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FARM NOTES.

Crops for Green Manure.

As I have a 12-acre piece of land that is sandy and run out, I would like advice regarding it. It is in corn this summer. I thought of sowing rye in the corn this fall, and plowing it under next spring for beans, as I haven't manure to cover it. But some of my neighbors say rye takes just as much fertility out of the land as it puts back, so I'm at a loss what to do with it. Please advise me regarding this, and as to what other crop I might better put on this land.

Muskegon Co.

It is true that rye will add nothing to the soil which it does not take from it, and in the sense of adding actual fertility to the soil is not to be compared with the legumes as a crop for green manure. But it does not follow that it will not pay to sow rye in corn to be plowed down the following spring on sandy land of this kind. There is no doubt that such treatment would be of some benefit to the soil, and probably more than enough to repay the value of the seed which represents the largest factor of expense, since the corn will be benefited by the late, shallow cultivation required to cover the grain. This benefit is two-fold. First the rye will appropriate and hold the available fertility in the surface soil, some of which might otherwise escape by leaching during the spring rains when the ground is soft. Then the field would be protected from washing and a covering of any kind seems to make the conditions better for the work of beneficial soil bacteria. Then when the rye is plowed down it will add to the vegetable matter in the soil and with the conversion of this vegetable matter into humus will better its mechanical condition, which is quite as important from the standpoint of increasing its fertility as increasing its actual content of plant food. However, if this rye is grown and plowed down and the field is planted to beans, this benefit will be lost and the soil will be left in a still more barren condition than it is at the present time. It is impossible to build up a soil in fertility or to improve its mechanical condition to any considerable extent and continue at the same time to put it into cultivated grain crops and take more of its available fertility off in the form of grain which is sold from the farm. Where a sand soil is badly run down the yield of beans secured is not likely to prove a profitable one, hence there is little in the proposition aside from wages for the labor put into growing the crop, and the soil is left in a condition which makes it more difficult to get a seeding of clover than it is at the present time.

For these reasons it is far better to try and grow some leguminous crop for green manure which will add needed nitrogen as well as vegetable matter to the soil when it is plowed down. Clover leads all other crops for this purpose in Michigan

and on lands where it can still be successfully grown. Where soils have become so worn that it is difficult to get a stand of clover by seeding in a grain crop it can often be secured by fitting the soil and seeding alone without a nurse crop. This, of course, takes a year's time, during which the land will produce no visible profit, but if the soil is to be built up to a profitable state of fertility we must spend either time or money in the process, and the former can generally be best afforded by the average farmer. In the northern part of the state winter vetch is proving a valuable crop for this purpose. It is sown during the latter part of August at the rate of about three pecks of the vetch seed and a half bushel of rye to the acre. The vetch is a leguminous crop and benefits the soil in much the same manner as clover. If this crop were plowed down and a liberal application of the mineral elements of fertility applied the bean crop might be grown with better prospects of a profit and less likelihood of a further depletion of the soil.

A. B.

further cropping and depend on some miracle to be wrought by a new crop, of which we know little or nothing, to restore it to fertility. The best thing to do is to get vegetable matter into it and add plant food at the same time if practical. Rye plowed down as a green manure crop, or in fact vegetation of any kind will help to attain the former object, but clover will accomplish both to a considerable degree, hence the desirability of getting such soils seeded, even at the cost of considerable time and labor, is apparent.

Disking Versus Plowing for Winter Grain.

I have a field on which I had winter wheat this year, which I want to sow to rye, and four acres of spring wheat, which I want to follow with winter wheat. Would disking be as good as plowing? I also have three acres of land which was sod two years ago, on which I had peas the first year and oats the second year after plowing. Would oats do well next year and be a good crop with which to seed it down.

Alpena Co.

SUBSCRIBER.

While it is entirely practical to fit stubble ground for fall-sown grain with the

fit for wheat than if allowed to dry out before being plowed. Many farmers who have tried this plan are of the opinion that it will pay to disk the ground as soon as the grain is off, since it will plow much easier and better if the sun is not allowed to bake the soil after the grain is off. It is quite a task to fit soil properly for fall-sown grain during a dry season, since if plowed it needs to be well fined and firmed down to make a proper seed bed, but the extra work needed for proper preparation will be more than repaid in the resulting crop.

If the soil is fertile, oats should do well after the peas, but seeding after oats is not as dependable in an unfavorable season as after fall-sown grain or barley, because oats draw more heavily on the soil moisture. However, if the oats are not sown too thickly and the season is at all favorable, good results should be secured on a fairly fertile soil.

Killing Locust Grubs.

On a farm that I bought this spring is an abandoned family cemetery. Locust trees have been cut off the plot about two years ago. The plot, consisting of an acre or so, is now covered with a dense growth of locust saplings which are spreading rapidly. Would you kindly inform me how to get rid of them, or at what time of the year to cut them in order to kill the roots?

St. Clair Co.

J. W. T.

These locust grubs will be best subdued by cutting off in August, leaving them in the ground until spring and burning soon after the new growth starts. However, they probably can not be entirely exterminated in this way, as they are vigorous growers and send up many new shoots from the roots. If the plot could be enclosed and pastured off with sheep frequently or as soon as the new sprouts start up, they could be easily killed in this way. Summer following the plot after burning by frequent cultivations with an old-fashioned "digger" if such an implement is available, would also help to subdue the grubs. However, if the plot is not so located as to prove unsightly or make an awkward-shaped field, it might pay better to let them grow, as this thick growth would make shade enough so the borers would not be apt to work in the young trees badly, and they would develop into valuable post timber in a few years.

Treating Seed Wheat for Smut.

Will the same treatment of formaldehyde and water as used by some on oats, also be good to take the smut out of fall wheat.

Cheboygan Co.

L. H.

The formalin treatment is now generally used for the treatment of seed wheat for smut, being easier to apply and apparently just as effective as the other methods of treatment which are sometimes used. The ordinary commercial formaldehyde should be used, mixing it with water at the rate of one pound to 40 gals. of water. About one gallon of



Good Wheat Crops Have Been Harvested in Many Sections of Michigan.

But vetch seed is rather expensive, and until it is tried on a small scale we are not certain that the soil is naturally inoculated with the bacteria peculiar to the plant and which is necessary for the successful growth of any nitrogen gatherer. Thus artificial inoculation might be necessary as it is in so many cases with alfalfa, and for this reason it is better to experiment with the vetch on a small scale and pin our faith to common clover where we can secure it, even by sowing alone without a nurse crop for the rejuvenation and improvement of worn soils. Other legumes, such as cow peas and soy beans, which have many advocates for this purpose, should be handled in the same way until we become familiar with them and know how they will grow under our soil conditions. It is undoubtedly profitable to experiment with these soil improvers, but it is folly to further impoverish an already badly worn soil by

disk, and while the best of seed beds can be prepared in this way if the work is thoroughly done, the labor required will probably be as great as would be the case if the ground were plowed. This is especially true in a dry season like the present, when the ground is hard, as a good deal of disking would be required to work up the ground to a proper depth. Observation would seem to show that less ground is prepared for wheat in this manner than was the case a few years ago, which indicates that experience with both methods has led a majority of wheat growers to prefer plowing to disking as a method of preparing for fall-sown grain. It will, however, often pay to use the disk before the ground is plowed. In case there is a good rain just after harvest, the disking of the soil will prevent the rapid evaporation of the soil moisture before the field can be plowed, and the soil will be in much better condition to



Alfalfa Curing Under Hay Caps on Roycroft Farm, in Houghton Co.—An Example of Success with This Forage Crop in the Upper Peninsula.

this mixture should be allowed for each bushel of grain to be treated. The grain should be placed on a tight floor in small piles and the mixture sprinkled or sprayed over it, the grain being shoveled over until the kernels are thoroughly wet. After the whole has been thus treated, repeat the operation until from three quarts to one gallon have been absorbed by each bushel of grain. Then cover the whole with a canvas for a few hours to prevent the fumes of the formaldehyde from being evaporated. After the canvas is removed the grain should be shoveled over a few times to aid in drying it out, when it will be ready for sowing at any time. Care should be taken not to use infected bags for handling it after treatment. If

ALFALFA IN NORTHERN MICHIGAN.

