them will be reckoned with the revenue from her other products that her rightful position among the wealth producing commonwealths of the nation may be established.

CUCUMBER BEETLES.

Some day in early summer when the cucumber vines have become nicely started we are surprised to find them beset by the enemy, a countless host of yellow and black striped beetles. Whether they have dropped from the sky or risen out of the earth or merely come into existence from nowhere in particular does not matter. The fact remains that they are here and they must be dealt with promptly.

The striped cucumber beetle is not a bug, but is what its name implies. It is a beetle, therefore it is a chewing insect. It masticates its food and is not slow in doing it either. There is no Fletcherism about it. The creature comes with an appetite and wastes no time in satisfying or trying to satisfy its hunger.

They may not be numerous enough to eat up the plants, but in that case they have another means of mischief, though slow in its action. The female beetles crawl down about the stem of the plant where it comes through the ground. Here the eggs are deposited. Soon the larvae hatch and feed upon the rootlets. If they are plentiful the plant does not thrive as it should and may die. The dry weather is blamed for the loss. But many such plants could have endured the drouth if they could have had the roots that went to feed this ravenous tribe.

After several weeks of mischief these worms become full-grown. They are then nearly half an inch long, whitish, with six legs at the front end and one at the posterior extremity. They pupate in the soil and shortly come forth mature insects, the time from the egg to the adult being about two months.

The beetle passes the winter under leaves, boards or other rubbish. The time being spent in fasting, it comes out in the spring with a good appetite, excellent digestion, and maybe a clear conscience. Anyhow, it joins with all of its relatives near at hand and makes a raid on such cucumbers, melons and squashes as are within reach.

When the beetle comes it is necessary that something be done and that quickly. The arsenates will kill insects of this kind, but they are too slow. By the time the beetle is ready to die the leaf has been eaten. Fortunately the beetle has a dislike for vile odors. Kerosene is not tolerated, neither is carbolic acid. Either of these mixed with ashes, road dust, plaster or something of a similar texture, will drive the beetle away in disgust. Tobacco dust is another remedy. Sprinkle it on the hills and see the insects fly! So they pick up their earthly belongings and migrate to your neighbor's, where they expect no worse treatment, at least. As long as the odor stays the bugs won't, but they may come back when it is gone, for which reason it ought to be renewed at short intervals. If there are a few hills only, good results are reported from using moth balls, one or two in a hill on a clean shell or small dish.

In localities where the beetle is a regular summer boarder, preventives are resorted to. These are frames covered with wire or plant cloth. The frames may be made of wire, barrel hoops or boards, the object being to cover the vines, yet leave room for them to grow. Board frames covered over the top with gauze are sometimes used. When open at the ends these will do quite well, but if they are enclosed they keep out light and air, which causes the vines to grow tall and spindling.

The fall clean-up is also to be recommended. If the harbors are destroyed many of the beetles will perish before another spring. This will help some, though enough of the pests will remain to make things interesting.

Oakland Co.

F. D. WELLS.

OAKLAND COUNTY HORT. MEETING.

The next meeting will be held on July 5 at Mr. R. J. Coryell's, one-half mile west of Birmingham, commencing at 10.30 a. m. standard time. In the forenoon Mr. J. P. Halstead, of Farmington, speaks on "Conserving Moistures." In afternoon Prof. H. J. Eustace, of M. A. C., will discuss "Corn Crops on a Fruit Farm." Conveyances will be at the Birmingham D. U. R. waiting-room at 10.00 a. m.—S. E. Sly, Secretary.

FARM NOTES.

Seeding Sandy Soil to Alfalfa.

I have a field of sandy soil (sand sub-soil) that we have been trying for three years to get seeded to clover. I now have about one-third of a crop. If I should turn this under by July 4, add one ton of lime per acre, and harrow each week until September 1 and then seed to alfalfa, would I be liable to get a good stand? Can you make any suggestions? Mecosta Co.

B. H. F.

The fact that it has been found impossible to get clover to grow on this soil would indicate that it needs lime, as a great many soils of this character in Michigan undoubtedly do. If this clover is turned under when reaches a maximum growth and lime is applied, it would seem reasonable that a good stand of alfalfa could be secured by midsummer sowing, provided the soil or seed is well inoculated and an application of mineral fertilizer made it needed. It would not, however, in the writer's opinion, be well to delay seeding until the first of September. Would prefer sowing the latter part of July or the first part of August at any time when the moisture conditions are right to insure the quick germination of the seed and rapid growth of the young plants. The ground, however, should be well firmed down and a good seed bed prepared. There would seem to be only one possible difficulty and that is that the beneficial effects of the lime are not wholly apparent the first season under ordinary conditions. However, with liberal application such as is proposed, we believe that a fairly good inoculation of the plant might be expected.

Millet After Clover Hay.

I wish to plow up a piece of clover stubble for millet. What time should I cut the hay so as to get the millet in in time and how much seed should I sow to the acre?

Wayne Co.

SUBSCRIBER.

If millet is to be sown after clover hay is cut, the clover should be cut as quickly as practicable and the millet seeded as quickly as it is possible to get the seed bed in condition. If there is a reasonably good stand of clover, however, it would, in the writer's opinion, be more profitable to cut it early and take the chance of getting a second crop of clover than to plow and sow the ground to millet, which would necessitate securing a much better yield to make the crop equally profitable, to say nothing of the fact that the millet will draw heavily on the soil fertility, while the clover should leave the soil in better condition for future crops. About one-half bushel of common millet or Hungarian grass should be sown per acre.

Grasses for Drained Marsh Land.

I wish to know if land that is covered with water from two to three feet deep the year round would grow grass of any kind if it were drained? This was formerly covered with brush and was burned out 12 or 15 years ago. The bottom of this pond is a black sandy loam, no muck, as it has been burned out, with a subsoil of clay and gravel. If this will grow grass I wish to know what is the best seed to sow and how to fit the soil.

Hillsdale Co.

C. V. B.

Undoubtedly if this soil were drained it would grow almost any kind of grass adapted to it, such as red-top, and perhaps timothy and alsike clover if well drained and prepared. The first step, of course, would be to thoroughly drain the land, then prepare a good seed bed and sow the grass either in the spring or midsummer.

LILLIE FARMSTEAD NOTES.

The Oat Crop.

Oats are exceedingly short. They are not over eight or ten inches high and here it is the 20th day of June. Of course, it has been a backward season. We can't tell yet whether they are going to be a failure or not. This afternoon, June 20, we have had a splendid rain and it may bring on the oat crop so that the plants will be of good height. A farmer, of course, always worries more than necessary about the quality of his crops. Of course, farming is, I will admit, very much of a speculation. The farmer can do the very best that he knows how and that anybody knows how, and if the season is against him he cannot produce crops that he would like to. In other words, he is up against conditions all the while over which he has no control, and he must simply take the best that he can get.

It was my privilege just a few days ago to make a trip into the eastern part of the state, and I found conditions there just about the same as they are here. It has been dry and cold over the entire state. Oats are no better over in the thumb and around Detroit than they are

here. Corn is no farther advanced. As one sometimes says: "There is some satisfaction in knowing that everybody is treated alike in this," and yet it is poor satisfaction to a man who wants to get ahead in farming and delights in raising good crops.

Sugar Beets.

We succeeded in getting our small acreage of sugar beets all thinned June 14. I think this is as early as we ever got our sugar beets thinned. We could have thinned them even before this had we had a uniform stand, but it was so dry on the clay spots that they didn't come up at first, and we had to wait until the low parts and sandy parts of the field were rather larger than they ought to be in order to have the beets large enough to weed on the clay. We have got them all cultivated, finished the thinning, and now this rain that is coming now will put them in good condition. I feel quite encouraged.

Clover and Alfalfa Seedings.

One of the worst results of this spring's dry cold weather is noticeable on the new seedings of clover and alfalfa. It is a complaint all over the neighborhood, that the clover which is almost invariably seeded in the wheat in this vicinity is very small and not very thick. One has to look very carefully to find any clover at all. There are only little puny plants. Of course, this rain will help matters, and yet the wheat is so large and maturing so fast that it will need all of this moisture and can ill afford to give any of it to the clover plant. As I have stated before, this year we did not seed our clover the same way that we usually do because we did not have the seed in time, and sowed it later and harrowed the wheat both ways to drag it in. I was inclined to lay the small clover at this time largely to this fact, but other people who have sown the clover in the old way are making the same complaint, and so it must be the cold weather. I am inclined to think that the cold weather has done more damage than the dry weather. I do not believe but what crops would have been farther along even with no more moisture had the weather been warmer.

MARKETING THE HAY CROP.

While this season's hay crop does not promise to be as abundant, at least in Michigan, as that of last year, it is likely to be more valuable as measured by the price which it will bring upon the market. Thus, there is every incentive to not only secure it in the best possible condition, but to have it in shape to put on the market at the most favorable time. Where hay must be stacked this work should be done in such a manner as to best insure its keeping qualities, and as soon as it is thoroughly cured out it should be baled and stored under cover until it is desired to market it.

Also where the barn room is needed for the housing of the later crops it will be found profitable to bale the hay on account of the greatly reduced space required for its storage. The great difficulty is that it is generally impossible to get hay balers to do this work at the time when it should be done for most profitable results. This difficulty can be obviated, however, in any section where hay is grown on a commercial scale by some farmer purchasing a hay press and doing the work for himself and neighbors, or a club of farmers purchasing one and doing their own baling in a co-operative way.

Modern improvements in hay presses have been as marked as in other agricultural machinery, and these machines are now available with the power plant attached, as well as the old styles which are horse or engine driven. It is not too early to begin investigating the hay press proposition where there is a likelihood that the purchase of such a machine would be a profitable investment, as it undoubtedly would be in many localities throughout the state. Those interested in the proposition should secure catalogs and descriptive literature of the improved types of presses before purchasing.

Wayne Co.

C. T. H. B.

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MAINTENANCE OF SOIL FERTILITY.

BY FLOYD W. ROBISON.

The zeal of some concerns exploiting the sale and use of commercial fertilizers has led them to decry the value of the ordinary barnyard manures. This is not so much true at the present time as it was a few years ago when the acquaintance with the effects and the values of the commercial fertilizers were not so generally understood as at the present time. We presume that this rivalry between the animal manures and the so-called commercial or artificial fertilizers grew up because of the early prejudice against the use of commercial fertilizers. It is even now the argument of many farmers who have not used commercial fertilizers to any extent that the use of artificial manures speedily robs the soil of its basic fertility or its permanent productive capacity.

Do Commercial Fertilizers Rob the Soil?

There has been some ground for the creation of this opinion for, as is usually the case, where public opinion becomes fixed, there is some real ground for this opinion. Many a man has learned to his regret that an opinion which prevails among a large number of people, inexperienced and unscientific though they may be, still is founded upon some element of truth and fact, somewhere. So with commercial fertilizers we see the opinion which many farmers had, that the use of commercial fertilizers robbed the soil of its basic fertility and thus lowered its permanent productive capacity, was not founded on mere fancy or myth. The real element of truth, however, shows that it has not been the use of commercial fertilizers which has formed the basis for this opinion but rather the abuse of commercial fertilizers.

Tankage Does Not Rob the Soil.

To dispel the illusion which any of our readers may have in this direction, let us observe of just what commercial fertilizer constituents are composed. Suppose we take, for example, tankage, which is a constituent part of many so-called complete fertilizers. We find tankage to be made up of the waste products of the slaughter houses, animal in their structure and hence derived directly from the vegetable matter of the soil which feeds upon and comes at first hand from the soil itself. A commercial fertilizer consisting in part of tankage, then, is but a way removed from the elemental constituents of the soil itself. No one would argue that the proper use of the soil constituents upon another soil should rob the soil upon which it is placed of any of its fundamental fertilizing principles. Therefore, it is simple logic to show and for us to realize that the addition of tankage, composed, as we have stated, of the waste animal products, to the soil cannot be a detriment to that soil.

Potash Cannot Rob the Soil.

Likewise potash is a common constituent of commercial fertilizers, sometimes in one form, sometimes in another. In its most ideal form as carbonate of potash it is a very important constituent of wood ashes. Now, wood ashes are derived directly from the soil and represent particularly the amount of mineral matter which has been taken by trees from the soil upon which those trees have grown. Therefore, the addition of wood ashes could not possibly be construed in any way as depleting the permanent fertility capacity of a soil. Potash, then, is a legitimate natural ingredient of commercial fertilizers because it is one of the soil constituents itself.

Can Phosphoric Acid Rob the Soil?

Suppose we take now for consideration phosphoric acid. Phosphoric acid is a very essential constituent of plants, particularly so of the vitalistic or reproductive portions of the plant. If we study scientific agriculture we know that phosphoric acid has no secondary relationship in agriculture. If plants contain phosphoric acid the very nature and properties of the product prove conclusively that this phosphoric acid must come from the soil. Bones contain phosphoric acid in very considerable quantities derived through the process of plant and animal growth from the soil itself. Is it very reasonable to suppose that the return of the phosphoric acid to the soil could in any way reduce the permanent productive capacity of that soil?

How the Antagonism to Fertilizer Started.

These conditions being apparent, we may then well ask ourselves what was the source of the opinion so common among farmers, that the use of commercial fertilizers robbed the soil of its basic fertility.

We have stated that in our judgment, it has been the abuse of commercial fertilizers. We have known farmers to allow the barnyard manures to go absolutely to waste and drive to town, bringing back a load of commercial fertilizer for use on the soil. There are some soils that will warrant the use of commercial fertilizers without the use at the same time of barnyard manures, but there are not many soils which will show an increased permanent and immediate productive capacity where commercial fertilizers alone are used. If commercial fertilizers are used alone on ordinary soils the effect is to lower the amount of organic matter in that soil and the lowering of the organic matter disturbs the nutritive equilibrium of that soil which cannot help being noticed in the succeeding crops. If, however, commercial fertilizers are used in conjunction with barnyard manures there is absolutely no possibility of this conjunctive use robbing the soil of any of its basic fertility, and the permanent productive capacity of that soil as well as its immediate productive capacity will be actually built up instead of being lowered.

What to Use when Barnyard Manure is Not Available.

There are some farms where barnyard manure is not accessible. When commercial fertilizers are used on such soils they should be combined with organic manures such as tankage, dried blood, cottonseed meal and the turning under of the leguminous crop. There are many expedients which may be followed to secure the proper amount of organic constituents in the soil but one should, however, not make the mistake of using commercial fertilizers to the exclusion of organic manures, and where commercial fertilizers are not abused their influence on the soil fertility cannot be otherwise than to its decided best interests.

KEEP CORN GROWING.

Inferior corn crops are often the result of lack of attention during the growing season. The corn should be kept growing from the time it is out of the ground until it is ready to harvest. If it becomes stunted at an important stage in its development, no matter how favorable later conditions may be the crop will be much inferior to what it otherwise would have been, had it been kept growing. The same results are noticed in animal life, those which have been stunted at an early age, never attaining a normal growth.

Few crops need more moisture than corn and for this reason it is well to take precautions that will mean a supply in case of a dry season. Frequent cultivation will accomplish this and make a supply almost independent of rain. A thin soil mulch on top prevents evaporation, so that moisture from the lower soil when brought to the surface, will become available to the corn instead of reaching the surface and escaping into space. Water is brought up by capillary action after the soil has settled.

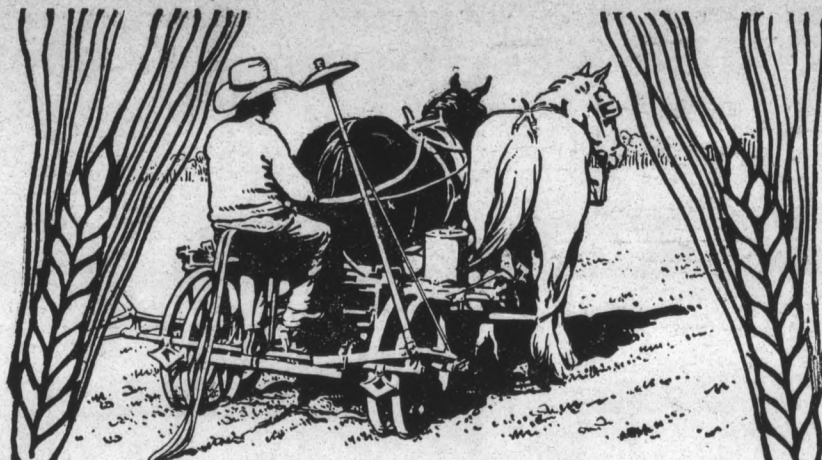
To illustrate the point a flask of gasoline with a lamp wick extending out the top, might be used. The gasoline will be attracted to the top of the wick by the same capillary force. Here it evaporates into space and in a short time the bottle will be empty. If the top of the bottle is covered tightly, the gasoline will reach the top of the wick, but it will not escape.

It is the same with soil moisture. It is drawn from lower depths and if the soil mulch is not maintained, it escapes into the air. The mulch accomplished the same purpose as the cork in the bottle, prevents evaporation by keeping the capillary tubes broken. The water is drawn to within an inch or two of the surface where it stops and is held until made use of by the corn crop, or for that matter whatever is growing in the soil. This is why frequent cultivation in a dry season largely overcomes the effect of the drought, keeps the corn growing and means a more productive crop at harvest time in the fall.

When weeds are allowed to grow, they not only rob the corn of a large amount of plant nutrients, but consume a large part of the moisture needed by the crop. This makes it important that they be kept down from the first. When there is not enough food and moisture for both the weeds and the corn, the weeds will win in the battle and get the most. They are stronger because they had to fight for their existence and can make a desirable showing under unfavorable conditions.

Pennsylvania.

L. J. HAYNES.



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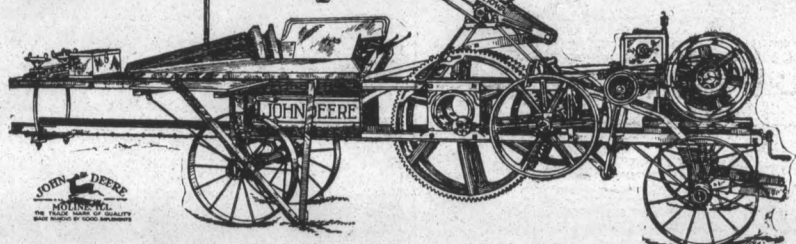


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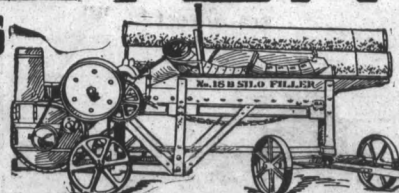
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Live Stock.

THE LIVE STOCK SITUATION.

The situation in regard to the numbers of cattle, sheep and hogs raised on the farms in the United States has very materially changed in the last few years. We have been producing all the meat needed for consumption in our own country and some for exportation, but now we are nearing the point where we will not be looking abroad for a market for any of our cattle at least. The home demand is catching up with the supply.

For several years we have been urging farmers to raise more of the calves on the farms, and produce more cattle to sell for meat, but they have not heeded the warning and have sold veal calves and have neglected to raise cattle for beef. We are aware that the prices for veal calves have been tempting, but they should have looked beyond the present day and saved, at least the best heifer calves, which would have made cows from which cattle could have been raised. The farmers of the country are now in the ridiculous position of not having cows enough from which it would be possible to raise the needed number of beef cattle that will be required to meet the demand for home consumption. Before long we will realize that money that should have been kept in circulation among our own people, is being sent out of the country to buy beef to supply the demands for that class of meat.

In some respects, farmers have just reasons for complaining, because they have been compelled to work on the short end of the evener the most of the time. During the few years following the close of the Civil war, the live stock business was developed to good proportions and farmers were making satisfactory profits on the stock raised on their farms. But by the time things were going along nicely the government allowed monied men in this and other countries to stock the public lands with both cattle and sheep and raise stock in competition with farmers who owned improved farms. In a short period of time the ranchers were sending stock forward to our markets in such numbers that prices dropped so low that farmers could not make any profit from the cattle and sheep raised on the farms, and there was a readjustment in farm management. Farmers felt the pinch of competition from the ranches very keenly and practically quit the stock raising business.

As the ranches were being broken up by actual settlers on the public lands, and the number of cattle and sheep were diminishing to the point where all raised in the country would be needed at home farmers have been cautious and slow to take up stock raising again. The habit of depending on the great west for the needed supply seems to have become fixed, or they have been afraid the government would have some game to play that would place them to a disadvantage. The game is now on. Under the tariff bill, now before Congress the duty on farm animals is put at so low a rate that the farmers are to be brought into direct competition, with but little protection, with the great live stock countries of Australia and South America.

Of course, the farmer's interests are not to be considered. The manufacturers are to be protected because they can wield a greater influence on the law makers in Congress. The law makers have gotten in the habit of adjusting the laws to suit the monied interests of the country and the farmers will have to submit, for a time, at least.

As far as the farmers are concerned the solution of the situation is plain and can be easily understood. There are many living on farms remote from the large markets who can yet raise stock to a good advantage and profit by raising early maturing animals. By using sires of the beef breeds that are of the right sort, it is possible to produce steers that will weigh from eight to ten hundred pounds when from a year to a year and a half of age, and the income will be liberal and the profits good. There is still hope for those who will go at it in a business sort of a way and produce animals of good quality and the weights mentioned. But for the man who raises cattle that require from two to three years to reach handy market weights, there is but little hope for a satisfactory margin of profit.

We are just beginning to see the dawn of the days when, by the cheap feeds raised on the farms in the shape of ensilage and alfalfa, it may be possible to produce baby beef and lambs cheap enough to compete with the great pasture lands of any country. The prices for young animals of good quality will be high because it will be practically in a class by itself as nothing from abroad can approach it. Frozen meats from Australia are selling in the markets of San Francisco and Los Angeles for two cents per pound less than the common meats produced in our own country. It is possible yet for the farmers of the United States to become practically masters of the situation if they will bestir themselves in the effort to meet the existing conditions and raise meat animals of good quality and in sufficient quantities to meet the demands of the exacting American consumers.

Wayne Co.

N. A. CLAPP.

SHEARING SHEEP.

I haven't kept any sheep on the farm for over 20 years until this past winter. Last year I had a large amount of clover hay that was injured by the wet weather so that it was practically unsalable, and then I didn't like to sell clover hay anyway, and so I conceived the idea of buying a small flock of sheep to help eat up some of this, and therefore I purchased 25 ewes and a buck. They are large Oxford sheep and they did their duty in getting rid of some of this hay and they have also done their duty this spring in keeping down the grass in the horse pasture till we wanted to turn the horses out. Usually it grows up so high that a lot of it is wasted, but we used this as a lambing field for the sheep, which was fairly close to the barn, and they have done their duty in keeping the grass down. They are good eaters, that is sure.

Very few sheep have been kept in this country for the past 20 years, the dairy cows have taken the place of the sheep. I don't know as anybody could give a good logical reason why this is so, only things get fashionable in a community and other things get out of fashion, and that's the way with sheep raising. The consequence is that there was nobody around to shear sheep. When I was a young man I was what might be called a professional sheep shearer. This is the only manual labor that I ever did for anybody else. All the rest has been done for myself. But I have a brother-in-law who came from the sheep growing sections of Ohio, and was a master at this business. He taught me to shear, and I went with him two or three seasons around the neighborhood shearing sheep.

Of course, since my days of shearing sheep the sheep-shearing machines or clippers have come into use, but I have not paid any attention to it. I never saw any used. There being no professional shearers in this section I made up my mind that we would get one of these sheep-shearing machines and try it out, and so I purchased one. None of my farm men ever sheared sheep, but I made up my mind that we would shear our own sheep. I caught and sheared the first sheep. It came pretty handy. They are mighty big sheep and hard to handle, but I found that my former experience in shearing sheep came in play nicely as I could handle the sheep and keep them in a comfortable position better than the average man who has had little experience. It certainly was comical to see the men try to handle some of the sheep. They did the best they could, but they were awkward. The sheep seemed to realize that they were awkward and sometimes took advantage, but we finally got them sheared. There is one thing certain about the clippers, and that is that a novice, a man who has had no experience in shearing sheep, can do a better job with the clippers than he can with sheep shears. There isn't the danger of cutting the sheep. I have seen people with common sheep shears haggle them awfully, until they got used to it. Some people never learn but what they do, but with the clippers there is very little danger. And so we got our sheep shearing done with novices at the art, that is, men with no former experience in shearing, and got a pretty good job done, too.

COLON C. LILLIE.

Dairy.

CONDUCTED BY COLON C. LILLIE.

CROPS THE DAIRY FARMER SHOULD GROW.

The first thing, of course, to consider in dairy farming is the raising of crops for the cows. That is the first business of the dairy farmer. What crops we shall raise is quite an important question. The dairy farmer ought to raise alfalfa or clover, or some legume, and corn silage. Every dairy cow on a farm in Michigan ought to have all the good corn silage and all the clover hay she will eat up clean every day she is kept in the stable. Why? Because we can produce more food per acre with corn than any other plant, and because it is easily produced in a succulent form.

Again, we cannot farm successfully unless we grow clover or alfalfa. I am not prepared to say how large an area of alfalfa you should grow. I am not prepared to say that you should substitute alfalfa entirely for clover, for I do not know. I am trying to work out the problem myself as to whether I can give up this wonderful plant, red clover, entirely and grow nothing but alfalfa. But I am prepared to say we should grow some alfalfa on every dairy farm. I do not believe there is any soil in Michigan that will not produce alfalfa successfully if we go at it right to get it started. We should have this legume.

If we don't know how to grow them, the first thing we should do is to learn how. We must have them if we want to make farming a permanent success. That is the foundation. They are good feeds for the dairy cow, rich in protein. Red clover is just about a balanced ration for the cow, one pound of protein to six pounds of carbohydrates. If it wasn't so bulky you would not have to raise anything else to make a balanced ration for a cow giving milk.

But because of the bulkiness of these leguminous crops we must produce some other feeds and to this end our attention is turned to the corn crop. We can raise more cow feed per acre in Indian corn than any other known plant. We can save it in the silo and preserve its succulency and feed it to the dairy cow through the cold winter, which has a wonderful effect in stimulating the flow of milk.

Now we have got to pin our faith upon clover, alfalfa, and corn silage, but to get the most out of the dairy cows we have got to have something besides these bulky feeds, that is, a concentrated ration. This ration should be richer in protein than corn silage because it is to supplement that feed which has a ration of one to 12. We can raise the concentrated feed on our farms if we want to, probably by growing soy beans, but surely by growing Canada field peas. Mix the peas with oats so that the oat plant will hold up the pea vine to enable you to harvest with a binder. Do not make hay out of them but ripen and thresh them, grind the grain and feed it to the dairy cow. By this plan you can have upon your own farm a complete balanced ration, balanced so far as food is concerned and so far as the bulky part of the ration is concerned. Of course, it rests with the dairy farmer as a business man to find out whether he can raise this mixture of concentrated protein cheaper than he can buy it, or not. It is a question to be determined with a lead pencil and a paper pad. If you can buy gluten feed or cottonseed meal or distillers' grains or any of the numerous by-products which we have in this country, and get your pound of digestible protein cheaper than you can grow it in the field, it is only a business proposition to do it. But we can raise them on our own farms and that is what we have farms for; to raise feed for the dairy cow. It is a question that we ought all to consider carefully.

There is another thing. It is necessary on the dairy farm to have bedding as well as feed. I don't see how you can get along without one crop on the dairy farm which is raised primarily to bed the cows, to make them comfortable and keep them clean. I don't know but you will laugh when I say I can afford to raise wheat, and yet I believe that as a dairy farmer I can afford to grow wheat as one crop in the rotation because I want the straw for bedding. My friends, I have got a seven-year average of 30

bushels of wheat to the acre without plowing for the wheat. We put the corn into the silo, cultivate the ground and sow to wheat. I believe there is profit in growing wheat under that system even in the state of Michigan, and it gives me bedding that I would have to go outside of the farm and pay \$10 or \$12 a ton for. If you raise a large area of peas and oats you can use that straw for bedding. It is, however, almost too valuable for bedding because pea and oat straw, if the peas are harvested just when they ought to be, properly taken care of, is valuable forage for the young growing stock especially. Pea and oat straw makes a valuable forage and you cannot afford, as a business man, to simply use it for bedding. It ought first to be run through the manger! The young stock ought to have a chance to eat practically all of this, as it is rich in protein. We never have been able to raise enough oats and peas to provide us with the necessary bedding, and so we have to put into the rotation a crop of wheat.

LOSS OF BUTTER-FAT IN CHURNING.

We use a small barrel churn but find that a good deal of fat is left in the buttermilk. Would we get a more complete gathering of the butter-fat if we used a larger churn? We have about 25 lbs. of butter-fat a week.

Jackson Co. A. H. P.
If your churn is too small for the amount of cream you churn you cannot get exhaustive churning, neither will the butter come as quickly as in a larger churn. The churning, of course, is brought about by the concussion or the battering of the cream against the wall of the churn. It ought not to be over one-third full in order to have the quick breaking of the globules of butter-fat and exhaustive churning as well. But in exhaustive churning might come from other causes than having the churn too full. If your cream is too cold the probability is that you cannot get exhaustive churning, that is, it takes much longer to churn, and if your cream is too hot you will not get exhaustive churning. In the neighborhood of 60 degrees is about the right temperature in order to get exhaustive churning and then not have the churn too full of cream so as to get proper concussion.

PROLONG THE LACTATION PERIOD AND FEED WELL WHEN COWS ARE DRY.

For many years most of our dairy instructors have taught that the milk of any cow is practically constant, and that it cannot be affected to any extent as to its component parts by the feed consumed. We have shown that the condition of the cow at time of freshening is an all-important factor for consideration. Any man who will unduly shorten the lactation period of his cows in order to force them dry to fatten before freshening may well be considered an enemy of the breed and of the short-time test; while the man who, after an exhaustive lactation period puts his cows into condition for freshening is to be commended. We have largely given up following the teachings of nature. In a natural condition herbivorous animals give birth to their young in the spring at about the time the grass will furnish plentiful sustenance; and it is not so long ago that farmer-dairymen, even in the dairy sections, tried to bring their cows through the winter with the least expenditure for feed. The expression "spring poor" described the condition of the animals.

A fleshy condition was rightly associated with parturient apoplexy or milk fever, and consequently as something to be avoided. It was even taught that to keep the cows in rather a thin condition insured better and stronger calves. Milk fever was indeed a dread disease; its victims were always the best cows in the herd. Were they the best because when dry they had a tendency to take on flesh, and so be better prepared for the next lactation period? I think so. The air treatment has banished the terrors of milk-fever, and has given to the breeders of dairy cattle all the advantages to be derived from properly caring for their cows while dry. If our short-time test has resulted in but the one thing of teaching the importance of having dairy cows in strong, healthy, moderately fleshy condition at freshening, it has added millions to the wealth of the country.

The above are words of M. H. Gardner who has charge of the advanced registry of the Holstein-Friesian association, and who because of his wide observation ought to know whereof he speaks.

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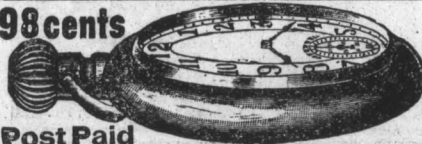
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Poultry and Bees.

IT PAYS TO GROW STRONG PULLETS.

The New York Cornell station has been making a test to determine whether it pays to raise weak pullets. The fowls used were White Leghorns and Barred Plymouth Rocks. Some of the Leghorns were separated into weak and vigorous lots when 10 weeks of age. With better care the weak chickens began to improve, so that in time the pullets were so satisfactorily developed that they would have been retained by most farmers for laying or even for breeding purposes. When the records of production were begun 25 pullets and two males were put in each pen. The strong males were put in the pens with the strong females.