At the present time there is a good deal of interest centered in alfalfa in the northern counties of the lower peninsula, as well as in some places in the upper peninsula of Michigan. The fact that alfalfa is succeeding in the lower counties is very encouraging, as it looks as though it is to help farmers out of summer troubles by furnishing a cheap supplemental feed during periods of drouth, when pastures fail, and also furnish an abundance of rich feed with which the stock can be carried through the winter more cheaply than on any other feed yet discovered.

During a recent trip to the north, I noticed along the way that the severe drouth had injured crops to a considerable extent, all along up the east shore. Oats are short and light in most places; peas that have been grown in such abundance in former years were a failure in many places. The vines are not producing pods and are being cut for hay. The failure to produce was caused partly by frosts and partly by the dry weather.

In Presque Isle county I visited the excellent farm owned by Mr. Merritt M. Chandler. On that farm alfalfa is being grown with both success and profit. One field, where the alfalfa had been cut once, was then (July 21st) nearly ready to cut again. On account of the crop being forward Mr. Chandler was contemplating trying to get seed from the third crop, as good germinating seed can not always be secured in the market. The profitability of raising alfalfa in that part of the state was indicated by the results last year. If the hay from the same field had been sold in the market the income would have exceeded \$100 per acre.

On another field of 35 acres alfalfa had been sown this season without a nurse crop. Corn had been grown on that field last year, and instead of plowing the ground to fit it for the seed, had been disced and worked up in very fine shape. On one side of the field where good seed was sown the plants were coming up thick and vigorous. On the other part the seed did not grow, and it will have to be reseeded. As the land is limestone soil lime was not sown in preparing the ground for the seed.

Mr. Chandler has found that for feeding sheep alfalfa it is better to chaff it, or cut it fine, and then they will eat it all as readily as they do any grain, while if thrown to them whole they pick the leaves first. He is contemplating getting a grinder and then he can make meal of the whole crop and use it in the form of grain, it having a feeding value equal to or greater than wheat bran.

In Houghton County.

On the Roycroft Farm in Houghton county, I found that alfalfa is being grown very successfully. The proprietor, Mr. W. S. Prickett, says he thinks he has solved the alfalfa problem, and can depend on it as one of his main forage crops. There are 30 acres of alfalfa meadow on the farm at present, and 60 acres are being prepared for seeding this year.

Mr. Prickett's management of the alfalfa may seem a little unique to some, but as it brings good results, I will mention it. As soon as the blossoms appear the alfalfa is mowed, carefully cured in the cock and stored before it is dried enough to crumble to any great extent. Immediately after the crop is taken off they go over the fields with a spike-tooth disc, splitting the crowns of the plants and letting air into the ground, which promotes a rapid growth in a short time. This plan was suggested to him by noticing how rank the alfalfa would grow up between the furrows soon after it had been plowed. It certainly brings good results in promoting the growth of the alfalfa as well as keeping back the grasses and weeds.

In preparing the ground for sowing the seed, a coat of manure is put on, the ground plowed and worked well to make a good seed bed. Lime is sown in lib-

eral quantities and well worked into the soil. The trinity of points on which dependence is placed for success is: thorough drainage, lime and cultivation. The plan of spreading the soil from the green patches is a good one, but inoculation is not considered absolutely essential.

The philosophy of using lime is considered from a business standpoint. If it will enable one to get a good stand of alfalfa, and from its growth one can get three cuttings of hay per season, that is worth twice as much for feed for the farm stock as any other of the clovers or grasses, it is a paying investment to use it. The lime undoubtedly hastens the disintegration of the vegetable matter in the soil, making the plant food which it contains readily available—just what the young alfalfa plants need to promote their growth while young.

Another point should be considered: Calcium, the metallic basis of lime, is one of the prime essentials as a plant food. No plant or animal can thrive from beginning to end of life without it. In the leaves of plants it appears to have the special function of aiding in the construction of cell walls, and no new plant cells are found without the aid of this important element, calcium. Alfalfa, the clovers and other legumes, use so much calcium that they are sometimes called "lime plants." If, by the use of carbonate of lime on soils that are somewhat deficient in "natural lime," good results are obtained when the clovers are sown, we need not wonder at it.

Wayne Co.

N. A. CLAPP.

DEVELOPMENT OF NORTHEASTERN MICHIGAN.

The following address was delivered by J. C. McDowell, Agriculturist, U. S. Department of Agriculture, while with the Better Farming Special which covered northeastern Michigan the latter part of June. While this talk was briefly reviewed at the time, its text is here published that all may benefit by reading it.

During the past three or four years Professor C. B. Smith, myself, and others of the United States Department of Agriculture have made a careful study of the soils, farm crops, agricultural conditions, and the agricultural possibilities of all of the northeastern part of the southern peninsula of Michigan. We have driven over every county from Bay City north to the Straits of Mackinac. We have visited many of the best farmers in this district and have studied their methods of farming right on their farms with the idea of finding systems of farming well adapted to the different conditions of soil and climate.

I wish to congratulate you on having some of the best soils that are to be found in this or any other state; but some of your soils are medium in quality, and I am sorry to say that there are large areas of light sandy soils. It is a part of our business to find out what crops, cropping systems, and what live stock are best adapted to these different kinds of soils. The farmers who are fortunate enough to be settled on the richer soils have an easy problem as their soils will grow almost any crop they choose to plant, but the problems confronting the farmer who is located on the light sandy soils are much more difficult. At present we are giving most of our attention to the problems of the sandier districts, and I must admit that these problems are difficult to solve.

It does not make any difference, however, whether your soils are the richest of this district, whether they are medium in quality, or whether they are of that quality so common on the jack pine plains, careful attention must be given to a few fundamentals if we are to succeed in maintaining a successful agriculture for any considerable length of time. Careful attention must be given to maintaining plant food, the moisture holding capacity of the soils must be kept as high as possible, the physical condition of the soils must be looked after, and the soils must be kept rich in humus. If the soils are kept rich in humus they will never be lacking in plant food, and will seldom run low in moisture.

I had this fact deeply impressed upon me two years ago this summer as I drove over the western prairies making an agricultural survey for the United States Department of Agriculture. During the long dry spell that occurred early in July, I found that all the crops were suffering severely on account of the hot winds and the extremely dry weather. The wheat was badly wilted, the pastures were drying up, and the soils contained no moisture. As I drove along one day I was much surprised to note one farm that was altogether different from the rest in that section; all the crops on this farm were of a dark green color, vigorous, and ap-

peared to be growing rapidly. I drove in to meet that farmer, and to examine his crops and soils more closely. I wanted to find out what that farmer was doing that his neighbors were not doing. His solution of the problem was very simple. On a farm of moderate size he was keeping over a hundred head of live stock, and he was putting into that soil all the manure that he could get hold of. We went all over his farm, dug down into the soil in many places, and found it full of humus and moist everywhere. Before I left he said to me, "You know the farmers all over this western country say that you must not add manure to the soil, because if you do you will dry it out. I am putting into my soil all the manure I can get hold of and you notice the results." I noticed the results on his farm, and I have been looking for the same results as I have traveled over the states farther east, and I am finding them, too. The best farmers right here in Michigan are the ones who are keeping their soils full of organic matter. The humus keeps up the supply of moisture during a long dry spell such as we are now experiencing, and always gives big results in larger yields at the close of the season.

Our great problem is to get the supply of organic matter to add to the soil. There are only two practical ways by which it may be obtained. One is to keep a large amount of live stock and by so doing get much manure for the soil, and the other is to produce crops to be plowed under as green manure. To keep live stock at a profit, and even to keep them at all, we must grow crops with which to feed them. What shall we grow for this purpose? Among the best crops to grow on our better lands are corn, clover, and alfalfa, but as Professor Shoemaker has just told you, alfalfa will not do well under ordinary conditions on the very sandy land. Clover will grow on lighter soils, but we can hardly expect clover to do much on the jack pine land until the soil has been enriched for it. Even if it escapes the frost, corn can hardly be expected to do much on our very sandy land, until such soil has been enriched by growing some of the legumes.