Although the food consumed was, on the average, greater in the strong pens, in all instances the amount of dry matter required to produce a pound of eggs was less for the strong fowls than for the weak. On an average the dry matter consumed per pound of live weight by the strong fowls was 15.71 lbs. against 16.34 lbs. for the weak. Of dry matter required per pound of eggs produced, the strong consumed 4.44 lbs. each, against 4.77 lbs. for the weak. The strong fowls required 8.33 lbs. of food each to produce a dozen eggs, while the weak required 8.95 lbs. each. The average cost of food per dozen eggs was 12 cents for the strong pens and 13.1 cents for the weak pens. The incubation of several hundred eggs per flock showed some advantage in fertility, hatching power, and weight of the chicks in favor of the strong pens.

The following table shows some of the results of the two years work of the station with the original flock and with one year's progeny:

Per hen.	Strong.	Weak.
Value of eggs	\$2.93	\$2.75
Value of gain in weight	.07	.09
Cost of food	1.35	1.32
Cost of loss of stock	.11	.09
Total income	3.00	2.81
Total outgo	1.46	1.41
Balance profit	1.54	1.40

HOT-WEATHER POULTRY WORK.

Keep a close watch on the poultry, both old and young, these warm, sultry days. This is the time when insect pests increase very rapidly, therefore one must be constantly on the alert to be sure that vermin and diseases are not allowed to take possession.

Hens should not be forced to roost in a warm or poorly ventilated house these nights. They are better off in a tree. An open-front poultry house, or even an open shed, is all to the good in summer; but some people make the mistake of permitting the hens to roost in such a place all winter, with the result that when eggs are wanted most they are scarce.

I clean the coops and houses frequently and use whitewash on walls, wherever it is possible to do so. Roosts are removed frequently, and examined. If there are any mites to be found, they are quickly disposed of by the use of kerosene. Sometimes it is advisable to spray the cracks in the floors with kerosene or some solution that will kill all vermin.

The roosts are cleaned and washed frequently. If let alone they become very badly soiled, in time. Don't put high roosts in a poultry house. When heavy fowls fly down from high roosts they are liable to injure their feet, causing the swelling and lameness known as bumble-foot.

Chicks should be encouraged to sit upon roosts. Their roosts should be made of wide scantling or narrow boards and they should be very low, so that the chicks will not have very far to fall in case they lose their footing, as they frequently do. When chicks are well feathered it is time they began to sit on roosts, instead of crowding together in a corner of the coop or house. When the chicks huddle together there are always some that suffer, more or less, during warm weather. Incubator chicks are more inclined to sit in bunches than others. When a large number of small chicks crowd themselves together, some are almost sure to be smothered. Crowding together spoils the plumage and it also retards their growth. A stunted chick is almost worthless for any practical purpose.

Don't neglect to feed the hens during summer. Of course, they can find some food, such as bugs and green stuff, but

they need some grain—not as much as in winter but enough to balance their ration. Some corn or wheat each morning helps to keep the hens in good condition, so that when moulting time comes they can better endure the extra strain on their vitality and thus be prepared to begin laying earlier than they otherwise would. When they begin to molt I begin to feed twice a day regularly. I fill some vessels with skim-milk for them every day, as this helps to make feathers, but remember it will not take the place of water. It saves time as well as labor to have the yards where the fowls can have access to a small brook or shallow trough. If a trough is used it should be so arranged that it can be easily cleaned.

One poultry keeper in a town not far from here, who keeps about a thousand laying hens, has his yards all fitted with shallow concrete troughs supplied with running water from a sort of force pump. His hens are kept housed and yarded summer and winter. Yards are not very large but they are kept as clean as possible and plenty of disinfectants are used both in yards and houses.

The owner sets out thousands of cabbages every year, which are used as green food for his poultry. He also buys a large quantity of cabbage every year, late in the season, for winter. He caters to the fancy trade, shipping eggs to one of the large cities.

Ohio. ANNA W. GALLIGHER.

HOW I DISCOURAGE SWARMING.

There are several conditions upon which the issuing of swarms hinge. The first and most important factor is a present honey flow; another is a multitude of bees. Excessive heat and a crowded hive are also incentives and will hasten the exodus. Now in order to retard, or discourage, swarming we must meet these conditions. The method that I have been practicing is to furnish each colony of bees an extra hive of empty combs. That is, at the approach of swarming time, or a week or two after the section boxes have been placed on top of the hive proper, I slip an extra hive body of empty combs under each hive and close the upper entrance, compelling the bees to take possession of the extra set of combs. This gives a double brood nest for the queen to supply with eggs.

The plan has proven, with me, to be only a partial success. About one-half of the colonies swarm notwithstanding. But nevertheless the plan is a good one, my average yield exceeding any other previously tried method. I might say that the colonies which had no thought of swarming stored the most surplus honey, one colony reaching 180 lbs., but with regard to those which did swarm the swarms were necessarily extra large ones on account of the double brood nest, and of course issued a few weeks later but gave excellent results. When a prime swarm issues, if the colony is strong and circumstances favorable, a second swarm may be expected a week or ten days later. If the queen cannot accompany them the bees will continue the attempt to swarm, sometimes every day, sometimes not so often. But when a young queen emerges, then the old one is disposed of.

It is well understood that if we can keep our colonies working in a normal condition, without swarming, all through the season, the best results will be obtained. This happy state of affairs seems impossible, however. Most bee-keepers want at least some swarms to make up for winter losses, even if they do not care to have a large number. It is a very difficult thing to prevent all swarming, but not so very difficult to prevent each colony from swarming more than once. Swarming can be prevented in a great measure by the free use of the honey extractor, but somehow, even in this case, a colony that has been prevented from carrying out the instincts of nature, although it may do well for a time, soon gets out of balance and thereafter works in a sluggish fashion. The beginner should not strive to more than double his colonies any year. Try to keep all strong. Feeding for winter, except in extremely poor seasons, will not then be needed.

New Jersey.

F. G. HERMAN.

Farmers' Clubs

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

Associational Motto:

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

Associational Sentiment:

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

CLUB DISCUSSIONS.

Discuss Important Topics.—Thursday, June 5, was an unusually busy time among the members of the Burton Farmers' Club. But those who availed themselves, of the opportunity of attending felt themselves very well repaid in the hearty hospitality of our hostess and in the entertaining as well as instructive program. Mr. M. L. Peterson, as chairman pro tem, opened the meeting and all joined in singing "America." Rev. J. P. Cooper, of Owosso, read a portion of Scripture and Rev. Kunsman, of Burton, offered prayer. Mrs. George Rush read several interesting current events of the past month. "Where shall we invest our surplus money, in banks, lands, or home comforts?" Mrs. Hammond very ably handled this broad subject. She has always desired to enjoy the freedom of many broad acres with all the modern conveniences and machinery that they may be well kept. Then she would have all the practical modern conveniences in the home that the home maker may not be worn out. She would have some money in the bank for the many emergencies that come our way. Then she would not forget that "The earth and the fullness thereof belongs to the Lord," and that we owe a tenth of our income to His work. "Is the Farmers' Club of benefit to the surrounding community?" The influence of every good organization, whether the organization be Sunday school, church, Grange or Farmers' Club, is felt in its community. "Are rural sanitary conditions improving?" Most certainly. The farmer is making ditches and putting in tile drains, thus leaving no stagnant water to breed flies, mosquitoes and disease. He is taking better care of his stables and yards. The housewife has learned to take care of the refuse from the kitchen, and with her screened porches and her gasoline or oil stoves, she has almost eliminated the fly from the premises.

The Young People and the Farm.—The Norvell Farmers' Club met at the home of Mr. and Mrs. Arthur Gillite in Sharon, with an attendance of about 25. L. D. Watkins cited some interesting events leading up to the organization of the Club in February 24, 1882. Previous to that time a few feeders of live stock met occasionally in the council rooms of the People's Bank of Manchester, and talked successes and failures and whatever was of interest to them. This continued for some time, then the interest began to decrease. David Rose, state senator at the time, then invited them, with their families, to his house where dinner was served. They were next invited to the home of Mr. Watkins. Soon after this he was requested to write a constitution and by-laws, which he did, and at Mr. Halladay's suggestion the Norvell Farmers' Club was finally organized. The opinion of Mr. Watkins is that no organization aside from churches has been and is of so much benefit to the best classes of people as the Farmers' Clubs. Roll call was well responded to by quotations and Mrs. Pierce gave a recitation and Miss Elma Holmes gave a select reading. The question for discussion, "How shall we keep the young people on the farm?" was opened by Mr. C. P. Holmes. In his remarks he said: "I do not want to keep all the young people on the farm. The city could not be maintained without the pure new blood from the country. When parents do not stay and there is not the love for the farm and country in their hearts, how can it be instilled in the hearts of the children and their children be kept there. The farm home should be made attractive and the many advantages pointed out to the children. As it is necessary at present for the young people to finish their education in the city it is necessary also to have love for farm and country born in the hearts. Mr. Halladay agrees with the leader, not all young people should remain, and he thinks the desire for accumulation is the attraction of the city. Legislation is somewhat to blame for it is more for the consumer than for the producer. Mr. Watkins cannot see any attraction in the city to tempt anyone. Mr. Mount says a farmer cannot be made out of a mechanic and Mr. Gillette feels each must follow his own desires. Mr. Pierce says they should be made their partners and in this way interest created.

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DETROIT, JUNE 28, 1913.

CURRENT COMMENT.

The fiftieth anniversary of the Battle of Gettysburg will be fittingly celebrated on the historic battlefield by the surviving veterans who participated in the conflict, on July 1-2-3. They, and they only, of the present generation of American people are capable of a full appreciation of the decisive event which they are about to celebrate, when so many loyal men of both North and South gave their lives for a principle, and when the fate of the greatest internal conflict which ever shook the structure of a great, modern and progressive nation to its very foundation was practically decided. It is well for the rest of us, who owe such a measure of our present blessings to their noble work, to refresh our memories and supplement our knowledge with regard to that important event.

Historians include the Battle of Gettysburg among the limited number, only about fifteen in all, of decisive battles which have greatly influenced the world's history. It was a long and strenuously fought battle, in which the issue was in doubt until the afternoon of the third day, when some of the attacking Confederate force, after two hours of artillery fire, charged the Union position on the crest of Cemetery Ridge, sweeping up the slope with a division of 15,000 men, a few of whom swarmed over the breastworks. Had they been able to hold their ground, a different chapter would undoubtedly have been written into our history, but the Union lines held steady, the remnant of the attacking division fell back and the southern army was defeated. The sad part of the story lies in the fact that of the 88,000 Union troops engaged, more than one man in four went down, either killed or wounded, while of the Confederate army of 75,000 men, nearly one-third met the same fate.

It is impossible for a layman to appreciate, much less describe, such a battle scene. Only the participants can do it justice. But we can appreciate the beautiful sentiment embodied in this anniversary of the battle, when the surviving participants of both armies will unite in a brotherly and sympathetic celebration of the event, all animosities forgotten, all differences buried with the dead on the historic battlefield.

But it will be a changed battlefield which will be viewed by the survivors on this occasion. Its vast extent of some twenty-five square miles is traversed by well-kept highways by which the visitors may reach the historic spots which were the scenes of the most strenuous conflict, where monuments and tablets mark the sites of interest in this remarkable battlefield. But the spot which would inspire in any visitor the deepest emotion is the quiet, peaceful, yet beautiful national cemetery where lie the thousands of named and nameless dead

who lost their lives in the awful carnage of Gettysburg, but left a heritage of peace and plenty to their posterity. Here stands a great national monument, within a great semi-circle of graves, where Lincoln stood to deliver that immortal speech which will live as long as the English language is spoken, with his closing words engraved upon it.

Well may we, in the celebration of our national holiday, give a thought to this historic battle ground and the brave heroes who are buried there, as well as the surviving veterans who have so lately celebrated the fiftieth anniversary of the conflict of which it was the scene of action.

Celebrating the general educational prop-
"Fourth." aganda for a "safe and
sane" celebration of the

great national holiday, there has been a marked decrease in the number of fatalities reported each year. Nor have the joys of childhood which revolve around this momentous occasion been appreciably diminished. There is still plenty of noise and stir, and still too many accidents which result in more or less serious injuries. While no one would seek to rob Young America of the undoubted pleasures of a Fourth of July celebration, or the patriotic lesson which it holds for them, all should exercise reasonable care in providing the accessories and supervision in their use to reduce the accompanying danger to a minimum. And in all cases where even minor injuries are suffered, the family doctor should be at once consulted in order to minimize the danger from the deadly tetanus or septic infection.

For the older people as well as the children, the modern tendency toward quiet neighborhood celebrations, with perhaps a picnic dinner at some convenient lake, and with a ball game as an added attraction, and possibly a modest display of fireworks in the evening, is one which will make the celebration of the Fourth not only safer and saner, but a source of really greater enjoyment.

The question of currency and banking reform legislation has been given the serious consideration of law makers and statesmen for many years. It was the subject of an exhaustive investigation by the monetary commission established by Congress, which investigation was the basis of the so-called Aldrich plan providing for a single central reserve bank association to be controlled by a committee of bankers, but which plan failed of sufficient endorsement to be made the basis of a currency reform law. While they directly repudiated the Aldrich plan, the democratic leaders have nevertheless conceded the desirability of currency and banking reform legislation and have drafted a new currency reform bill which will be designated the federal reserve act, the details of which have already been made public and which will be formally placed before Congress at an early date.

In place of a single federal reserve bank association this bill provides for the establishment of 15 regional reserve districts, the association of national banks in each district to be known as the federal reserve bank, the minimum capital stock of any of which banks is placed at \$5,000,000. Instead of having these regional banks controlled by a committee of bankers, this new bill provides for central control through a board of nine members, three to be chosen by the banks, three members of the cabinet and three to be appointed by the President and confirmed by the Senate. Under this plan it is proposed to issue federal reserve notes in amount not to exceed \$500,000,000, the issue to be secured by government or state bonds or approved commercial paper. The headquarters of this federal reserve board is to be situated in Washington.

Other changes in the general banking laws proposed by this bill are the giving of authority to country banks to loan money on farm lands and a provision which will permit banks of \$1,000,000 or more capital to establish branch banks in foreign countries. The federal reserve banks will be made national depositories, thus superseding national banks in this respect.

The powers of the board of control are broad, extending to the requiring of one reserve association to loan money to another, thus providing for the making of reserve capital more liquid so that it can be easily diverted to points where needed. The board is also given authority to fix rates of interest on such loans.

The disposition of the earnings of these

regional reserve banks as provided in the bill, is as follows: The shareholders are entitled to receive an annual dividend of five per cent on the paid in capital. One-half of the net earnings is to be placed in a surplus fund until same aggregates 20 per cent of the paid-in capital and the remaining one-half is to be turned into the United States treasury, as are all of the earnings after the above payments are provided for.

This bill thus briefly described represents the ideas of the democratic leaders on needed currency reform legislation. As will be observed from the provisions outlined this would place the reserve banks directly under government control, giving the President broad powers in overcoming the objections which have been made to the central reserve association controlled entirely by bankers. This wide departure from the established order of things in banking circles will doubtless create much opposition to this proposed currency reform legislation, it being contended by some who have already expressed opposition that it would tend to drive the banks and bankers into politics, while others affirm that with the general adoption of the proposed preferential primary vote political manipulations of this kind would be impractical and that under government control of this kind the people could better place the responsibility for the handling of reserve monies.

On the other hand, the more radical element in the dominant party is renewing talk about another investigation of the money trust, so-called, with a view to postponing currency reform legislation during the present session of Congress at least. It is thus probable that this bill, which will be pushed by the administration, will cause much debate in Congress and will be amended in many particulars in the event that it is passed at the present session, which will undoubtedly be greatly prolonged by its consideration. It is, however, a matter of vital public interest, for which reason the above review of the provisions of the tentative administration plan for currency and banking reform is given at this time.

Mailing Parcel
Post Matter.

A subscriber asks for information with regard to the rules for mailing parcel post packages, stating that the rural carrier requires packages to be personally delivered to him, which in the inquirer's case is something of a hardship as he lives a half mile from the route traversed by the rural carrier, whose time schedule over the route varies to an extent which makes it inconvenient to meet this requirement.

Section 10 of the parcel post regulations reads as follows: "Parcels must be mailed at a post office, branch post office, named or lettered station, or such numbered station as may be designated by the postmaster, or delivered to a rural or other carrier duly authorized to receive such matter."

It will thus be seen that in cases of this kind the rural carriers are complying with the regulations prescribed for them. This regulation was doubtless considered necessary on account of the provision requiring that all parcels must be examined, and because of the risk which would accompany the leaving of packages unprotected to be picked up by the rural carrier.

It would appear, however, that this is a provision of the parcel post regulations which might well be modified for the convenience of the patrons of same and of those who do not live on the direct route traversed by the rural carrier, at least to the extent of permitting them to provide a parcel box of approved type in which parcels could be deposited for collection by the carrier, and left by him for the patrons providing and using the box. People so situated would be justified in petitioning the Post Office Department for such a modification of the present parcel post regulations.

KNOWLEDGE MAKES IT SAFE TO
BUY ANYWHERE.

You can purchase with safety anywhere, if you are informed upon merchandise. The article you need may be found in a little store a few miles away; it may be in a big warehouse two thousand miles away. But you should know about it first and know that it is reliable. Just watch the advertisements in the Michigan Farmer.

The United States cruiser Detroit, which at one time was one of the greatest sea fighters of the United States navy, is being converted into a coal carrying barge to be used in coastwise and river trade.

HAPPENINGS OF THE WEEK.

National.

Congressman Doremus, of the first congressional district of Michigan was chosen by the democratic congressional committee as chairman to lead the party in the mid-presidential campaign for 1914.

President Wilson appeared before Congress on Monday for the second time, when he read his message urging immediate action in regard to the financial system of the country, suggesting that currency and banking reforms be acted upon as a necessary corollary to tariff reform.

The sugar schedule is under consideration in the Senate caucus this week and the southern and western democratic senators who are opposed to making sugar free in 1916, as provided by the bill, are using every argument against that particular provision of this schedule.

The capsizing of a boat during a wind storm on the Mississippi river near New Madrid, Mo., resulted in nine United States engineers being drowned, while five others were saved. The 14 engineers were aboard a canal craft to make a preliminary survey of the river north of New Madrid for government improvements, when the accident occurred.

Four unknown persons were drowned in the Missouri river near Parkville, Mo., when the engine in the motor boat in which they were riding went "dead" and allowed the craft to drift upon some piling and capsize.

July 22 has been authorized by the common council of Cleveland as the date for the exercises in honor of the birthday of that city.

Fifty persons were injured, some of them seriously, when a Pennsylvania railroad excursion train was derailed near Sterling station, New York, last Sunday morning.

In a freight wreck near Clinton, Iowa, June 22, seven men were killed and another seriously injured. The freight, speeding down a four-mile grade crashed into a gravel train. Both engines were wrecked and 28 cars were piled up.

Two young boys were drowned in the Whirlpool Rapids, Niagara river, June 22. They had been playing in a flat-bottomed scow anchored to the shore a half mile above the rapids when the rope holding the boat broke and they were carried down the stream and to death.

Joseph Rebore and wife, of Detroit, were killed by an interurban car one and one-half miles east of Dearborn last Sunday afternoon.

The special train carrying veterans of the Civil war to Gettysburg will start for Pennsylvania next Saturday. It is anticipated that a large number of those who took part in the famous battle will attend the reunion to be held there. The Legislature of Michigan appropriated \$20,000 to pay the railroad fares of those going from this state. It was found, however, that this was not sufficient, \$6,000 more being required. However, the railroads have announced that they will trust the state until the Legislature meets and appropriates the balance.

The state Epworth League institute of Michigan and the state ministerial association of the M. E. church will gather at Albion on June 22-29, inclusive, for their annual summer school assembly.

Five indictments have been brought against the Michigan Central Railroad Company by a federal grand jury, charging violation of interstate commerce laws. The indictment alleges that the railroad gave concession to two companies where it failed to observe tariffs and schedules. The maximum penalty, if found guilty on all charges, is \$1,940,000.

Foreign.

Twenty men have been sentenced to death after a trial by court martial at Constantinople for complicity in the recent assassination of the Grand Vizier.

Already 18 nations have accepted the peace plan proposed by Secretary of State Bryan. President Wilson now suggests that representatives from each of the contracting nations be appointed to compose a commission to investigate any controversies between the nations in the compact.

Reports have come from France to the effect that violent rioting has been renewed at Barcelona on account of trouble in Morocco. The contest is between the socialistic and the anarchistic elements. A stormy meeting at Barcelona was followed by a collision between the police and the agitators, when firearms were used and several persons were shot.

Report comes by way of Fairbanks, Alaska, that Hudson Stuck, an Episcopal missionary in Alaska, with four persons, succeeded in reaching the top of the south peak of Mt. McKinley, the highest point on the North American continent. According to their barometer readings the peak is 20,500 feet high.

Lucie Goyou, daughter of the late President of France, died at Paris, Sunday, after a short illness.

ANOTHER PHASE OF THE HUNTING
QUESTION.

Several of your correspondents have recently called attention to the large amount of damage done to the property of farmers by the careless action of many of the hunters. There is yet another phase of the question which is urgently in need of a remedy. Many of the rabbit hunters are also fishers, and when out fishing take their dogs along with them, presumably for exercise. They are allowed to range through the brushwood at will, making the most "hideous shrieks." Now it is evident that game birds that have their nests on the ground must be very much disturbed thereby, and an odd female bird of this class is occasionally found dead near the edge of the brush, perhaps killed in defending her young. Is it a wonder that game birds are becoming scarce?

Gd. Traverse Co.

SUBSCRIBER.

Farm Commerce.

THE BINDING CONTRACT BETWEEN CO-OPERATIVE SOCIETIES AND MEMBERS.

Would you explain through the columns of your paper why it is so necessary for a co-operative selling company to have such rigid contracts with its members, requiring them to dispose of all of their crops through the organization? We find that in many cases private concerns will advance the price above what the co-operative company would pay us. Why should we not be free to take advantage of these prices?

This inquiry describes a condition with which a large majority of the co-operative enterprises have at one time or another been confronted and where many of them have failed. Private concerns are seeking to destroy confidence in the co-operative organization. Temporarily they will advance quotations to a point where the co-operative organization is not able to pay, and by so doing they hope to not only draw the members' products away but to also destroy their faith in the ability of the co-operative enterprise to "make good." If the members prove disloyal and sell their grain to the private concerns there is but one course for the co-operative organization to take, and that is the road to dissolution. When that is accomplished the private concerns will reduce their quotations that they may gain back what was lost in destroying the competing movement.

In the successful conduct of any selling business the superintendent or manager must be able to look ahead and gain a general idea, at least, of the amount of business that will be done. He must know something of the quantity of fruit, or grain, or stock, or of whatever products are being handled, that he will have to sell. Knowing this he can proceed to find the best market and make arrangements with buyers. Now, should there be no binding agreement between the members and the association, and the products which the association expects to sell are easily diverted to private concerns by a little advance in the quotations, the manager can make no promises or arrangements whatever—he is helpless. Whereas if the members are under legal obligation to sell to the co-operative concern, the manager can then plan his selling campaign and make engagements and contracts.

Experience has shown that men who may promise faithfully to deliver their products to the co-operative storage house, or elevator, cannot be relied upon. Again and again this has been tried and only a small percentage have succeeded. Men stirred with the enthusiasm accompanying the organization of a co-operative concern are apt to over-estimate the strength of their moral powers and to make engagements which they do not have the courage to fulfill in time of stress or temptation. Because of this weakness no movement of this nature should expect to become permanently successful unless the members are obligated by stronger evidence than mere word of mouth.

As a result of the many failures to stand loyal to the organization when outside influences are operating to destroy it, the precaution of binding the members to the organization with contracts is now being taken, and these contractual arrangements have proved to be the foundation stone on which the stability of the business is built. These contracts usually provide that in lieu of liquidated damages an assessment be levied against each and every member who breaks the contract. Some elevator associations have framed their agreements with members so the latter may sell their grain to outside concerns, providing the association be paid two per cent or more of the price received. This requirement has been brought into question in some jurisdictions and the courts have held it illegal in that it acts as a restraint of trade. The assessment plan appears, therefore, to be the preferable arrangement. The following clause referring to this matter is taken from the contracts used by the Citrus Fruit Growers' Exchange of California:

"The actual damages which will be sustained by the first party because of the failure or refusal of any of the second parties to pick and deliver his said fruit as herein provided, and the further detriment and injury to the first party because of the effect of said breach upon the (association) and its efficiency, and the expenses to which the

first party will be put, and the damage caused by outlays incurred and to be incurred by it in providing means for selling and marketing the said fruit, are impossible now to estimate or fix, and, therefore, the same are estimated and agreed upon as twenty-five cents (25c) for each box of fruit grown or sold, which sum shall be allowed in any action brought by the first party to recover damages for the breach of this agreement by any of the second parties, should the first party elect, and it may elect, to bring such action."

Thus we see the most successful co-operative association in the country has seen fit to use an iron-clad contract in holding members to patronize the association, which fact together with the observations already noted lead us to the conclusion that such an arrangement is quite necessary if men are going into such an enterprise to improve their marketing conditions.

TO ENCOURAGE THE USE OF MICHIGAN'S SUPERIOR POTATOES.

The Michigan Potato Grading Association has been formed, with L. F. Perket, of Grand Traverse county, as president, and S. D. Lardie, secretary. The association includes in its membership men from the important potato shipping points from Grand Rapids on the south to Petoskey on the north. The association plans to adopt standard grades for potatoes and to arrange an inspection system and to design a label which will be used upon potatoes that come up to the standards. The Michigan potato is of extra quality but has not been duly appreciated in the big markets because occasionally poor stock has become mixed with the good. With the new inspection system in operation the buyer will be sure of a square deal, so that he will be on the watch for potatoes bearing the label of the association.

The methods that this association are to follow in its campaign for improving the market for the better grades of Michigan potatoes, are to be commended. They are based upon the principle of honesty, since it is the desire and purpose of the members of the organization to give to those who buy just what is wanted, and by the use of a registered label it hopes to protect those patrons against any who would use the good name of the society for unloading inferior grades of tubers.

CROP AND MARKET NOTES.

Sanilac Co., June 20.—We have had very dry weather ever since spring opened up. All crops have suffered more or less for the want of moisture. Yesterday and last night light showers came to relieve the situation some. Rather late for most of the hay fields for the clover is coming out in head. Beans about all drilled. Corn all up; some up in time to catch the frosts of June 9-10. Wheat coming out in head rather short, some being plowed up for beans. Sugar beets industry is not very promising, caused by the removal of the tariff. All grain is about the same in price. Hogs and cattle high. Cows have given a good flow of milk; not many flies. Hay market still lifeless.

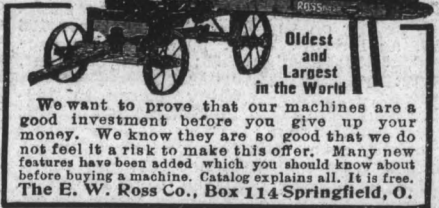
Lapeer Co., June 20.—After two weeks of dry weather the drought was broken yesterday by heavy rains. The oat crop needed it very much and would have been a very light crop. Wheat, pastures, and everything revived. Haying will be ready before July 1. Corn crop away behind time; many are yet planting potatoes and beans. Bottom knocked out of potato prices, but all kinds of grain bring a big price. Ground feed, \$1.60 per cwt. and going up; butter lower, 24c; eggs, 19c.

Newaygo Co., June 20.—Long drought was broken last night by a heavy rain which was welcomed by the farmers in this section, but too late to save the hay crop as most farmers had to cut their hay to save it. The long cold spell and freeze, then hot and dry weather damaged the pastures and hay until hay isn't one-third of a crop. Corn is late and looks bad; potatoes are looking good and this rain will make the early ones. Farmers are busy plowing corn, putting in beans and late potatoes, and haying at the same time. Eggs, 17c; butter, 23c; chickens, 12c; fall rye and wheat look good; oats are poor.

Carroll Co., June 20.—It rained here last night, the first rain here since the first of this month. The grass just seemed to burn up. The hay crop will be very short. The roads were very dusty and everything needed rain. The wheat does not look very good now. The cherries are about all picked. The pastures are very short. Farmers are still holding their wool. Eggs, 17c; butter, 20c.

An attempt is to be made by the Detroit city council to pass an ordinance requiring ice dealers to weigh each cake of ice before delivering it.

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WANT TO BUY Registered Holstein breeding. W. H. H. WERTZ, Wooster, Ohio.

BREEDERS' DIRECTORY.

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Aberdeen-Angus.

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

GUERNSEY BULL CALVES, YORKSHIRE PIGS. Good Stock.

HICKS GUERNSEY FARM, Saginaw, W. S., Mich.

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

I have 2 Reg. Guernsey bulls left. Ready for service, the very best breeding, cheap if taken soon. Guarantee satisfaction. John Ebels, R. 10, Holland, Mich.

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

CHOICE Bull Calves from A. R. O. dams. Sired by our herd sire whose dam and sire's dam each made over 30 lbs. in 7 days. E. R. Cornell, Howell, Mich.

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

HOLSTEIN BULLS—well bred, at reasonable prices. Barred Rock Chickens from 15 years breeding. Good layers eggs 15 for \$1. W. B. Jones, Oak Grove, Mich.

FOR SALE—Two reg. Holstein bull calves, 1 & 7 months old from good A. R. O. dams. Fine individuals. Price reasonable. Floyd F. Jones, R. 3, Oak Grove, Mich.

"Top-Notch" Holsteins. Choice bull calves from 2 to 8 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices. McPHERSON FARMS CO., Howell, Michigan.

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IMPORTANT TO HOLSTEIN BREEDERS.

If there is a breeder or a community of breeders in Michigan in need of one of the greatest BULLS of the GREATEST breed of Dairy cattle in the world, I wish to call your attention to the fact that I am offering FOR SALE, Pledge Duke De Kol Welsch No. 4374. He is a great breeder, a grand individual. Bred right and guaranteed a sure breeder, sound and right in every respect. His dam is Nancy Pledge Princess. Butter in 7 days, 32.39 lbs.; Milk in 7 days, 71.00 lbs.; Butter in 30 days, 132.81 lbs.; Milk in 30 days, 305.70 lbs.; Come and see him and see his heifers, and be convinced of his worth. L. E. CONNELL, Fayette, Ohio.

Bigelow's Holstein Farms Breedsville, Mich. Have for sale several fine young bulls out of cows with high official butter and milk records.

Send for circular.

HOLSTEIN COWS FOR SALE

Bred to a bull that is more than a half brother to the World record cow Benosine Belle De Kol. This is an opportunity for some one to start in Registered stock at a moderate cost.

ED. S. LEWIS, Marshall, Michigan.

THIS HOLSTEIN BULL was sired by best son of PONTIAC BUTTERBOY. Dam has official record of 24 lbs. milk in 7 days, 90 lbs. milk a day. Price \$100. C. D. WOODBURY, Lansing, Mich.

REGISTERED HOLSTEINS. HOBART W. FAY, Mason, Mich. Farm right in the city, only few minutes from Jackson or Lansing. Electric cars from both cities every hour.

HOLSTEIN BULLS. 3 to 8 months old, \$75 to \$300. Don't buy until you get our pedigrees and prices. LONG BEACH FARMS, Augusta, Kalamazoo Co., Mich.

Butter Profits You ought to get more butter profits. Jersey Cattle mean more butter profits, because they yield more butter fat at less net cost of keep than any other breed.