I am pleased to be able to inform you today that we have a crop, and it belongs to the nitrogen gathering family, too, that makes a very satisfactory growth on some of our sandiest land. The crop to which I refer is the sand or winter vetch. I have known the winter vetch to give big yields in this state on the drifting sands along the shores of Lake Michigan. It should be sown about the twentieth of August, at the rate of three pecks of vetch seed and a half bushel of rye per acre. It is best to sow with a drill at the depth of two to three inches in this sandy soil. Rye is sown with the vetch in order to support it, and keep it from growing along the ground. Under ordinary conditions the vetch makes a rapid growth that fall, remains green under the snow all winter, and goes on growing vigorously the next spring. By the middle of May or the first of June it has produced a large crop that may be plowed under as a green manure. If desired the vetches may be used as a soiling crop, may be cut for hay, and they are reported by some to do very well as a pasture for a short time. Yields of two tons of hay per acre are not uncommon on sandy land, and one farmer in Oceana county reports that last year he sold the seed of his sand vetch and the rye that was mixed with it at a price that brought him in an average of 46 per acre. This result was obtained on very sandy land.

By growing a crop of rye and vetch, and plowing the crop under, or feeding it to live stock and returning the manure to the soil, our soils become comparatively rich in humus and from that time on our problems are much more simple. With our soils rich in humus we can get a stand of clover or alfalfa, and with a good stand of either clover or alfalfa we may start dairying or almost any system of farming that we choose. As a rule, our Michigan soils appear to be naturally inoculated for vetches, generally they are inoculated for clover, but I have not seen a single field this year in this part of Michigan that is thoroughly inoculated for alfalfa, and I have examined over a hundred fields on which farmers were trying to grow alfalfa.

In conclusion, let me urge upon you the necessity of keeping your soils rich in humus. Grow legumes and be sure they are inoculated, and as soon as possible go into some line of live stock. Feed your soils and your live stock, and later they will not only feed you but will assist you greatly in enlarging your bank account.

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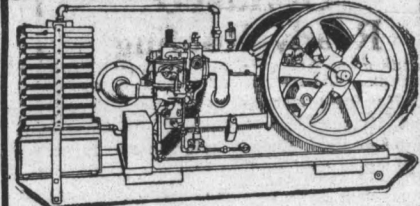
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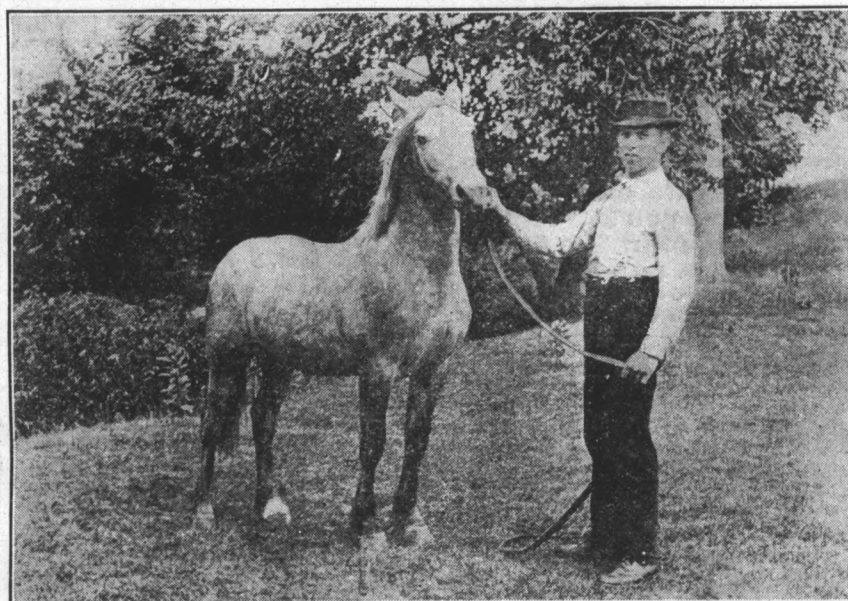
LIVE STOCK

GROWING THE COLTS.

The prevailing high price of horseflesh has had the natural effect of reviving interest in horse breeding throughout the country. Fortunately a better class of sires have been available for use than has ever been the case before, especially for use on farm mares for the breeding of grade draft animals. True some of the sires which are now in use are not all that might be desired, but there are good, big stallions of some of the draft breeds available for use in nearly every community, and while many of them may not have the fine points which make for show quality they are unquestionably an improvement over the nondescript sires of no particular breeding which were so common in the country a few years ago. While the revival of interest in horse breeding has resulted in the breeding of almost every available mare, regardless of her size or quality, yet the average quality of the brood mares of the country is better than in past generations, at least from the standpoint of their fitness for the raising of grade drafters. Thus in Michigan we are better equipped for the raising of a type of horses that are wanted in the market and that will bring prices which will leave the breeder a fair profit,

mum growth. It is desirable, of course, to feed a balanced grain ration, using plenty of bran or a little oil meal or other nitrogenous concentrate to supply this need, and good clover hay where it is available. But variety and palatability add to the efficiency of the ration, and the good feeder who takes a personal interest in the welfare of the colts and has a strong liking for them is apt to get as good results as the more scientific feeder who lacks the element of personal interest above mentioned. The accompanying illustration from a photograph of a well-grown yearling colt shows what a combination of these factors backed up by good breeding will do. In a letter to the writer regarding this colt, its owner incidentally added a sentence which reveals his personal liking for good horses. This expression was: "Good stock is a source of great satisfaction as well as profit to any farmer." This is but one of a number of similarly well-bred colts which its owner has raised from a pair of pure-bred Percheron mares, which, as he adds, have been an efficient work team on the farm in addition to raising this kind of colts.

It is not so much the purpose of this article to lay down rules for the proper feeding and care of the colts as to impress upon the reader the importance of such feeding and care. The good sense of any farmer will tell him when the colts are getting such care, and all who have colts to feed should provide for them



Percheron Stallion Colt, James 65217, Foal ed June 8, 1909, Weight 1,100 lbs., Bred by M. A. Bray, of Ingham Co.

provided the colts are properly grown while young to bring them to maturity with a maximum degree of size and quality which represents the limit of what their breeding makes them capable of attaining.

But in the growing of colts, as with the development of other young animals, the care and feed which is given them from birth to maturity is just as important as their breeding, if satisfactory results are to be attained. If every condition is not made right to secure this desired development at this time, no amount of good feeding in after years can avail to remedy the error. The growth and development must be continuous from birth to maturity if the colt is to attain either good size or harmonious development. Obviously, both of these qualities are very desirable in the horse, whether he is grown for market purposes or for use on the farm. If he is to be sold in the open market for a drafter or perhaps an expresser, size and development mean added dollars for the breeder. If he is to be retained on the farm, the extra pounds and the better developed muscles which are the result of proper feeding and care from the start mean added efficiency in the doing of farm work. It is, then, of the greatest importance that the farmer who is breeding and raising colts should fully appreciate the importance of proper feed and care for the colts during the whole period between birth and maturity. This is also true with other animals for the most profitable results, but it is true to a far greater degree with the horse, for the reason that his mission in life is not so quickly fulfilled, and the added efficiency resulting from his best development is a continued source of profit for many years, and has a corresponding effect in increasing his value.

But how, the reader may ask, is this desired end to be accomplished? It should not be a very difficult thing for anyone interested in the proposition to provide plenty of wholesome, nutritious food and proper environments to promote a maxi-

with a bountiful hand. Watch the needs and appetite of the young things and make the ration sufficient to satisfy them, instead of feeding according to previous ideas or established precedents. If this plan is followed, the growing colts will certainly prove to be a source of satisfaction as well as of substantial profit to their owners. It is an individual problem with every individual colt, and, in the vernacular of the day, "good horse sense" is needed for its correct solution.

FALL PASTURE FOR THE SHEEP.

Under normal conditions the question of fall pasture for the sheep is not generally a difficult one to solve upon the average farm where a small or medium-sized flock of sheep is kept. This year will, however, prove an exception on many Michigan farms, for the reason that the dry summer has so shortened the pastures that all available pasturage has been so closely grazed that the fall feed will be necessarily shortened, and the old meadows and pastures will need to be given an opportunity to develop some covering and accumulate some plant food in the crowns of the plants if they are to be expected to yield a normal amount of forage next season. This makes the question of late fall feed one for serious consideration at the present time. Where the corn fields are to be used for some other cultivated crop next year, it is an excellent plan to sow rye in them at the last cultivation. If reasonable showers occur so that this rye gets a good start before the corn is cut it will then come on rapidly and make considerable good pasture before winter sets in. This late pasture may not be available until after the corn crop is all secured, but there will then be several weeks during which it may be pastured in a normal season, and this late pasturage makes a great saving in the winter forage, which will be none too plenty on many farms this year. Then the soil will be the better for the covering which remains on it over winter, as the

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growing rye plants will appropriate and conserve the available fertility in the surface soil and will also prevent serious soil erosion during the spring season where the ground is rolling. Then again this same rye will make some good early spring pasture, again effecting a saving of hay at this end of the feeding season and proving of benefit to the flock by giving the young lambs a good start.