THE JERSEY excels in beauty of dairy type. She is a persistent milkier. Jersey Cattle are easily adapted. They live long and keep healthy. They mean steady butter profits. Write now for Jersey facts. Free for the asking. AMERICAN JERSEY CATTLE CLUB 524 W. 23d St., New York

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

Jerseys—Bulls ready for service, bred for production. Also cows and heifers. Brookwater Farm. R. F. D. No. 7, Ann Arbor, Mich.

FOR SALE—Hope Farm Jersey Bulls, from prize winning stock. GEO. C. BORCK, Grand Haven, Michigan.

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

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

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

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

SHEEP.

IT PAYS TO BUY thoroughbred sheep of PARSONS. The Sheep Man of the East. R. 1, Grand Lodge, Mich. (Write for descriptive price list.) I pay express charges. Oxfords, Shropshires, Rambouillet, Polled Delaine.

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

SHROPSHIRE & DUROCS KOPE-KON FARM, Kinderhook, Michigan.

HOGS.

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

BERKSHIRES Choice spring boars and gilts. stock. ELMHURST STOCK FARM, Almont, Mich.

BERKSHIRE PIGS FOR SALE—With or without mothers. Ternes Stock Farm, 1730 Michigan Ave., Detroit, Mich.

Quick Maturing Berkshires—Best breeding; best type. Satisfaction guaranteed or money refunded. O. S. BARTLETT, Pontiac, Mich.

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

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

O. I. C.'s—A FEW BRED SOWS FOR SEPTEMBER FARROW. GEO. P. ANDREWS, Dansville, Ingham Co., Mich.

O. I. C. SWINE Write me for price on Spring Pigs, pairs and trios, not akin. Have a number of service males of good type. Write me describing your wants. A. J. GORDEN, R. No. 2, Dor, Mich.

THIS O.I.C. SOW WEIGHED 932 LBS. AT 23 MONTHS OLD IONIA GIRL

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

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

O. I. C.'s—Bred sows, March pigs pairs and trios. Buff Rock Eggs \$150 per 15. FRED NICKEL R. 1, Monroe, Michigan.

O. I. C.'s—All ages, growthy and large. Males on young stock. H. H. JUMP, Munith, Mich.

O. I. C.—March pigs ready to ship, the long growthy kind with plenty of bone, at farmers prices. A. NEWMAN, R. 1, Marlette, Mich.

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

DUROC JERSEYS—Fall Gilts bred or open. Spring pigs pairs not akin. F. J. DRODT, R. No. 1, Monroe, Michigan.

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

MALES ALL SOLD BUT ONE—Fancy fall gilts for sale. JOHN McNICOLL, Station A, Bay City, Mich. Route 4, Box 81.

DUROC JERSEY SPRING PIGS of either sex for sale. Pairs not akin, also 2 Reg. Percheron mares, 2 years old, both grays. M. A. BRAY, Okemos, Mich.

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

Butler's Big Bone Poland Chinas

We have a few nice fall boars, also some big sows bred for fall farrow. Our hogs are all cholera proof. J. C. BUTLER, Portland, Michigan.

Big Type Poland China Pigs at close prices. Eggs from big business B.P. Rocks, \$1 per 15. ROBERT NEVE, Pierson, Mich.

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

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

350 BIG TYPE MULE FOOT HOGS—All ages for sale. Prolific and Hardy, also Pories Best breed for Michigan. J. DUNLAP, Box M, Williamsport, Ohio.

LARGE Yorkshires—Choice breeding stock, all ages, not akin, from State Fair prize-winners. Pedigrees furnished. W. C. COOK, R. 42 Box 22, Ada, Mich.

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

FOR SALE—Yorkshire boar pigs, will be ready for fall service. WATERMAN & WATERMAN, Meadowland Farm, Ann Arbor, Michigan.

Lillie Farmstead YORKSHIRES

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

Mention the Michigan Farmer when writing to advertisers.

Markets.

GRAINS AND SEEDS.

Wheat.—The tendency of the wheat market this past week seemed to be toward a lower basis. The trade was dependent almost entirely upon crop conditions and responded to changes throughout the week. Since most of the wheat growing states and provinces were favored with rain the tendency of values was naturally downward. However, on Tuesday futures were advanced a fraction because the rains had not been sufficient over a large portion of the wheat belt to remove the crop from danger. In fact, extensive damage has already been done and unless a considerable more moisture falls and the weather remains cool portions of the territory, particularly in the spring wheat sections, will have scarcely any crop to harvest at all. Conditions, therefore, seem to favor the present basis of values so far as this country is concerned, it demanding the most favorable weather to improve the crop beyond present expectations. European countries report favorable weather and some weakness has developed there because of the improved outlook. On the other hand, the visible supply in Europe is smaller than a year ago and the same is true in this country. Cash wheat is in fair demand, millers in the northwest being heavy buyers on Tuesday. Because of the speculative possibilities in the trade at the present time prices are likely to fluctuate considerably. One year ago the price for No. 2 red wheat on the local market was \$1.12½ per bu. Quotations for the past week are as follows:

	No. 2	No. 1	Red.	White.	July.	Sept.
Thursday	1.05½	1.04½	92	92½		
Friday	1.05	1.04	92	93		
Saturday	1.05	1.04	92	93		
Monday	1.03	1.02	91½	92½		
Tuesday	1.03	1.02	92	92½		
Wednesday	1.03	1.02	91½	92½		

Chicago, (June 24).—No. 2 red wheat, 97c@1; July, 91c; Sept., 90½c; Dec., 93½c per bu.

New York, (June 24).—July wheat, 99½c; Sept., 98c; Dec., \$1 per bu.

Corn.—This deal was unable to stand the pressure of a declining wheat market and the general fall of moisture over the corn states. Generally speaking the crop has been materially improved since a week ago and the prospect is correspondingly brighter for a larger harvest. However, many sections are still in much need of rain and unless it comes soon the crop will not measure up to the normal standard. Quotations have declined a full cent during the week which, however, is only a portion of the advance for the previous week. One year ago No. 3 corn was quoted at 76c per bu. on the local market. Quotations for the past week are:

	No. 3	No. 3	Corn.	Yellow.
Thursday	62	64		
Friday	61½	63½		
Saturday	61½	63½		
Monday	61	63		
Tuesday	61	63		
Wednesday	60½	62½		

Chicago, (June 24).—No. 2 corn, 60¼@60½c; No. 3 yellow, 60@60½c; July, 59½c; Sept., 61½c; Dec., 58½c per bu.

Oats.—This trade also suffered a decline. Not only was marketing affected by the downward trend of wheat and corn, but the rains of the past week came at an opportune time and did much to improve the outlook for the growing crop. On the local market there is only a moderate supply of grain with a good demand. One year ago the price here was 55½c per bu. for standard oats. Quotations for the past week are:

	No. 3	Standard.	White.
Thursday	44	43	
Friday	43½	42½	
Saturday	43½	42½	
Monday	43	42	
Tuesday	43	42	
Wednesday	42½	41½	

Chicago, (June 24).—No. 2 oats, 38½@40c; No. 2 white, 41@41½c; standard, 40½@41½c; July, 40¼c; Sept., 41½c per bu.

Beans.—No change has occurred in the bean deal at this point and the same nominal prices that ruled a week ago were again published by the board Tuesday, they being \$2.05 for prompt and June shipment and \$2.10 for August.

Chicago, (June 24).—Unchanged quotations rule at this point. The market continues steady with very few contracts being made. Pea beans, hand-picked, fancy are quoted at \$2.35 per bu.; choice, \$2.50; prime, \$2.20; red kidneys, \$2; white kidneys, \$2.50 per bu.

Rye.—Last week's conditions continue with the cereal in good demand and offerings small. Cash No. 2 is quoted at 64c per bu. The Chicago price is steady to higher with No. 2 quoted at 61@62c per bu.

Barley.—There is no material change in barley values and prices average about the same, they being but a shade higher in Chicago and lower at Milwaukee. The Chicago range is from 50@66c while at Milwaukee the margin is from 58@66c per bu.

Clover Seed.—All seed values rule lower. Rains and the early maturing of the first crop of June seeding seemingly is encouraging a better crop than was earlier expected. At Toledo prime October is down to \$8.12½ and Dec. \$8.07½ per bu. Alsike has declined, prime Oct. being \$8.75 and Dec. \$8.70 per bu.

Timothy Seed.—Values for this seed at Toledo have advanced over last week's higher figures. Quotations for prime cash are \$2.50; August, \$2.70; Sept., \$2.60 per bushel.

FLOUR AND FEEDS.

Flour.—Jobbing lots in ¼ paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.70; second, \$5.20; straight, \$5; spring patent, \$5.10; rye flour, \$4.60 per bbl.

Feed.—Detroit jobbing prices in 100-lb. sacks are as follows: Bran, \$21; coarse middlings, \$21; fine middlings, \$27; cracked corn, \$25; coarse corn meal, \$22.50; corn and oat chop, \$21 per ton.

Hay.—Reports continue to come in of the poor growth of the new hay crop over widely different sections. Lack of moisture is the chief cause. Old hay trading does not reflect the condition of the new crop as yet, the market being slow and well supplied. Carlots on the track at Detroit are: No. 1 timothy, \$14.50@15; No. 2, \$12@13; light mixed, \$13.50@14; No. 1 mixed, \$12@13 per ton.

Chicago.—There is a better demand for hay, with values averaging about steady. Movement is improving. Choice timothy, \$15@16 per ton; No. 1, \$14.50@15; No. 2, \$12@13; No. 3 and clover mixed, \$8@11; clover, \$8@12; alfalfa, \$14@17.

New York.—Market dull for all except large bales of choice timothy, which are scarce and in demand. Quotations: No. 1 timothy, \$20@21; standard, \$18@19 per ton.

Straw.—Steady. Carlot prices on wheat and oat straw on Detroit market are \$8.50 per ton, rye straw, \$9@10 per ton.

Chicago.—Lower. Rye straw, \$8@9; oat \$6@7; wheat, \$5.50@6 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Whatever change has occurred in the past week has been in the direction of slower demand and lower values. Elgin went off ½c on Monday. The local market continues in fair condition with former prices ruling. Detroit jobbing prices as follows: Fancy creamery, 27½c; firsts, 26c; dairy, 22c; packing stock, 20c per lb.

Elgin.—Market steady at 27½c.

Chicago.—An indifferent demand here is causing a shading of prices. The feeling is easy with holders more disposed to sell than in some weeks. Quotations are: Extra creamery, 27@27½c; extra firsts, 26½@26¾c; firsts, 25½c; seconds, 24½@25c; dairy extras, 26c; firsts, 24c; seconds, 22c; packing stock, 12@21c as to quality.

New York.—Barring packing stock, which shows a little improvement, all grades are ¼c lower with the market reported weak. Quotations: Creamery extras, 27½@27¾c; firsts, 26½@27c; seconds, 25½@26¼c; state dairy, finest, 26½@27c; good to prime, 25@26c; common to fair, 23@24½c; packing, 20@22c as to quality.

Eggs.—Offerings are fully up to requirements but the quality of receipts is weekly becoming more variable. Prices show a loss of ½c since last week. Current offerings, candled, being quoted at 18½c per dozen.

Chicago.—Good northern stock fairly steady; inferior goods weak and hard to move. Prices cover a wide range but average about ½c lower than a week ago. Miscellaneous receipts, cases included, are quoted at 16@17c; do., cases returned, 15½@16½c; ordinary firsts, 16@16½c; firsts, 17¼@17¾c; storage packed, firsts, 18@18½c per dozen.

New York.—Irregular; some grades are quoted higher. Fresh gathered extras, 22½@24c; western gathered, whites, 20@23c per dozen.

Poultry.—The local market is slow under liberal receipts and a demand that is only fair. Broilers and hens quoted lower. Quotations are: Live.—Broilers, 25@26c; hens, 15½@16c; No. 2 hens, 12@13c; old roosters, 11@12c; turkeys, 17@18c; geese, 12@13c; ducks, 15@16c per lb.

Chicago.—Trade slow outside of spring chickens which are active and higher. Quotations on live are: Turkeys, good weight, 15@17c; others, 12c; fowls, good, 14½c; spring chickens, 27c; ducks, 11@12c; geese, 7@9c; guinea hens, \$4 per doz.

Cheese.—Steady. Wholesale lots, Michigan flats, 14¼@14¾c; New York flats, 15¼@16c; brick cream, 14¼@15c; limburger, 14½@15c.

Veal.—Quiet; values unchanged. Fancy 13½@14c; common, 10@11c.

Chicago.—Market quiet and slow with stock being carried over from day to day. Prices generally about 1c lower than last week. Fair to choice, 80@110-lbs., 12@13c; extra fancy stock, 13½c; fair to good chunky, 11@12c.

WOOL.

Boston.—Wool dealers are convinced that a change has come over the American farmer. Instead of being the timid person of the past when he sold out as soon as the market indicated a decline, he now shows resolution, for in the face of lower values that have been ruling lately and a certainty that the tariff will be removed by Congress he stands unflinchingly, refusing to sell his wool holdings because he considers the offers for them too low. As a result manufacturers are already taking note of the fact that the new clip is not moving marketward and there is a little more life coming into the trade by reason of the users of raw wool going out to supply their present needs. Altogether their purchases here amounted to 940,000 lbs. last week as compared with 743,000 lbs. the previous week and 1,915,000 lbs. for the corresponding week a year ago. Medium wools are moving slowly at around 20c in the central states.

FRUITS AND VEGETABLES.

Apples.—Supplies are scarce and values higher. Detroit quotations are: Fancy, \$5@6; ordinary, \$3@4 per bbl.

Raspberries.—Lower. Red, \$4@4.50 per 24-pint case.

Strawberries.—The climax of the southern Michigan harvest is here and present prices are perhaps as low as they will be this season. Locally they are selling at \$3@3.50 per bushel wholesale.

Potatoes.—The market continues to decline and be neglected. Ample supplies. Prices are now lower than they have been at any time this spring. Michigan stock now selling at 20@25c per bushel in car lots.

New York.—Old potatoes neglected and there is no settled price.

Chicago.—This trade is all but gone, the regular quotation for offerings being 15c per bushel. New potatoes are being substituted.

GRAND RAPIDS.

Jobbers are paying the country trade 22c for No. 1 dairy butter and 17c for eggs this week. Live poultry is bringing 13@14c, veal 9@10c. The city market had 300 loads Tuesday morning with strawberries in the best supply so far but still far below normal. Berries brought \$1@2 per crate; cherries, especially sour, will be a very fair crop in this section, and they are beginning to come in, sour selling at \$1.25 and sweets at \$2.25. First gooseberries are bringing \$1.60. In the vegetable line peas are worth \$1.75@2; spinach and asparagus unchanged at 50c. Hay is scarce and sells at \$14@18.

DETROIT RETAIL QUOTATIONS.

Eastern Market.—There was a good market on Tuesday, considering the season. Buyers were plentiful, which made selling active and prices generally satisfactory. Lettuce was retailing at 40¢ per basket; carrots at 20¢ per dozen bunches; beets, 30¢@35¢ per dozen bunches; asparagus, \$1 per dozen. Strawberries of fair quality were offered freely at \$2.25@3 per 24-qt. case. Potatoes, 45¢ per bu. for best grades; green peas \$2 per bu; loose hay \$13@16 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

June 23, 1913.

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

Receipts of stock here today as follows: Cattle, 216 cars; hogs, 100 double decks; sheep and lambs, 32 double decks; calves 1600 head.

With 216 cars of cattle on our market here today, and only 18000 reported in Chicago, while we had the biggest run of the season, the good dry-fed cattle, weighing from 1200 up, quality considered, sold steady with last Monday, except in a few cases where they weighed around 1300 or less. The dry-fed butcher cattle sold from 15@25c per cwt. lower than last week, while grassy stock of all kinds cows, heifers, steers and bulls, sold fully 25@50c lower, and a very slow and draggy trade from start to finish. Fresh cows and springers also sold strong \$5@10 per head lower. At the close, about all desirable grades were cleaned up, but quite a number of grassy and slippery kind unsold.