Then there will be some rye left to plow down, adding something to the vegetable matter in the soil, thus many times repaying the value of the seed which is practically the only cost of this catch crop for fall pasture.

Where it is considered preferable rape can be substituted for rye for this purpose, but in a majority of cases will not prove as profitable a crop. But whatever the catch crop used for this supplementary fall pasture, it will be found of great benefit to the flock. A great deal depends on the condition in which the ewes go into winter quarters so far as next season's lamb crop is concerned. If the sheep go into the barn in good condition, only a small grain ration will be required to keep them in good thrift during the winter, and this will prove a saving of grain as well as a benefit to the sheep. It is difficult to put them in proper condition by the use of a heavy grain ration during the winter season without impairing their usefulness as breeders, and if they are allowed to remain in poor condition until lambing time they will fail to nourish their lambs in a manner to give the most profitable results. Supplementary feeding at this season of the year and the provision of some supplementary forage crop for late fall pasture are important considerations in the proper care of the breeding flock upon every farm where the pasture is now short, and both will pay big dividends, both in the future profit from the flock and the future production of the pastures and meadows which would otherwise be grazed so closely as to impair the yield of forage next season.

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SUPPLEMENTARY FEED FOR THE PIGS.

The farmer or breeder who uses portable colony houses for his hogs and has them distributed through a field of alfalfa properly fenced for the purpose is indeed fortunate in a season like the present one. But he is fortunate because he has devoted some time and thought to proper preparation for the business of raising and feeding hogs in an economical manner. Unquestionably the man who is so equipped at the present time will be able to mature his spring crop earlier in the season and at a very greatly reduced cost in comparison with the farmer who has made no special preparation along this line. The alfalfa pasture will keep right on producing succulent forage, rich in protein and greatly relished by the pigs through the dry weather when the average hog lot is producing practically nothing. No farmer who makes a specialty of raising hogs should allow another season to pass without making an attempt to get alfalfa established in some convenient lot near the farm buildings where the hogs can be handled in this advantageous way during the summer season at least in future years.

But good resolutions of this kind will not help out the present situation. On most Michigan farms the pigs are being fed in a pasture lot which affords them little or no green feed at the present time, if they are so fortunate as to have the run of a pasture lot at all. As a result of this condition they are not making the best possible use of the expensive grain ration which they are being fed, and consequently the gains which they are making are expensive gains, and in many cases will not yield a large profit, even at the present exceptionally high price of pork. On few of these farms has any preparation been made for supplementary pasture crops for the hogs, and in many localities the weather has been so dry that such supplementary pasture crops have been practically a failure if sown. However, this should not be made an excuse for not providing the pigs with need- sufficiently far along toward its maximum growth so that a few hills pulled or cut each day and fed to the pigs will supply this deficiency, and while it will not take the place of good alfalfa or clover pasture, it will pay a far better profit if fed to them in the quantities which they will consume from now on than the same corn would if allowed to mature and the grain which it would produce were fed to them later.

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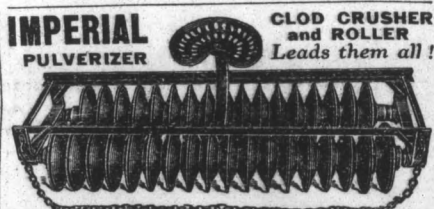
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POULTRY AND BEES

SOME FEEDING QUERIES.

In a recent Farmer I saw an item in regard to feeding hens that were moulting. In it, oatmeal, bran and wheat screenings were recommended, together with hemp seed. The question is whether this should be fed in hoppers, where the fowls are allowed to run to it all the time, or given to them one to three times a day. Are the self-feeding hoppers recommended for Barred Rock poultry?

I have upwards of 100 spring chicks; have kept them in a pen 16x26 feet until now I am letting them out in the big yard around the house for more natural feed and exercise. I have fed mostly on wheat screenings, with a little raw rice at times, keeping bran, charcoal and pure clean water always before them. Some of them do not feather out? A few look badly for want of feathers—eight weeks old and their feathers nearly as scarce as their teeth.

What is the best and cheapest feed for young chicks at this age for quick development and fattening. Should coarse grain and preventatives be given them in hoppers with divisions, or should such foods as corn, oats, rice, barley, wheat, etc., be fed at intervals of a few days or weeks?

Calhoun Co.

T. H. H.

The advice referred to was good so far as it went. The products named make a good mixture, but it is not considered advisable to feed this or any other ration in hoppers until the moulting period is fairly well along. The general practice among poultrymen who give such matters thought and attention, is to feed very lightly for a week or two before the moult. Some go so far as to maintain that moulting can be induced somewhat earlier than it would naturally occur by thus reducing the ration, and that the period will be shortened, the fowls losing their feathers more rapidly because the food given is not sufficient to supply all the demands of the system, and the feathers are first to show the effect of such shortage. They also hold that the fowls will grow the new feathers faster if they receive a ration that is above the normal in quantity and nutrition, consequently when the new feathers start the ration is increased and added to until the fowls are receiving an unusual amount of nutriment. At this time the grain mixture used could be given in self-feeding hoppers to good advantage since it would save some time and labor in feeding. But, fowls that are growing feathers need a good lot of protein, consequently must have something more than a grain mixture. Skim-milk in liberal quantities is good. Meat scraps, or green bone, gluten feed or oil meal, or some similar food rich in protein should be given two or three times a week at least. Sunflower seed is a good and cheap source of pro-

The chicks that are not feathering properly do not receive enough protein. Now that they have the run of the yard and can probably get hold of worms and insects they will no doubt do better. Give them sweet skim-milk to drink and an occasional feed of some of the protein foods named above.

A mixture of ground oats, ground corn and cracked wheat or wheat screenings makes a good food for growing chicks, and is comparatively cheap. It may be fed in hoppers. With it should go an abundance and variety of green stuff, with allowances of protein foods sufficiently frequent to balance the liberal quantities of grain which they will consume. A fairly well-balanced ration is necessary to proper development and growth, but when they reach the stage at which you desire to fatten them, confine them to a smaller yard or pen, increase the proportion of corn in the grain mixture and gradually diminish the allowances of protein or muscle-making feeds.

EXPERIENCE JOTTINGS.

Thinks Cracknels Worth One Cent per Pound.

In reply to your recent request for reports on the use of cracknels for chicken feed, will say that I used all the cracknels from last winter's killing of two hogs, grinding them up in a food chopper and feeding about 1 lb. daily to 29 Barred Rocks, with other foods. The egg yield was increased, if anything, and had the food been pressed free from lard I believe it would have made still better feed. I regard it as a good feed for winter use, estimating its value for layers at 1c per lb. or thereabouts. I would like to hear from others who have used them on a larger scale.

Your paper seems to be getting better every issue, or else I'm learning to appreciate it more. Take your choice.

Berrien Co.

R. G. BAUCH.

Another Way of Preserving Eggs.

I have used eggs that had been packed for six months and found they had kept well. My method of preserving them is to first dip the eggs in boiling water, leaving them only a few seconds—just long enough to count five—and then pack them in salt or bran, in fact anything that will keep them from cracking. This process closes the pores, the air is out, the eggs will be good when you come to use them and there is no expense attached to this method.

Gd. Traverse Co. OLD SUBSCRIBER.

Home Remedy for Turkeys and Geese.

When your hen turkeys or geese get the dumps, as I call it, when they sit around and will not eat or follow the rest of the flock, give a tablespoonful of good

A MICHIGAN WOMAN'S SUCCESS IN BEE-KEEPING.

Many farm women make butter, raise poultry and eggs, and in various ways seek to earn an income, but few keep bees. Yet apiculture offers a pleasant, profitable employment for them, and, to the woman thrown upon her own resources, would furnish an easy means of gaining a livelihood. It works in especially well with fruit growing. It is interesting and fascinating, and no more difficult to learn than poultry raising, and the bee sting can be eliminated by using the bee-veil, gloves and smoker. Bees require practically no care during the winter months when outdoor work is so cold and tedious, but these days may be used in the bee-house in preparing the supers with sections and foundation, and in putting together the new hives for the increase of swarms the following summer.

Mrs. O. E. Gibson, of Saginaw Co., a half-tone cut of whose apiary accompanies this article, is one of the few successful women apiarists of Michigan. Her apiary has 115 colonies, almost all in chaff hives. They were wintered in these hives, sitting on their present stands, with a loss of only three swarms. This apiary is run almost entirely for comb honey and, with less than 100 colonies in 1909, produced upwards of \$700 worth. This year she has started another apiary of 35 swarms in dovetailed hives and will run it for extracted honey. The new apiary is located five miles north of the old.

Mrs. Gibson's experience in wintering bees in chaff hives, and in the single-walled hives packed in sawdust in long rows, is decidedly in favor of the chaff hives. She attributes much of this difference, however, to the bees getting into the wrong hives after a winter flight, causing confusion and starting robbing. This was probably due to the bees not properly locating their new positions when moved to be packed, and to the hives being so close together in the rows. She will pack them the same way another winter, but will contract the entrances of the hives more, and take precautions to compel the bees to locate their new positions.

I noted in the apiary a novel method of transferring. She had a half dozen swarms, purchased in old box hives. They were turned bottom side up, the bottom-boards removed, and new dove-tailed hives, also with bottoms removed, were placed upon them with full sheets of foundation in the frames. All cracks were closed excepting the entrance to the old hive, which would be between the two. The old comb being bottom side up, with plenty of room above, the bees

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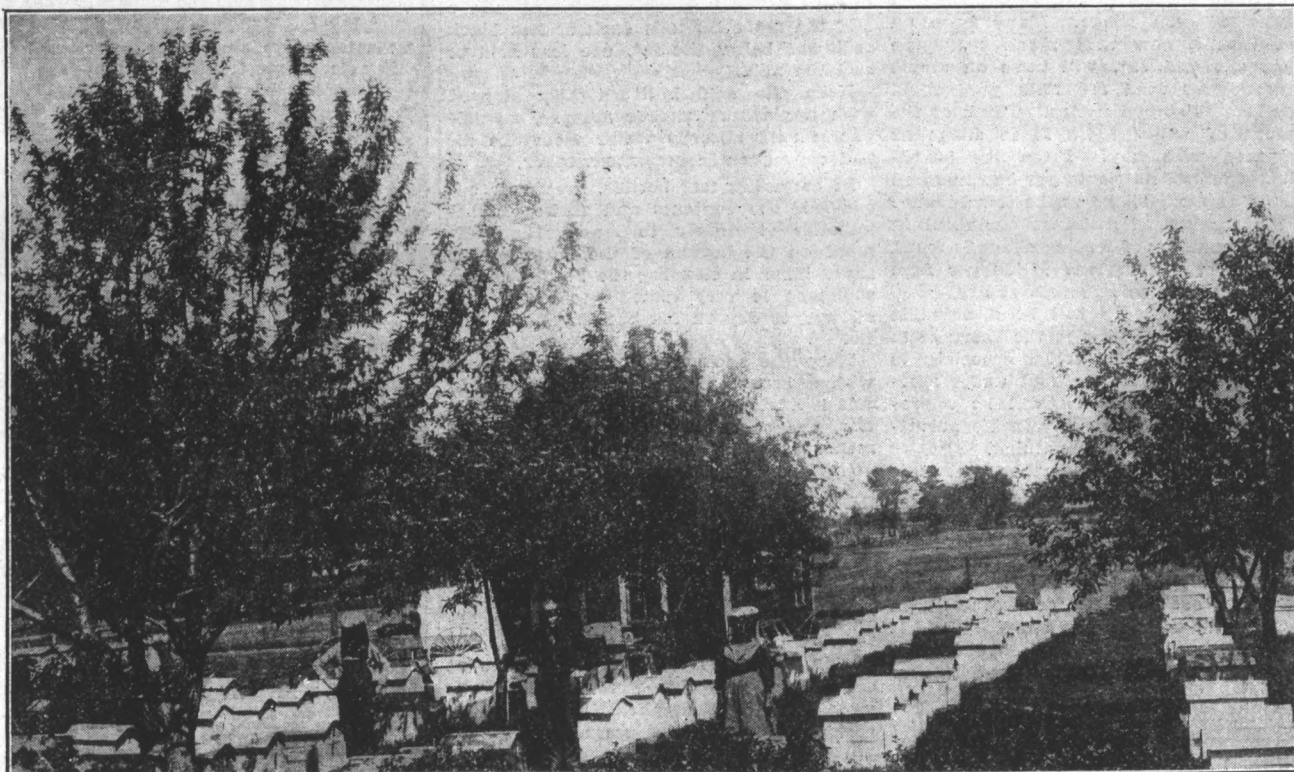
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tein for those who grew a crop of it last season, and is excellent for fowls that are growing feathers. Feeds of this kind which do not spoil easily if kept dry might be given in hoppers, as the fowls would thus get all they want, balancing the ration themselves. Self-feeding hoppers are all right for Barred Rocks or any other breed so long as they do not interfere with the fowls securing the required amount of exercise. They must not be made to depend upon the contents of the hopper entirely for sustenance.

lard or any grease you may have, and they will eat their breakfast with the others.

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I have been much interested in various cures for gapes, but will say that the removal of the gape-worm with the tiny web of a soft feather is absolutely certain to cure 99 out of 100 if skillfully used. As the worm clings with one head to the interior of the windpipe, any other method is not certain to remove the cause.

PRISCILLA PLUM.

will carry all honey gathered into the new hive, and all from the old hive also. The queen will lay all eggs there, and as soon as the larvae in the old comb hatch the bees will abandon the old hive. In three weeks' time the swarm should be entirely in the new hive. Then it may be lifted and placed upon its bottom-board, and the old hive removed. Transferring in this manner can be done any time in the spring after the honey flow begins.

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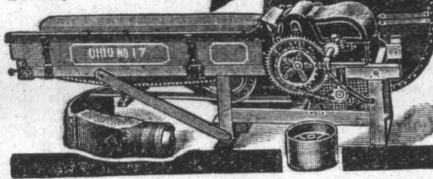
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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

REDUCING FEED COST.

I am living in a limestone section where alfalfa flourishes, even when only ordinary care is given to its cultivation. It grows well in high places and low places, in rich soil and rather poor soil, and it certainly looks as if lime was a greater factor in the successful growing of alfalfa than either the preparation of the soil or the character of the soil itself outside of its lime content.

Eight years ago alfalfa was practically unknown here, but now this plant seems so essential that farmers are beginning to wonder how they could continue in the dairy business without it. It is a great feed, rich and palatable, and liked by all classes of farm stock. It does away to a large extent with the purchase of concentrated feeds, which are not only steadily advancing in price but are also becoming poorer in quality. Good alfalfa hay has been proven to be equal to wheat bran, pound for pound, as a feed for dairy cows.

But the beauty about alfalfa is its yield. Even in this extraordinarily dry season, the yield has averaged close to three tons per acre and in good seasons the yield averages close to five tons to the acre. No farmer can afford to dismiss the subject of alfalfa growing until he has given it a good trial.

With rich corn silage and alfalfa hay, the cost of feeding cows I believe is only about one-half of what it would be without them. Not only is each a cheap and high-class milk producer, but when fed together, make a rare combination for cattle feeding. It is remarkable how these feeds have cut down the cost of producing milk and we sometimes wonder if anything may be discovered soon that will supplant either feed in the economy of milk production.

Silos are nowadays springing up everywhere like mushrooms. The majority of dairymen are realizing what a valuable asset they are upon dairy farms. It is not so well understood, however, that silage should be put up for summer as well as for winter use. The men who offer the least complaint about dry weather this summer are those who have had silage to feed and there are lots of them to be found, though the number who provide silage for summer feeding constitute but a small per cent of the total number using silos.