We quote: Best 1350 to 1500-lb. steers, \$8.75@9; good to prime 1200 to 1300-lb. steers, \$8.50@8.70; good to prime 1100 to 1200-lb. do., \$8.25@8.50; coarse and plain weighty steers, \$7.75@8; good to choice handy steers, \$7.75@8; medium butcher steers, \$7.25@7.50; light common grassy butcher steers, \$6.50@7; best fat cows, \$5.50@6; good butcher cows, \$5@5.25; light butcher cows, \$5@5.25; trimmers, \$4@4.25; best fat heifers, dry-fed, \$7.50@8; medium butcher heifers, \$7.50@7.75; light and common grassy heifers, \$6.50@6.75; stock heifers, \$5.50@6; best feeding steers, dehorned, \$7@7.50; light and common stockers, \$5.75@6.25; prime heavy bulls, \$6.50@7; best butcher bulls, \$6@6.50; bo-logna bulls, \$6@6.50; stock bulls, \$5.50@6; Best milkers and springers, \$6@7; common kind do., \$4@5.50.

Our hog receipts footed up a total of about 100 double decks, same number as we had a week ago, and with but very little outside demand here today, we had to rely on the packers for the outlet, consequently a 5@10c decline from Saturday's best time. About everything in the good line sold at 9c, with a few selected lights and pigs at \$9.05@9.10; roughs, \$7.50@7.75; stags, \$6@7. Trade closed easy, but about everything was sold.

Sheep and lamb market fairly active today; prices about steady with the close of last week; most of the choice handy yearling lambs selling at \$6@6.25; spring lambs, \$7@7.25. Look for about steady prices the balance of the week.

We quote: Choice spring lambs, \$7@7.25; cull to fair do., \$6@6.75; yearling lambs, \$6@6.25; bucks, \$3@3.50; wethers, \$4.75@5; handy ewes, \$4@4.50; heavy ewes, \$3.50@3.60; cull sheep, \$2.50@3.25; veals, choice to extra, \$10@10.50; fair to good, \$7@10; heavy calves, \$4.50@6.

Chicago.

June 23, 1913.

Cattle. Hogs. Sheep. Received today18,000 44,000 10,000 Same day last year..18,396 41,243 18,223 Received last week..53,056 125,879 96,071 Same week last year..52,865 117,858 87,423

The Chicago Live Stock Exchange decided at a special meeting to observe not only the Fourth of July, but also the following day, Saturday, as a close holiday. Accordingly, no live stock will be sold on the two days, and country shippers will act accordingly.

The meager run of cattle today, Mon-

day, is attributable to the bad break in prices last week. There is a fairly active general demand, and prices are stronger, with fat steers a dime higher. Hogs are active at firm prices, sales being at \$8.25@8.80. Hogs marketed last week averaged 240 lbs., compared with 248 lbs. a week earlier, 236 lbs. a year ago, 234 lbs. two years ago and 242 lbs. three years ago. After the smash-up in prices, sheepmen held back supplies, and scarcely 10,000 head arrived today, including shipments consigned to the packers. Prices averaged 25c higher, the tops being \$7.50 for springs, \$7 for fed lambs and \$5 for ewes.

Cattle prices last week rose to the highest levels recorded in a long time, Monday's market being the best, with a moderate supply, following recent light receipts. Later in the week much larger numbers showed up, including many cattle not in full flesh that appeared to be marketed because of burned pastures and lack of water, and prices suffered large reductions. The packers appeared to expect further liquidation on the part of cattle feeders, and they bought sparingly. The bulk of the beef steers sold during the week went at \$8@8.25, although the later sales were below this range, with considerable numbers going as low as \$7.75. The poorest steers brought \$7.25 and the best grade of heavy beefs \$9@9.20, with a good class at \$8.50 and over, while common to prime yearlings found buyers at \$7.75@9. Butchering cows and heifers had a good demand, as usual, selling at \$5.15@9, the top figure being obtained for 54 head of Hereford heifers averaging 320 lbs. They were in a class by themselves, and were fed in this state by an expert in the line of baby beef making. The next price for heifers was \$8.75, while cutters sold at \$4.65@5.10, canners at \$3.50@4.60 and bulls at \$5.25@7.75, with a few prime little yearling bulls at \$8. The stocker and feeder trade was fairly animated at marked reductions in prices as the week advanced, the former going at \$6.25@8 and feeders carrying considerable weight bringing \$7@8. Dried-up pastures in various sections are responsible for numerous marketings of these cattle. The greater part of the stock cows and heifers went at \$5.50@7, and stock calves brought \$7.50@8. The calf market was materially lower, with a restricted demand at \$5@9.25, early sales taking place as high as \$10.25 for prime, light vealers. Milkers and springers had a moderate sale on the basis of \$50@100 per head, the greater part bringing \$60@70. Backward springers of the best class had a fair country demand. The general cattle market closed 25c lower than a week ago, with the poorer to good stockers and feeders showing a decline of 25c and upward.

Hogs suffered several breaks in prices last week, following the previous boom, with some rallies. The receipts were not at all excessive, and every hog was needed, with eastern shippers good buyers on some days. Losses from the intensely hot weather were extraordinarily large, more dead hogs being removed from arriving cars on Monday than ever before. The early sharp declines in prices caused numerous stock feeders to delay marketing their hogs, and this was a great help in bringing about a check to the weakness. The lighter and medium butcher weights were the best sellers, and heavy packing hogs sold lowest, as usual. Stockmen are putting more flesh on their hogs as a general rule than in recent years, being encouraged to do so by the high prices prevailing, but those who got their matured hogs marketed before the recent hot wave made no mistake. Eastern packers are getting a good many hogs from their home territory, and this tends to lessen their operations in the Chicago hog market. Provisions are accumulating in leading western packing centers, the aggregate gain for May being 20,698,000 lbs., but the holdings on June 1 were only 247,767,000 lbs., against 320,173,000 lbs. a year earlier. Early large hog receipts were followed by much smaller offerings, and the week's supplies fell off materially because of the decline in prices. Saturday's sales ranged at \$8.15@8.45 for heavy packing hogs and at \$8.50@8.75 for the better class of hogs, with one sale at \$8.80. The top a week earlier was \$9. Pigs closed at \$6.80@8.50 and stags at \$8.70@9.10.

Sheep and lambs furnish much the most sensational fluctuations in prices of the several live stock markets, last week starting off with a plump drop of half a dollar per 100 lbs. in fed lambs of last year, as well as in spring lambs, the very best class of each included. Further sharp breaks in prices for everything in the sheep and lamb lines took place, and it was on the whole the worst week experienced by sellers in a long time. This was due to greatly increased receipts here and at other western and eastern markets, with spring lambs showing up in liberal numbers, including heavy supplies shipped from Louisville direct to Chicago packing plants. The week closed \$1.25@1.50 per 100 lbs. lower for spring lambs than a week earlier, with other live mutons off \$1@1.50. Springs sold at \$5.50@7.50; fed lambs at \$4.35@6.75; yearlings at \$5.50@6.35; wethers at \$4.50@5.50; ewes at \$2@4.60 and bucks at \$3.25@3.75. Feeder lambs were wanted at \$4.75@5.50. Prospects look poor for the near future, unless receipts fall off a good deal.

Horses were in restricted general demand last week, with medium-priced drafters most frequently called for, and prices were weak for the poorer animals. After Tuesday out-of-town buyers were few, and speculators did a large share of the buying, mostly at lower values. The cheaper horses sold on the basis of \$85@100 per head, with the best heavy drafters quoted at \$300@350. Good to choice draft horses sold around \$235@295, and little chunks went as low as \$185. Drivers were worth \$125@200.

THIS IS THE FIRST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

June 19, 1913.

Cattle.

Receipts, 1625. Good dry-fed steady; all grassers 25¢@50c lower.

We quote: Extra dry-fed steers and heifers, \$8.25@8.60; steers and heifers, 1060 to 1200, \$7.75@8.15; do. 800 to 1000, \$7@8; grass steers and heifers that are fat, 800 to 1000, \$6@7.25; do. 500 to 700, \$5@5.75; choice fat cows, \$6.50@7; good do., \$5.50@6; common cows, \$5@5.25; canners, \$3.75@4.25; choice heavy bulls, \$6.50@7; fair to good bolognas, bulls, \$5.75@6.25; stock bulls, \$5@5.50; choice feeding steers, 800 to 1000, \$7@7.50; fair do., 800 to 1000, \$6@6.75; choice stockers, 500 to 700, \$6@7; fair do., 500 to 700, \$5.50@6; stock heifers, \$5@5.50; milkers, large, young, medium age, \$55@75; common do. \$35@50.

Roe Com. Co. sold Sullivan P. Co. 2 cows av 1150 at \$6.50; to Breitenbeck 14 steers av 1030 at \$8.60; to Sullivan P. Co. 3 do av 757 at \$4.25; to Sullivan P. Co. 3 bulls av 927 at \$6.40; butchers av 890 at \$6.30; canners av 897 at \$4.50; to Allington 12 stockers av 425 at \$6.25; to Wyness 3 cows av 1013 at \$5.85; to Kamman B. Co. 13 steers av 1004 at \$8.10; 6 cows and bulls av 910 at \$5.85; 2 steers av 850 at \$7.50; to Hammond, S. & Co. 1 cow weighing 980 at \$5.25, 2 do av 1065 at \$5.75, 1 bull weighing 770 at \$6; to Thompson Bros. 2 cows av 815 at \$4.35.

Bresnahan sold Gerisch Market Co. 21 steers av 1250 at \$8.60.

Bishop, B. & H. sold Bresnahan 21 steers av 1250 at \$8.50; to Sullivan P. Co. 3 do av 970 at \$7.20; cows av 760 at \$4.50, 5 do av 1070 at \$6.50, 4 steers av \$65 at \$7.75, 14 cows av 1037 at \$6.10, 1 bull weighing 1100 at \$6.75, 1 do weighing 900 at \$6.25, 2 cows av 1155 at \$7.10, 1 bull weighing 1050 at \$6.50; to Davenport 11 stockers av 535 at \$6.11; do av 727 at \$6.25, 1 bull weighing 540 at \$6; to Newton B. Co. 33 steers av 1030 at \$8.25, 1 cow weighing 1250 at \$7.20, 5 do av 830 at \$5.50, 2 do av 970 at \$5.50, 5 do av 1118 at \$6.25, 6 steers av 905 at \$7.25, 12 do av 1045 at \$8.40, 4 do av 847 at \$7.50, 1 cow weighing 830 at \$5.50, 2 do av 1010 at \$6.50, 6 do av 890 at \$5.70; heifers av 600 at \$6.16; steers av 1275 at \$8.50; to Underhill 14 feeders av 805 at \$7.50; to Parker, W. & Co. 21 steers av 871 at \$7.50; to Bresnahan 8 cows av 910 at \$5.10, 11 stockers av 713 at \$6.65; to Breitenbeck 4 steers av 1070 at \$7.65, 11 cows av 943 at \$5.85, 20 butchers av 935 at \$7.75; to Mich. B. Co. 7 do av 644 at \$6.40, 4 cows av 947 at \$5.25, 4 butchers av 795 at \$7.10, 1 cow weighing 910 at \$5.50, 3 do av 1013 at \$6.50.

Spicer & R. sold Kull 22 steers av 887 at \$8.50; to Snow 14 stockers av 553 at \$6.75; to Mich. B. Co. 1 cow weighing 950 at \$5.75, 1 bull weighing 1010 at \$6.50, 1 do weighing 1000 at \$6.50; to Sullivan P. Co. 6 butchers av 861 at \$7.25, 3 do av 970 at \$6.25, 1 cow weighing 760 at \$4.50, 20 steers av 983 at \$8.50, 20 do av 995 at \$8.35; to Kull 2 cows av 960 at \$5.50, 2 heifers av 680 at \$6.75; to Newton B. Co. 9 steers av 1103 at \$8.20, 20 do av 1002 at \$8.35, 20 do av 1057 at \$8.50; to Sullivan P. Co. 4 cows av 915 at \$5.50, 2 do av 1160 at \$5.30, 3 do av 1066 at \$6.40; butchers av 800 at \$7.20, 2 cows av 1250 at \$6.75; to Hammond, S. & Co. 15 butchers av 835 at \$7.25, 1 cow weighing 1100 at \$6.50, 2 bulls av 775 at \$6.10, 1 do weighing 1730 at \$7.40, 4 do av 1002 at \$6.50, 3 butchers av 757 at \$6.50, 5 do av 736 at \$6.50, 5 canners av 856 at \$4.50; to Mason B. Co. 3 steers av 1110 at \$8.25.

Haley & M. sold Newton B. Co. 8 cows av 1025 at \$6.50, 10 steers av 1152 at \$8.10; to Sullivan P. Co. 2 bulls av 875 at \$6.60, 2 cows av 855 at \$5.25; to Newton B. Co. 3 steers av 800 at \$7; to Underhill 4 feeders av 755 at \$7.35, 1 do weighing 750 at \$7.25; to Sullivan P. Co. 2 bulls av 1105 at \$6.75, 2 do av 865 at \$5.25, 6 cows av 1016 at \$6.25; to Bresnahan 5 heifers av 540 at \$6; to Snow 4 stockers av 600 at \$6.75; to Mich. B. Co. 4 cows av 950 at \$6.10, 4 heifers av 760 at \$7.80, 5 cows av 912 at \$6.30, 3 steers av 903 at \$7.50; to Snow 11 stockers av 493 at \$5.90, 9 do av 480 at \$6.20; to Mich. B. Co. 3 steers av 920 at \$7.50, 2 do av 965 at \$7.50, 6 butchers av 808 at \$6.10, 5 do av 882 at \$6; to Rattkowsky 5 cows av 1004 at \$6.10; to Sullivan P. Co. 1 bull weighing 1430 at \$6.60; to Lowenstein 11 stockers av 516 at \$6.30, 11 do av 553 at \$6.25; to Applebaum 7 cows av 731 at \$5.85.

Sandall sold Mich. B. Co. 1 bull weighing 1200 at \$6.75.

Young sold same 1 do weighing 1550 at \$6.50, 2 cows av 1035 at \$5.30, 3 steers av 800 at \$7.

Johnson sold Bresnahan 6 cows av 780 at \$4.25, 11 heifers av 645 at \$6.30.

Sandall sold Newton B. Co. 7 butchers av 736 at \$6.25.

Wills sold same 9 butchers av 727 at \$7.20, 2 canners av 680 at \$3.50, 10 butchers av 554 at \$5.25.

Allington sold Jackson 40 stockers av 570 at \$6.50, 4 cows av 912 at \$5.75.

Sandall sold Weeks 15 stockers av 572 at \$6.25.

Veal Calves.

Receipts, 1171. Market steady. Best, \$10@10.50; others, \$7@9.50.

Bishop, B. & H. sold Parker, W. & Co.

Co. 5 av 145 at \$10.10, 1 weighing 190 at \$10.50, 5 av 160 at \$10.50, 8 av 130 at \$9.50; to Kull 10 av 177 at \$9.85; to Goose 4 av 160 at \$10.50; to Hammond, S. & Co. 12 av 155 at \$10.25, 2 av 160 at \$10.25, 2 av 145 at \$10.25; to Parker, W. & Co. 12 av 140 at \$10.25, 2 av 145 at \$10.25; to Sullivan P. Co. 17 av 120 at \$10.25, 9 av 140 at \$9.50, 20 av 145 at \$10.25, 2 av 185 at \$10.50, 2 av 125 at \$9.10, 1 weighing 110 at \$9.

Roe Com. Co. sold Rattkowsky 1 weighing 170 at \$9.30, 3 av 250 at \$7.50, 5 av 125 at \$9.30, 3 av 120 at \$9.50; to Thompson Bros. 5 av 160 at \$7.12, 12 av 150 at \$9.25; to Hammond, S. & Co. 2 av 135 at \$8.11, 160 at \$10.34, 150 at \$10; to Rattkowsky 1 weighing 170 at \$8.