There seems to be a somewhat prevailing misconception as to the actual amount of nutrients contained in a hundred pounds of corn silage. Many have an idea that a cow that receives all the silage she will eat, will have an ample allowance of feed for milk production. This is a mistaken notion. Think of the amount of water there is in silage as compared with hay! From the standpoint of actual nutrients per one hundred pounds of feed, silage ranks low because of the amount of moisture contained in it. The economy of feeding silage is found chiefly in the enormous yields per acre and its succulence and palatability.

Straw undoubtedly will be a valuable feed next winter owing to the shortage in the feed supply. Oat straw especially is valuable and should be kept under shelter. Even wheat straw will be appreciated next winter as a valuable substitute for—well—perhaps nothing.

It is well also, to remember that it is economy to feed corn stover shredded. Fortunately the larger dairymen now have their corn husked by machinery which shreds the stover at the same time. But probably those mostly in need of shredded stover next winter have not been in the habit of having it shredded and it will pay them to use hand shredders, if they can do no better. Too much stover is wasted when fed unshredded.

Wisconsin. JOHN MICHELS.

WELL FAILS—COWS FALL OFF ON MILK.

Some time ago there was run in these columns an account of the effect of installing in the barns of a prominent Michigan dairyman individual fountains for the cows. Beginning with the installation the cows began to improve in the quantity of milk. We were impressed with a similar result, only that ours worked in the opposite direction. Our well at the barn "went dry." The back pasture field has a good spring and the cattle must go to it for their supply or drink from a creek, the water of which they do not

appear to like. However, they will take the water from the creek in preference to walking to the back pasture for the better spring water. As a result of this discomfiture of the animals they appear not to get the water they should have, and the milk has been falling off from the time the well at the barn gave out. Other examples also go to show that the water supply, handy for the animals, is not a matter to be slighted by the wise dairyman. He can well afford to do it for the animals will respond better at the pail, besides they will keep in better health than when they have not the necessary amount of moisture to digest their food, keep up the supply of fluids of the body and to provide for the proper distribution of foods to all parts of the body.

TESTING MILK—CAUTIONS AND REMEDIES.

Dairymen who are up with the calendar can go among their cows and point out with positiveness which of the animals are good earners and which are poor. Their word is not to be questioned for they tell you that this cow produced so many pounds of milk which tested such and such per cent. That little Babcock tester has been used. More dairymen are using the testers every week. They are getting popular. But because of the popularity they often get in incompetent hands. The testing is simple and is not beyond the ability of the very ordinary farm hand to perform, providing he be careful. The college man, on the other hand, will get inaccurate results if he is careless about the measurements of milk and acid. The Missouri experiment station has issued a leaflet in which they give some helpful advice to the tester. We are appending herewith some cautions and remedies which the author has found needs especial attention. Here they are:

If a sample coagulates before testing, start a new one adding a few drops more formalin than at first.

Sulphuric acid destroys clothing and burns the flesh, so handle it with care. If spilled on the hands, wash off with water at once.

Keep the bottles hot while testing, and they must be hot when the reading is taken. If they become cold, place them in hot water up to within an inch of the top of the neck and leave for five minutes before reading.

If the test has been properly conducted, the fat column will be clear with no sediment present either below or above. If a white, cheesy sediment shows under the fat column, use a little more acid next time. White foam on top of the fat column is usually caused by hard water and may be avoided by using rain water.

If the fat column is dark or has black sediment below the fat, use less acid or cool the milk.

Keep the acid bottle tightly stopped with a glass or rubber stopper, as sulphuric acid absorbs water from the air and consequently becomes weaker.

In emptying test bottles, first pour out one-half the contents and shake the remainder vigorously to loosen the sediment on the bottom of the bottle. This saves labor in cleaning the bottles as the sediment is very difficult to remove, if allowed to dry on the bottom of the bottle.

Keep the neck of the test bottle clean with a brush.

It is advisable to keep a few extra bottles, one or two extra pipettes and acid measures on hand.

BETTER STABLE LIGHTING NEEDED.

Prof. Plumb, of Ohio, on a trip through Michigan made an examination of the dairy barns between Plymouth and Lansing not long ago and found upon arranging them into three classes that out of 189 barns 130 showed no windows at all, 56 had very few windows and three were fairly well supplied. This does not speak loudly for the progressiveness of Michigan farmers if they are aware of the importance of light in the stables. In the great battle against tuberculosis the health of our cows must not be overlooked. And in the fight to cut down the cost of and improve the quality of our milk product the health of our cows cannot be disregarded. Light influences health. It kills disease germs, sweetens the air and gives the animal a chance. Before the animals are taken to the winter quarters, holes to let in the light should be made in these barns. Put in windows, keep them clean so the light can get through.

Wayne Co.

A. H.

Let Him Alone

Perhaps some maker or agent of common cream separators is trying to sell you a disk-filled or other complicated machine by claiming it is simplest,



52 disks from one common separator exchanged for Dairy Tubular. The maker calls it simple and easy to clean.

most efficient, or most durable. Ask him why he makes such claims when everybody knows that

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have neither disks nor other contraptions, yet produce twice the skimming force, skim faster, skim twice as clean, wash easier and wear longer than common machines. If he tries to dispute these facts, ask him to go with you to the nearest Tubular agent and disprove them. If he refuses to go, just let him alone—his machine is not the kind you want.

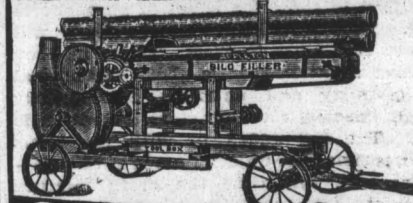
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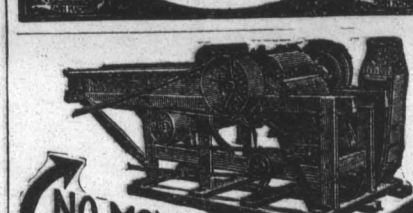
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MICHIGAN

HORTICULTURE

RENEWING THE STRAWBERRY BED.

The first operation after the picking is over is to mow the vines, using the mowing machine if the bed is large enough to warrant it, and the scythe if it is not.

The next step with us is to rake the mulch and dried foliage and stems from the bed. We use a horse rake to get the bulk of this raked up. As we use marsh hay for mulching there is considerable of this material, and last year we tried using it again instead of piling it around trees in sod, as has been our custom, and could see no bad results from its use, though from a sanitary point of view it would not be permissible where fungous diseases were bad. It is also quite fine from the tramping of the pickers, and will not go as far as new hay. We use the new hay on the new beds, reserving the old hay for those that are renewed.

After raking all we can with the horse rake we haul this and then go over the bed again to clean up the balance. The mulch is tramped down so flat between the rows that the horse rake will not pick all of it up unless it is loosened. Neither will the teader reach all of it without striking into the ground. We have found the quickest way is to go along with a fork and turn the hay which remains in the lower places between the rows up over the rows where the horse rake can catch it, and a second raking will take it clean. If one has but a small patch it can be cleaned off nicely with the hand rake.

Some practice burning the beds instead of raking off the mulch. We used to do this, but have lost so many plants by the practice that we have discontinued it. It also sets the patch back somewhat, as the younger leaves which start as soon as the plants are mowed will be burned, necessitating the forming of more. The advantages of burning are that it is more sanitary, and that the bed is more easily cleaned out in this way.

After the bed is cleaned of rubbish the next operation is to work up all the ground about the plants, removing all weeds and leaving a dust mulch over the entire bed. If the bed is small, this may be done by hand. If larger, a cultivator may be used to tear up the ground between the rows, finishing between the plants with the hoe. If the bed is large and the rows long, a good implement is a one-horse plow, which is set about four inches deep and run along each side of the row so as to throw a furrow from the row. If the rows are too wide they may be narrowed in this way by cutting into the row a little. This will leave a backfurrow between each two rows. If we are going to fertilize the bed, now is a good time to scatter fine manure over it, much of which will find its way to the furrows by the side of the rows, where it may be reached by the roots. We usually leave the fertilizing until we have dragged down the ridges with the spike tooth harrow and partially filled the furrows, then if we have fine manure which is free from seeds, we put this directly over the rows by means of a row attachment to the manure spreader, and hoe it in when working out the rows about the plants.

Next comes some good solid work with hoes, cleaning out the weeds about the plants and loosening up the soil. This is best done when the ground is moist, as it is apt to be very firm when it is dry. A hoe with a narrow blade, about four inches, and with two prongs at the back for picking up the ground is the handiest tool we have found for this work.