Wills sold Newton B. Co. 15 av 150 at \$10.60, 6 av 125 at \$7.50.

Weeks Bros. sold Applebaum 19 av 135 at \$9.65.

Sandall sold Parker, W. & Co. 20 av 140 at \$9.25.

Spicer & R. sold Goose 10 av 150 at \$10.25; to Applebaum 3 av 120 at \$9.10, 1 weighing 240 at \$7.30, 3 av 130 at \$9.75; to Goose 9 av 140 at \$9.25; to Hammond, S. & Co. 1 weighing 350 at \$7.20, 2 av 150 at \$8.50, 4 av 200 at \$10.50.

Haley & M. sold Parker, W. & Co. 9 av 160 at \$10.25, 10 av 178 at \$10.30, 170 at \$10; to Mich. B. Co. 22 av 160 at \$10.30, 3 av 180 at \$10; to Applebaum 2 av 145 at \$9.10, 1 weighing 160 at \$10.50; to J. Goose 12 av 145 at \$10.50, 5 av 160 at \$8; to D. Goose 5 av 155 at \$9.14, 160 at \$10.25.

Sheep and Lambs.

Receipts, 1993. Market 50¢@75c lower than last Thursday. Best spring lambs, \$7.50@8; fair to good lambs, \$6@6.50; light to common lambs, \$5@6; yearlings, \$6@6.50; fair to good sheep, \$4@4.25; culls and common, \$2.50@3.

Roe Com. Co. sold Rattkowsky 2 sheep av 100 at \$4; to Barlage 6 spring lambs av 60 at \$8.60, 6 sheep av 115 at \$4.30, 3 do 125 at \$4.50, 5 spring lambs av 55 at \$8.19, 19 sheep av 100 at \$4.50, 5 spring lambs av 54 at \$8.70, 7 sheep av 90 at \$3.50.

Bishop, B. & H. sold Sullivan P. Co. 44 sheep av 85 at \$4.75, 7 spring lambs av 60 at \$8.25, 4 do av 62 at \$8.50, 5 do av 63 at \$7.50, 38 yearlings av 85 at \$6.50, 5 lambs av 58 at \$4; to Parker, W. & Co. 4 sheep av 130 at \$4.50, 27 yearlings av 85 at \$6.50; to Davenport 12 sheep av 110 at \$4.25, 14 do av 115 at \$4.50; to Kull 6 yearlings av 90 at \$7.80, 8 do av 80 at \$6.50; to Davenport 11 sheep av 100 at \$4.25; to Barlage 14 do av 90 at \$2.50; to Mich. B. Co. 32 do av 105 at \$4.35, 20 do av 100 at \$4.25, 9 spring lambs av 50 at \$7.10, 9 do av 55 at \$7.10, 14 sheep av 110 at \$4.35; to Barlage 18 do av 85 at \$4.18, 18 spring lambs av 50 at \$7.25, 12 sheep av 68 at \$4.

Haley & M. sold Mich. B. Co. 13 spring lambs av 55 at \$7.50, 24 sheep av 110 at \$4.25, 4 do av 120 at \$4.12, 12 lambs av 62 at \$7.50, 19 spring lambs av 70 at \$8.

Sandall sold Mich. B. Co. 36 sheep av 100 at \$4.35, 20 lambs av 60 at \$7.75.

Hogs.

Receipts, 4952. None sold up to noon; packers bidding \$8.60, sellers holding for 5c more.

Bishop, B. & H. sold Hammond, S. & Co. 2700 av 180 at \$8.65.

Roe Com. Co. sold Sullivan P. Co. 530 av 200 at \$8.65.

Haley & M. sold Parker, W. & Co. 580 av 175 at \$8.65.

Spicer & R. sold same 440 av 185 at \$8.65.

Friday's Market.

June 20, 1913.

Cattle.

Receipts this week, 1904; last week, 1387; market dull at Thursday's prices.

We quote: Best dry-fed steers and heifers, \$8@8.50; steers and heifers, 1000 to 1200, \$8@8.50; do. 800 to 1000, \$7.75@8; grass steers and heifers that are fat, 800 to 1000, \$7.25@7.75; do. 500 to 700, \$5.75@7; choice fat cows, \$6.25@6.50; good do., \$5.50@6; common cows, \$5@5.25; canners, \$3.50@4.25; choice heavy bulls, \$6.75@7; fair to good bologna bulls, \$6.25@6.50; stock bulls, \$5@6; choice feeding steers, 800 to 1000, \$7@7.25; fair do., 800 to 1000, \$6.75@7; choice stockers, 500 to 700, \$6.25@6.90; fair do., 500 to 700, \$6@6.25; stock heifers, \$5@5.75; milkers, large, young, medium age, \$60@75; common do., \$35@50.

Veal Calves.

Receipts this week, 1297; last week, 1128. Market slow at Thursday's prices. Best, \$10@10.25; others, \$7@9.50.

Sheep and Lambs.

Receipts this week, 2374; last week, 2616. Market dull at Thursday's prices. Best spring lambs, \$7.50@8; fair do., \$5.50@6.50; light to common lambs, \$4.50@5; yearlings, \$5.50@6.50; fair to good sheep, \$3.75@4.25; culls and common, \$2.25@3.

Hogs.

Receipts this week, 6170; last week, 6265; market 10c higher. Range of prices: Light to good butchers, \$8.75; pigs, \$8.75; mixed, \$8.70@8.75; stags one-third off.

There is a growing demand in the Chicago market for grazing flocks of lambs to ship to Michigan, and in a number of instances intending buyers of feeding cattle who arrived in that city changed their minds on account of the dearthness of cattle of the feeder class and substituted lambs, prices ranging from \$5@5.50 per 100 lbs. Thus far, however, lambs of this class have not been offered particularly freely.

Potatoes of the crop of 1912 have been sold in the Chicago market quite recently as low as 16¢ cents per bushel. They were white Burbanks grown in Minnesota, and the same kind of potatoes brought from \$1 to \$1.25 a bushel a year ago. New potatoes sold on the Chicago market recently for 80 to 90 cents a bushel. The 1912 crop of potatoes was the largest ever raised in the United States, aggregating 421,000,000 bushels, and it is said that farmers who have supplies still left are going to feed them.

Veterinary.

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

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

Bruised Brisket.—My Durham cow came fresh May 2, had milk fever next day; applied air treatment, had her on foot 1½ hours later, then she seemed all right. Now she has a large bunch on breast which is not very soft and I would like to know what to apply. A. N. S., Lake Odessa, Mich.—If the swelling fluctuates on pressure, open it up freely to allow effusion to escape, then inject one part tincture iodine and eight parts water once a day. This swelling is no doubt the result of a bruise.

Indigestion.—I have a calf two months old that was doing fine until a few days ago when his appetite failed him and he commenced to breathe fast. His eyes are dull, coat rough and I might say I have been feeding him skim-milk which is sometimes sour. J. D. Q., Carsonville, Mich.—Give your calf 20 grs. salicylic acid and a teaspoonful of bicarbonate soda with each feed of skim-milk three or four times a day; but, first of all, give 2 or 3 ozs. of sulphate of magnesia as a drench to clean out the stomach and bowels.

Feeding too Much Corn.—I have a sow with eight pigs six weeks old, four black and four white ones. When they were three weeks old the white ones began to drop their backs down and squeal, but the black ones are well. They all eat heartily, seem to grow rapidly, and I am feeding them corn, but they fail to drink as much as I think they should. A. G. V. H., Nirvana, Mich.—Feed them ground oats, instead of corn and add a little baking soda and ginger to their food supply and they will soon get all right.

Nervousness—Cracked Heels.—I have a 12-year-old mare that is extremely nervous, more so than usual when in heat. Is inclined to urinate every time she hears water running, and she seems to come in heat too frequently. She is well bred, but does not lay on flesh. Would breeding her overcome this trouble and breeding her overcome this trouble and

make her less nervous? This same mare is troubled with cracked heels. R. G. B., Coloma, Mich.—Either breed your mare or have her spayed. Apply one part oxide of zinc and three parts vaseline to sore heels twice a day.

Eczema.—Our local Vet. tells me that my mare has eczema which causes her to scratch and bite herself. The little pimples on body never suppurate. L. D., Bangor, Mich.—Give your mare a desertspoonful of Donovan's solution at a dose in feed three times a day. Grain and grass is the best food for her; also dissolve ¼ lb. borate of soda and 2 ozs. of carbolic acid in a gallon of water and wet itchy parts of body once or twice a day.

Bacterial Infection.—I have a colt three weeks old which appeared to be normal for a few days after birth, but had rather large joints, especially hocks. This colt did not seem to gain, appears dull, rather languid and disinclined to remain standing. Most of the trouble appears to be in hock, stiffler and back. The mare has not worked since she foaled. L. C. K., Stanton, Mich.—This colt was perhaps infected at birth or very soon afterwards and the infection perhaps carried into body through navel cord. Apply one part iodine and 30 parts fresh lard to swollen joints three times a week. Give it 3 drs. of salol, 2 grs. of quinine and one one hundred and twentieth of a grain of strychnine at a dose four times a day. The mare should be well fed and the colt kept out on pasture, except during storms.

Indigestion—Flatulent Colic.—I have a horse that has been in an unthrifty condition all this year, and day before yesterday he had an attack of acute indigestion and colic. I gave him salts, soda and ginger; I also gave him linseed oil and turpentine. He seemed to recover, but took sick the day following. I would like to know what to do with him. F. W. C., Caro, Mich.—Give your horse ½ oz. fluid extract gentian, ½ oz. fluid extract ginger and ½ oz. Fowler's solution at a dose in feed two or three times a day. Change his feed and exercise him daily.

Tumor on Brisket.—I have a mare that has a growth between fore legs and another situated between fifth and sixth rib. This mare has been pulling snags and I would like to have her cured. J. M., Omena, Mich.—The bunch on brisket should be cut off, then apply one part iodoform and 15 parts boracic acid to sores two or three times a day.

Chronic Cough.—Nearly all my cows, also some of my young cattle commenced to cough last winter and have kept it up ever since. I am puzzled to know what caused it or how to control it. J. W. K., Erie, Mich.—Mix together equal parts powdered licorice, powdered nitrate of potash, ground ginger and muriate ammonia and give a tablespoonful at a dose breeding her overcome this trouble and

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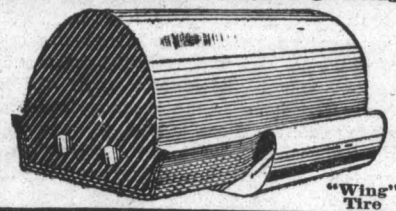
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Home and Youth

CULTIVATING CORN.

BY CHARLES H. MEIERS.

There was something strangely pleasing About cultivating corn As the farmers used to do it Round the place where I was born. I remember that we started Soon as we could "see the rows," And the corn-hills that we covered We would dig out with bare toes.

With the lines across one shoulder, Or held up by sturdy hips, We would walk between the handles While we executed dips In between the hills, then outward; And whenever we missed a weed We would stoop or stop to pull it, That it might not go to seed.

Sometimes we would guide the shovels Past a corn-hill with one hip While we placed a gentle pressure On one line, to guide "old Jip." But ere long the team would follow That green row of corn it saw, Heeding faithfully our wishes When we called out, "Geel!" or "Haw!"

Now I see the farmers riding While they cultivate; and they Raise as much corn to the acre As the best men of my day. So I know that this means progress; And I'm thankful, too, God knows; Still, I'd like to just uncover One more corn-hill with my toes.

THE RUNAWAY BOY.

BY EMMA P. SEABURY.

Tom lay under the great spreading maple, reading intently. The horse, hitched to the cultivator, was turned so he could munch the lush grass, and the cultivator was not cultivating.

His father came upon the scene and, regarding him a moment with strong disapproval, burst out in angry invective: "You lazy, good for nothing boy, what are you doing here? You can get out of this as soon as you like. If you won't work, you can't eat. I am tired of coaxing, and scolding, and driving."

"But, Father, Minnie just brought the mail, and I was looking over the new school books. It is so hot, and my head aches!"

"Yes, always some excuse," he said in a mollified tone. Secretly he was proud that his children led all others at school. "I am not so sure that you will go to school this winter, unless you do very differently from what you have, so far. Nobody would ever have made me believe that a son of mine could be a shirk, and tell me a lie." He glanced at the books doubtfully.

Tom sprang to his feet, and his eyes flashed anger and defiance. "I never lied to you in my life, sir. You will live to rue the day you ever dared to speak to me as you have, as if I were a dog or a slave."

He flung the books on the grass, fastened the traces, turned the horse around and strode after it, leaving his father more amazed at this hot rebellion than anything that had ever happened in all his experience. He smiled at the spirit of the boy, and was secretly proud of it.

The warm afternoon sun filtered through the trees, the insects droned, an oriole flashed from a bough, the wind lifted the branches lightly; it was an afternoon for somnolence and not for labor, he knew. He picked up the books and satisfied himself they were not dime novels, then walked away with a troubled look.

Tom was not like his other children; he loved to dream, rather than to work, to lie under the trees with a book better than the arduous toil of the farm. But he remembered that when the carriage barn had been struck by lightning it was Tom who saved the horses and carriages, and not his faithful Edward.

He quarreled with all family traditions; he was an alien to the soil. If he had understood, he would have said, "He is a poet and a dreamer and he shall have his chance to develop where he belongs." But he was an old-fashioned father; and he did not understand.

Tom's heart was hot within him. He was always warring with his father and his autocracy against his strong individuality. He rebelled against his injustice, and never more bitterly than this afternoon. He resolved he would stand it no longer. He would run away, and make his fortune. He would go that very night, he knew not where; he would go, he knew not what he could do, but go he would, somewhere, anywhere, to free himself from this hateful yoke. He called

himself a serf and a slave, and he grew hotter and hotter the more he brooded over his fettered soul.

When he went to the house at sundown it seemed to him the place had never seemed so beautiful. Much of his own love of beauty had been inherited from his father, who had come as a pioneer, many years ago, and cleared the land, prospered by hard work, and had made his broad acres like a garden, and beautiful with trees, vines, and flowers. It was a fine old-fashioned homestead, and Tom was proud of its plenty and its hospitality, and he knew that even love was not withheld from it and the group of brothers and sisters.

The good supper had never tasted so good. The moonlight was never so bewitching. He adored his gentle mother, and when she put her arm around him and said, "I am afraid you are too tired my dear," he longed to tell her his resolve. This was his last evening at home, and with her, and he could not speak.

Farm life forty years ago was very different from that of today. But there were plenty of books, and leisure to enjoy them, and home life and quiet.

Tom went to his room after supper and packed up a bundle in an old carpet-bag satchel he found in the garret. It seemed very hard to leave his keepsakes and books behind, and even his best clothes, but it must be done.

When no one was looking he carried it down and hid it under the bed in the parlor bedroom. Every parlor had a bedroom, those days, and was a place sacred to company, and only opened for visitors. It was safe there—unless, and his heart beat fast, unexpected visitors came, which was not unusual. But he risked it.

He was silent and preoccupied. He watched all the goings and comings, as he lay in the hammock. When they saw him again he would be a man, perhaps a rich man, come home to help father and mother, in their old age. But tears came to his eyes now and then. Would he look like the tramps who came to his father's house?

He had a few dollars; he did not know what he could do to earn more. But his

THE CRUELTY OF POISONING.

BY HATTIE WASHBURN.

A little stream meandered across a pasture, murmuring softly and stealing shyly from pool to pool along its course, while on its banks the marks of high water showed that but recently the modest rivulet had been a raging torrent. Just below a footbridge that spanned the stream a pool had been formed by the force of rushing water. Above it graceful willows leaned, and in the shallow pool, sparingly fed by the diminished stream, floated the lifeless form of a grackle, with wings outspread.