Where the plants were layered the previous year they are already spaced properly, and it will not be necessary to thin them out or induce runners to set, simply work around the old plants and keep the runners cut. If the plants are too thick it will be well to thin them out with the hoe to from six to ten inches, so as to give room to work around them and allow the plant sufficient space to develop.

The subsequent treatment is to keep the patch clean, by cultivation and hoeing, and to keep surplus runners cut.

Calhoun Co. S. B. HARTMAN.

CONTROLS STRIPED BEETLES.

As I have been a raiser of cucumbers for a number of years, perhaps I can give a little experience which may help Mr. Hartman. In the first place my ground is made rich by a liberal application of barnyard manure every winter, and also the hen manure which I think very valu-

able for the garden. I plow the ground early and keep it worked till about June 10 or 15; have planted as late as the 20th, getting an abundant crop. I mark the ground with my corn marker, which marks three feet apart. I plant on every other mark, making the hills 6 feet apart each way, and putting from 8 to 12 seeds in a hill and covering one-half inch deep, taking pains not to get the seed too deep, as it is a tender seed and will not germinate if it is planted too far down. As soon as the plants are up I use insect powder, sifting it on them while wet with dew, and have never been troubled with the striped bug. I then start the cultivator and hoe, and keep it up till the vines cover the ground. I sell my cucumbers in the local markets, getting 25c a hundred for the small size pickles.

Branch Co. D. B. SCRIPTON.

Another's Experience.

We have been raising cucumbers on a black loam soil, and as this is our first experience we have been using other people's advice.

Some time ago I read an article about how to keep the cucumber beetle away from the vines, and after trying it I find it successful. It said to transplant a small onion in each hill. Our vines are strong and healthy and unless the soil has something to do with it I can see no reason why it would not keep the beetles away in other places as well.

Kalamazoo Co. H. E. GUCHESS.

GETTING LOW HEADED TREES.

I shall set out about 60 standard apple, pear and plum trees next spring, and I desire to know whether I can cut them back so that they will branch about four feet from the ground, or even less? I do not want to do unnecessary climbing when it comes to gathering fruit. I have heard much said about the advantage of dwarf trees.

Emmet Co. GIDEON NOEL.

The desirable low-headed trees are easiest produced when one can get the nursery stock from the nursery without its being pruned "up" to sell. But the fact that one has stock that is pruned high does not destroy his hope of getting low-headed trees, for if pruning the top back heavily does not stimulate adventitious buds to start lower down and develop into main branches where they are wanted, it is not a difficult matter to insert buds into the bark of the young stock at the desired point for starting such a branch. These, of course, are measures that the ordinary man would not care to undertake, although they are by no means beyond his ability to perform; and consequently the best way to get an orchard with low tops is to get the trees with branches started low in the nursery. Our correspondent states that he wants his tops about four feet or less. Today four feet is considered a high top, and the average nursery stock will give him tops at this height. It would be our advice that he start the tops less than four feet, even two feet would not be amiss. Low-headed trees are not dwarfed in the sense that that term is used in horticulture, but are only standard trees with the tops brought nearer to the ground that the work may be easier performed and the evil effects of winds and storms reduced.

CABBAGE LICE CONTROLLED.

Would you kindly state through the columns of your paper what is good to kill lice on cabbage? Is sweet clover good to plow under for fertilizer?

A READER.

Cabbage lice are much affected by seasons, some years they are plentiful because the natural enemies are scarce, while other years they are few because they fail to hatch abundantly, and other predatory insects and fungi are ready to devour those that develop. This season has been rather favorable for the insect, and so complaints are coming to the office of its work, not alone on cabbage, but on other crops as well.

Keep the garden clean and give the plants good culture. They need vigor to overcome the attacks of the hungry lice. If water is forced upon the plants in a strong stream by means of a force pump the damage from the insect can often be fully mitigated. Where this fails from repeated applications, spray with kerosene emulsion, the making of which has been many times described in these columns. This preparation should not be administered after the heads are well developed, but can be used with a great deal of certainty of controlling the pest during the early life of the crop and up to within a short time of its maturity. Another remedy is whale oil soap, which is applied much the same as the kerosene emulsion. Sweet clover is all right to plow under as fertilizer.

Driving along it will be observed that some fields of

wheat

are much better than others, although the soil may be the same and the farmers had an equal chance to obtain the same results. The good field would probably thresh 35 bushels of wheat to the acre, while the other farmer will get about 20 bushels from the poor field. He will be lucky to get that much.

Now the question is, in normal seasons who is to blame for the short crop? No one but the farmer himself. He pockets the loss and struggles along away behind his wide-awake competitor, constantly complaining about short crops and hard times, because he cannot compete with those farmers who produce their crop at less cost. Therefore, it should be the aim of every farmer to get out of the soil all that it can bear. Every bushel raised in excess of normal production means a pure gain and gives him an advantage over his competitors, and this can be accomplished only by the liberal application of our

fertilizers

Some Fertilizers are better than others. Yes, very much better. There are inferior goods on the market. Competition from that source makes our position stronger in the Fertilizer business. It takes one season for the farmer to find out the difference. A wise farmer will not run the risk of getting short crops by experimenting with an unknown brand of Fertilizer of uncertain quality, but will buy the well known goods that have stood the test, the kind that he knows to give satisfaction.

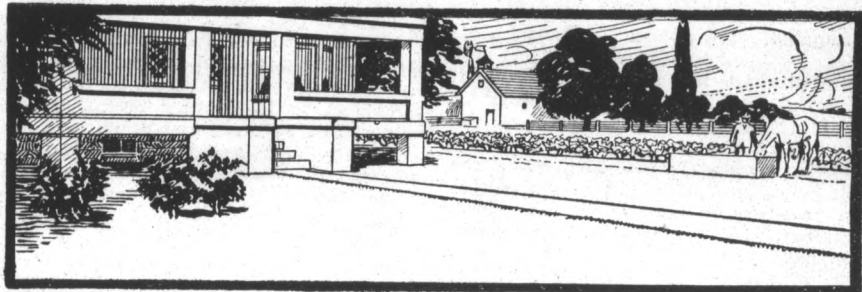
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 The Lawrence Pub. Co.,
 Detroit, Mich.

DETROIT, AUGUST 13, 1910.

CURRENT COMMENT.

Frequent mention has been made in these columns of co-operation made in these columns of in England. the growth of co-operation among producers, and the desirability of its general development throughout the country as a medium for the marketing of the products of the farms. Mention has been made of the example afforded by the farmers of the little country of Denmark in this direction and gratifying reports have been published from time to time of the progress made in the organization and operation of co-operative enterprises by the farmers of this country. But there are many persons who believe that the co-operative enterprises organized by the farmers for the marketing of their products should go further in the process of distribution and thus enable the farmers to sell their products direct to the consumers and thus eliminate the middleman and his charges entirely. This, however, has appeared to be impractical where it has been tried, and in this country, as in others, those co-operative organizations which have been developed along community lines of production and distribution of the products grown through the regular channels of trade have uniformly proven the most successful. Thus for the present, at least, until the co-operative principle has been fully developed and applied along the lines above suggested, it would seem the part of wisdom for American producers to confine their efforts to co-operative selling in bulk rather than direct to the consumer.

But perhaps the ideal condition of affairs would be reached through the similar organization of consumers, who would buy in bulk through their organization from the co-operative organizations of producers, thus saving at both ends of the line and bringing producers and consumers closer together to the advantage of both. Co-operation of this kind has found its highest development in England, where large communities are maintained on the co-operative basis. In some of these communities the co-operative plan is carried into manufacturing industries as well as the distribution of the necessities of life. One of the largest shoe factories in England is conducted on a co-operative basis, while co-operative organizations among workmen for the distribution of necessary supplies are

common. Not the least of the benefits to come from this kind of co-operation is that all members are required to pay for the goods purchased in cash, which fact undoubtedly makes for economy and thrift among the membership and increases their purchasing power so far as the essentials of life are concerned in no small degree. Just now this plan of co-operation among workmen is attracting some attention in this country, as is evidenced by its being included among the subjects of lectures given at Chautauqua. Of course, any movement of this kind is bound to be slow in its development, as the development of the co-operative principle among producers has been slow, but it is a matter for congratulation that the idea is taking root in this country. The co-ordinate development of co-operative selling by producers and co-operative buying by consumers would certainly be an advantage to the producers of the country, as it would solve the vexed problem of bringing producers and consumers into closer touch, and would eliminate a large percentage of the present high cost of distribution.