Well might one fancy him a suicidal bird who, with the fortitude of despair, had drowned himself in water so shallow that by standing upright he could have held his glossy head safely above the surface. But in a nearby grove what once had been a happy bird home, with loving mate and helpless fledglings in the nest, belied all reason for a suicidal death, did birds willfully destroy themselves. And in a nearby field lay strewn the damning evidence of the wanton cruelty of the grackle's untimely death. Many other birds, with homes in the vicinity of the corn field where the poisoned grain was strewn, had shared the grackle's fate. He alone had reached the crystal pool and, vainly trying to slake an anguishing thirst, had died in that romantic spot beneath the screening willows.

The great inroads gophers often make in newly planted corn fields may justify the farmer in resorting to desperate measures, but he can never be justified in strewing poison where birds may get it. There may be a question of the justice of killing, by that most cruel method, innocent creatures which but follow the characteristic food habits of their kind, however harmful to human interests those habits may be, but we will waive that question. Surely the most humane method of protecting the corn fields is that of strewing food along the margins to feed the rodents until they are surfeited, but when the fields are large this is impractical and often impossible. The gun and the snare, when there is someone with time to use them, are most effective, as then only the offenders suffer.

Though few farmers may realize it, they can never afford to sacrifice the life of an insect-eating bird on the chance of destroying harmful rodents. Millions of

father needed the lesson, and he would go. When he kissed his mother goodnight he squeezed her, swung her around, and kissed her again.

"Are you not feeling well, Tom?" she asked anxiously.

"All right," he shouted half way up the stairs. He could not trust himself to say any more. He knew he should break down. He did hate to leave his mother. He was her baby, and her pet, and he got the very best of everything. She loved and understood him.

He had made up his mind not to sleep a wink, and to slip out as soon as the house was still. He shared the room with Ned, and Ned was safe, but it was next to his mother's room, and what if she should wake and beg him to stay.

He was troubled by many misgivings, haunted by many fears, for he was a nervous, timid boy. His heart was sore; he was outraged by injustice. The hot tears coursed down his cheeks at his utter loneliness and the thought of being adrift in the world tomorrow. He was most desolate and unhappy.

The first thing he knew the sun was streaming in at his window. His father was by the bed saying, "Come boys, time to get up! Get the chores done quickly and I think we will go to town to the circus this afternoon. I guess the sun was too hot for you, Tom; you have been moaning and talking in your sleep all night. Get braced up ready for school next month. The circus will settle all scores for us Tom, won't it?"

He went out of the room chuckling, and Tom sat up in bed, astonished, dazed, sorry, glad, happy, shamefaced. He stole out while they were at breakfast and carried up the satchel, dumping the contents into his old oak chest, and hiding it in the garret again. And not until he was a man did he tell how he had planned to run away, and slept all night, forgetting his troubles.

He decided, then and there, that it was better to go to the circus, and live at home, and that it was much the best policy to try a little harder to do his whole duty and share the work than he ever had before.

birds have been destroyed, either willfully or thoughtlessly, by those who, blinded by their own interests, fancied they were benefiting themselves thereby. Now, with their feathered protectors so greatly reduced, the farmer of today is paying a heavier tax to his insect enemies than to the government under which he lives.

There is a wanton cruelty in killing by means of poison that should be revolting to every human being, no matter how harmful the victim may be. The chance, very rarely avoidable, of the poison being taken by another creature than the one for which it was intended, greatly increases the wrong.

The writer's first sorrow which left its mark on my memory was that for a pet dog who ate the portion intended for a thieving fox. As, with tears coursing down my cheeks, I watched my little dog writhing in the agony of such a death, my childish spirit was filled with such revulsion against poisoning as I shall never outlive.

The tragedy of accidental poisoning is as old as history, and many of my readers, because of it, may have felt the keen barb of sorrow, even though it be for nothing more than a cherished pet. Let us not be the ones to perpetrate the cruel practice of killing by poisoning, no matter how dire our needs may seem to be.

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Woman and Her Needs. At Home and Elsewhere.

Summer Cooking.

BY L. D. STEARNS.

WITH the warm days of summer the housekeeper confronts a problem of jaded, capricious appetites and lagging spirits in some, if not all of the members of her family.

Appetites change with the changing of the seasons, and it is well for the housewife to bear this in mind and substitute for the heavy, heat-producing foods of winter, the hot breads and soups, the over-abundance of meats and rich pastry, a lighter diet and one more fitted to the needs of the system.

Introduce into the diet as many of the natural foods, in their uncooked state, as possible. Besides giving a tone to the system and supplying many needed elements in the best and most easily digested form, it saves many hours of bending over a hot stove in the kitchen, and there are such an abundance of them one need not weary of the sameness if a little care and thought is used in their selection.

Try some morning for breakfast, instead of the hot cereal and cream, a dish of apples, radishes, figs and peanuts chopped together. It is an ideal breakfast dish, and the different foods blend so delightfully that one finds it a most happy change at this time of year.

Cut out the hot puddings and pies if you would keep in good condition through the summer months, and substitute cold and frozen dainties instead. Prepare them in the early morning. Ice creams, chilled jellies, melons and fruit of all kinds are pre-eminently summer foods and cannot be improved upon. A dish of stoned dates and peanuts is an easy dessert, as is also dates and cream, either whipped or plain; and likewise, a slice or two of chilled pineapple with a dash of sugar or salt, as one prefers. The salt gives a delicious flavor and neutralizes the acid.

One cannot, especially in a large family, do away with the hot dishes altogether, for the taste of everyone must be considered, and where one might get along comfortably and well on a diet of fruits and raw vegetables another would rebel and count himself ill used without the more hearty foods, to a certain extent. Remember that the first requisite to health and success, and an ideal home, is happiness, coupled with a feeling of satisfied contentment and well being.

If John can thrive on a diet of milk and eggs, that is no reason why you should assume that Mary can do likewise. But you can cut out, and substitute, here and there and harm no one.

Cold sliced meat with hot mealy potatoes, chilled cucumbers and lettuce, followed by a generous slice of melon or ice cream ought to satisfy any reasonable mortal on a hot day. Choose the cooler days on which to serve cooked vegetables, peas, beans, etc., with the hot meats, and ten to one your family will not realize they have been under any different regime only as the health of each of them will be better and more vigorous, and you, busy housewife, will have gained many hours in which to live and grow.

SAVING THE CANNED FRUIT.

BY ELLA E. ROCKWOOD.

This caption does not refer to frugality in the use of fruit but to prevention of loss by mold or fermentation. Each year adds something to the housewife's knowledge along the line of bacterial activity and the relation which that process bears to the spoiling of our domestic stores after they have been put into the cans, sealed, and set away for winter use. The thoroughness with which this work is done in the commercial canneries proves that every can of fruit should keep in perfect condition until opened. If the home product does not do this then somewhere in the process there is a flaw and it is up to the housewife to study cause and effect thus to avoid a direct loss both of time and money since every quart represents a cash outlay or its equivalent, whether the fruit is grown at home or purchased outright.

Probably everyone who attempts canning at all understands that cans, covers and rubbers must be sterilized with boiling water. Breakage will be avoided by slipping the cans sidewise into hot water and not pouring it directly inside. A good way is to lay cans and covers in cold

water and bring gradually to the boiling point. Fresh rubbers every year are not expensive and there is danger in using old ones which have become hardened. Occasionally a rubber survives in good condition but safety lies only in the purchase of the best quality fresh every season. Compared to the loss of a single can of fruit the cost of a good rubber is not to be considered.

Some fruits, cherries, for example, are easy keepers. With others, like strawberries, every precaution must be observed. Whether cooking is done in an open vessel or after the cans are filled there is no question but that it must be thorough. Complete sterilization to the innermost section of each separate piece is essential. A broad pan for open cooking is better than a narrow, deep one, since it better prevents crushing of the fruit while boiling. After filling to the running-over point and sealing, the cans may have a coating of melted paraffin applied over the top parts as an extra precaution. This is best accomplished after they have become cold and the covers tightened for the last time. Any can from which the liquid oozes when it is inverted must be re-sealed, or the contents will surely spoil. This is a final test. Sound fruit put up according to these instructions will keep in perfect condition.

HOW I MADE A COOK-BOOK.

BY CHARLOTTE BIRD.

Although I have never in my life had any call to cook for more than one or two people, I have always had a decided taste for preparing dainty things for the table. Consequently, a good recipe I have never willingly let pass by. The result is that I have an impressive collection of cook-books, from mere pamphlets to real books. But my very best recipes, or rather, the hardest ones for me to lay my hands on at any given moment, were those clipped out of papers or scribbled down on a piece of paper. These were in constant danger of being lost. As it was to insure safety the edges of my standby cook-books were written full.

So, one day coming across an old, well-bound congressional report, I determined to make it a safe depository for my loose recipes. I cut out a lot of the leaves so that with the extra material pasted into the book, it would not be swelled out of shape. Then I sorted over my recipes and rejected all duplicates.

Then the book space was divided into sections and labeled in cook-book fashion: "Soups," "Fish," "Shellfish," "Vegetables," "Bread," "Pastry," etc. From my clippings I had little introductory rules for these different classes of food and these I pasted in first. Then I divided my recipes under each head according to alphabetical order and pasted them into the book. At the end I left space for recipes still to be obtained.

I threw out all recipes too complex for ordinary family use and all of which I found more expensive than seemed necessary. For ordinary use there are few better cakes than the common one-egg cake, provided, of course, that it is well made. Then, using it as a basis, one can vary it by putting in chocolate, or fruit, or coconut, or ordinary nutmeats, or more than one of these additions, and thus have a new kind of cake each time. So what was the use of cluttering up good space in my book by including recipes calling for eight or ten eggs when eggs are forty cents a dozen? So, retaining only the recipe for "Angel Food," or "Sunshine Cake," a good wedding cake and one or two others, I threw the rest in the waste basket.

But the newer desirable recipes, like mock mincemeat from green tomatoes, carrot pudding, pumpkin butter, I retained, because I do not find them in the older cook-books. And under my "Salads," and "Croquettes," and even under my "Soups," were great improvements over the recipe books of a generation ago.

There is a card index system being worked out for the preservation of recipes which is really superior to any book. But one must have the cards of a proper size and shape and a box in which to preserve them. The box would take up space and be more or less awkward for the mere uses of the ordinary housekeeper. The book therefore seems simpler.



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THE JULY PROGRAMS.

State Lecturer's Suggestions for First Meeting.

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A new machine that interests me.
Recitation.
Common inconveniences about farm homes.
Song, "Lightly Laugh and Gaily Sing," No. 180, Grange Melodies.
A rural co-operative laundry.
Reading, "Consumer-Producer."
What qualifications should a rural school teacher have? Discussion.
Roll call responded to by each member giving his experience with or observation of parcel post, or suggestion on its improvement.

WASHTENAW POMONA IN 1913.

Although no reports have appeared of the work being undertaken by Washtenaw Pomona Grange, it has not been idle. Instead, its plans were made in good season for the year and it has had three large and promising meetings. The first was the biennial election, when it returned C. H. Alexander to the master's chair and Mrs. B. D. Kelly to the secretary's. Mrs. C. E. Sperry was made lecturer, and she, with the executive committee, immediately took steps to hold a joint meeting with another Pomona as recommended by Master Ketcham. This was accomplished in March when Wayne Pomona met with us in a session at Ypsilanti. Some 300 or more eager patrons

attended, among them 30 from Lenawee.

The presence of so many guests was a delight to Washtenaw members, and the conferring of the fifth degree by the Lenawee team was pronounced the finest treat of its kind ever enjoyed by many present. A class of more than 50 were thus initiated. At this meeting the president of the Housewives' League, of Detroit, told the interesting story of the effort women in her city are making for obtaining food direct from producer to consumer, every word of which was listened to with intensest attention. Another topic which is particularly "live" with us is that of the "County Farm Man" method of promoting more profitable agriculture. A committee, appointed to investigate and confer with the city civic associations, reported favorably, but the people in general who were present apparently would have none of it. As there was no opportunity then for a full discussion, the lecturer announced that she would plan to devote another meeting to a further investigation of the matter.

In the meantime, the Corn Contest committee had been perfecting its plans for a bigger and better boys' corn show this year than ever. This is designed to be held December 5-6, at Ann Arbor, and will be the ninth annual event of a similar nature with the county Grange to back it. The time seems to be near when this undertaking can sustain itself and continue its work of reaching farm boys and, incidentally, improving the corn of the county. Some of the best corn now grown in the county dates its introductory seed back to the early days of this annual corn contest.

Perhaps the saddest blow that could have come to our Pomona came without warning on the last Sabbath of March, when Hon. John K. Campbell was "called away." First master of the Pomona when it was reorganized, and for many years lecturer of his home Grange, and leader of his home community, he was known and beloved as few are, regardless of the much wider acquaintance and positions of honor and trust which he occupied in state and national agricultural and religious affairs. He had been a welcome and prominent factor in our big meeting a few days before his death. A service in commemoration of his great influence among us will be observed at

a Pomona meeting at Chelsea, September 9.

The June meeting of Pomona was a delightful surprise—a surprise in attendance, cordiality and earnestness of the further discussion of the "The County Farm Man" idea. It was the first in a long series that had met with Manchester people and they made it a happy day indeed. Something like 125 came from all parts of the county, and right royally did the local Grange meet the occasion. The general subject under discussion was "Our County from the Farmer's Standpoint." In the closed session this took the form of talking over various co-operative plans and work in the Granges represented. State Secretary Hutchins' bill, now a law, regulating the organizing of co-operative associations in the state, was reported, and announcement was made of the plans for organization of county Grange co-operative associations under direction of the executive committee of State Grange. At the open afternoon session a short time was spent upon "The Three Leading Crops of the County," but no one had statistics to show which crops really bring in the greatest financial returns. One man judged them to be hay, corn and hens; another, apples, corn and pigs, etc. On the topic, "Three Greatest Needs of Our County," some interesting things were said. N. W. Laird thought we needed more boys and girls who were fitted to become leaders in the great enterprises of the world; F. G. Leeson, of Manchester, believed the great present needs are silos, alfalfa and warm weather, while Mrs. Osborn, of Pittsfield, said we need a county farm agent—one who will help farmers market their crops to better advantage and teach them how to grade and pack to better purpose. She illustrated her remarks by experiences in her own marketing of garden products in the city markets.

All these discussions led up to the address by Brother Jason Woodman, now county demonstrator or agent for Kalamazoo county. Mr. Woodman was engaged for the Kalamazoo work by bankers of that city, and he proceeded to show why bankers are interested in promoting better farming and why it is not patronage, in his opinion. He pointed out that the farm population has de-

creased, rather than kept up with the general increase in population of the country, how farm products are going onto the importing list, rather than the exporting, and how farming is being done by middle-aged and elderly men. He showed how farms are losing ground in fertility—not all farms, but many, some of which are actually being abandoned. He said: "I have been asked, what might a farm agent do in this county? In reply, I say I don't know. I can't tell. I can tell you that in my own county of Van Buren we are ready for such a man but have not yet been able to get one; and I can tell you what I am trying to do in Kalamazoo county, and can tell you how the idea came to be tried, for it is still an experiment. I am not here to advocate the county agent. He is an experiment and we may abandon the plan of having him altogether, or we may multiply him, putting a farm demonstrator in every township."

In the course of more than an hour's talk, Mr. Woodman read from his notebook one week's record of work. One day he helped a Holland farmer prepare his seedbed for alfalfa; another day he spent with a farmer who knows how to feed Jersey cows, learning all he could himself of this master feeder; another day he visited a master of a Grange to help start him aright with his potatoes. He will return there at time for spraying and see that the spraying is properly done, thereby insuring a much larger yield. "No," said he, "I am not teaching him how to grow twice as many potatoes, but how to grow as many as he does now on half as much ground with less labor."

The closest attention was given to this address and many were the expressions of pleasure at the opportunity to hear a man upon this question who is in position to give the most practical and accurate report of the working out of the county plan. Pomona Granges owe it to the people of their counties to give them opportunities to study this and other questions affecting the county welfare.

The August rally of this Pomona will be at North Lake, when State Master Ketcham will be present. The Governor is invited and plans are on foot for the kind of a picnic that North Lake knows best how to make. JENNIE BUELL.

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