Due to the efforts of the U. S. Department of Agriculture and the agitation of the subject in the agricultural press of that section, a crusade against the rat nuisance has been started in the New England states. It is more than likely that this crusade, like previous efforts toward the extermination of rats in town and country communities, will prove to be spasmodic and soon die out. However, the annual loss from the depredations of rats on the average farm undoubtedly runs up into a larger sum than the average farmer is aware of. But it is a leak which goes on under the cover of darkness and which is generally so gradual that it is not given the attention which it merits by the average person. Yet it is a leak which is worthy of our careful thought and attention and which we can not afford to overlook. The various well known methods of ridding the premises of these pests should not be neglected, but probably the greatest degree of immunity from their depredations can be secured by proper methods of building, which will exclude them from granaries, cellars and storehouses which may contain grain, fruit or vegetables, which may be eaten or ruined by these troublesome rodents. The American people are too busy with larger affairs to take the concerted action to get rid of the rat pest which has been adopted in some of the more thickly populated countries of Europe, but it would certainly be the part of wisdom to take every precaution to protect their property and premises from their depredations so far as is practicable, and modern materials and methods of building make this an easy matter when the farm buildings are being constructed or remodeled.

HAPPENINGS OF THE WEEK.

Foreign.

An aero race between eight flying machines started from Paris on the seventh. The course is 485 miles long and extends from Paris through Troyes, Nancy, Mezieres, Charleville, Douai and Amiens to Paris, again where the race will end. Six of the eight machines covered the first 85 miles of the trip.

The political situation in Cuba on the eve of the fall elections does not look good to those who have given conditions there a study. The lottery bill passed by congress a short time ago to furnish funds for the government has failed to produce the revenue expected. Many small parties have sprung up and others are being organized for the coming elections. This condition alone makes the future of the island government look dark, and there does not appear a real hopeful mark on the political horizon.

The relations of Spain with the papal powers at Rome continues to be the big question of the country and the church, and the occurrences of the past few days reveals a very bitter spirit between the progressive element of Spain and the conservatives or clericals. At San Sebastian the past week it became necessary to call out the troops to prevent rioting between the opposing elements. The queen mother and the royal children are stationed there.

At Teheran, Persia, nationalists are trying to gain control of the government and an armed conflict between the federal troops and insurgents resulted in many casualties and the latter being routed from their position in the northern part of the city.

Japanese troops are being opposed in Formosa by the natives, but in spite of a strong front, the natives have been compelled to give way and many points of advantage are now in the hands of the Japanese.

The government forces in Honduras were repulsed in an engagement fought at Pedro Pentada, a small place seven miles from Ceiba.

An official of the Swedish government is in America with the hope that he

might discover something of the fate of the Andree balloon and its pilots who started from the most northerly point of Spitzbergen in 1897. Reports have come down from the northern part of North America that Indians have reported seeing a big ship floating through the air, and that many have been in possession of ropes and other materials that corresponded with those of the balloon in which the explorer sailed. The official is about to investigate these reports and determine, if he can, what became of the courageous explorer.

National.

The collision of a passenger train with a locomotive and a caboose on the Northwestern Pacific railway out of San Francisco to Santa Barbara resulted in thirteen deaths. The accident occurred at a sharp curve. A mistake in orders was the direct cause.

The national meeting of the Knight Templars is in session in Chicago this week.

A broad plan for the establishment of stations at different points where expert men will be ready in case of mine disaster is now being realized by the placing of the stations. It is the purpose of the department to insure mining interests and particularly men working in mines to the greatest extent possible. By bringing the most expert men available and keeping them at the stations ready for service the department believes the purpose can be best attained.

A proclamation has been issued by the governor of Louisiana for the assembling of the legislature of that state to vote upon the issuing of bonds for the support of the Panama exposition planned to be held in 1915.

The state tax commission has caused the valuation of property in the state to be raised \$75,000,000, over \$50,000,000 of which has been added to the property of cities of more than 10,000 population.

The cash balance in the state treasurer's hands on the first of August was \$1,250,225.54, as compared with \$52,810.61, the amount on hand a year ago.

As the result of the law passed by the last legislature requiring judges of probate to report as to whether patients for admission to state asylums have any property has been an efficient aid to the state in collecting for the maintenance of those institutions.

It is stated that the census figures taken this spring will be compiled by the government clerks by the middle of October. It is forecasted that the population of the country will approximate 90,000,000 people.

The enlisted strength of the army for the year has been fixed at 87,000 men.

According to the arrangement of the navy department the battleship Washington, the largest of its kind, will make the trip about Cape Horn made by the Oregon during the Spanish-American war.

The big battleship Delaware is now in the North Atlantic trying out her machinery preparatory to the inspection by the government for acceptance.

The 56th annual meeting of the international typographical union is in session at Minneapolis this week.

A monument to the memory of the landing of the Pilgrim Fathers at Provincetown on November 11, 1620, was dedicated last week at that place. President Taft was present and gave an address in which he eulogized the early pioneers.

An attempt is being made to corner the stock of the D. U. R. electric lines centered in Detroit.

Navigation was practically brought to a standstill by a gale over Lake Erie last Friday. For eight hours boats were held up.

The Pacific steamer Princess May went down in the Lynn canal north of Juneau, Alaska, during a dense fog.

NATIONAL CROP REPORT.

The average condition of corn on August 1 was 79.3, as compared with 85.4 last month, 84.4 on August 1, 1909, and 82.1 the average on August 1 for the past ten years.

Preliminary returns indicate a winter wheat yield of about 15.8 bushels per acre, or a total of about 458,294,000 bushels, as compared with 15.8 and 446,366,000 bushels, respectively, as finally estimated last year. The average quality of the crop is 92.6, against 90.3 last year.

The average condition of spring wheat on August 1 was 61.0, as compared with 61.6 last month, 91.6 on August 1, 1909, and 81.9 the ten-year average on Aug. 1.

The average condition of the oat crop on August 1 was 81.5, as compared with 82.2 last month, 85.5 on August 1, 1909, 76.8 on August 1, 1908, and 82.6 the ten-year average on August 1.

The proportion of last year's oat crop in farmers' hands on August 1 was about 6.3 per cent, or 63,249,000 bushels, as compared with 3.3 per cent (26,323,000 bushels) of the 1908 crop on hand August 1, 1909, and 5.8 per cent (50,394,000 bushels), the average proportion on hand for the past ten years on August 1.

The average condition of barley on August 1 was 70.0, as compared with 73.7 last month, 85.4 on August 1, 1909, 83.1 on August 1, 1908, and 85.3 the ten-year average on August 1. About 7,263,000 bushels, or 4.3 per cent of the 1909 crop was on farms August 1.

The preliminary estimate of the area of rye harvested is 1.7 per cent less than last year. The preliminary estimate of yield per acre is 16.3, against 16.1 bushels last year, 16.4 bushels in 1908, and a ten-year average of 16.0 bushels. The indicated total production is 32,088,000 bushels, against 32,239,000 finally estimated in 1909 and 31,851,000 bushels in 1908. The quality of the crop is 92.7, against 92.9 last year.

The acreage of buckwheat is about 816,000 acres or 2.2 per cent (18,000 acres) less than last year. The condition of the crop on August 1 was 87.9, as compared with 86.4 last year, 89.4 two years ago,

and 91.1 the ten-year average on Aug. 1. The average condition of white potatoes on August 1 was 75.8, as compared with 86.3 last month, 85.8 on August 1, 1909, 82.9 on August 1, 1908, and 86.0 the ten-year average on August 1.

The average condition of flax on August 1 was 51.7, as compared with 65.0 last month, 92.7 on August 1, 1909, 86.1 on August 1, 1908, and 88.4 the average on August 1 for the past seven years.

The preliminary estimate of the acreage of hay is 45,005,000 acres, or 1.6 per cent (739,000 acres) less than last year. The average condition of the hay crop on August 1, was 83.0, as compared with 80.2 last month, 86.8 on August 1, 1909, 92.1 on August 1, 1908, and a ten-year average on August 1 of approximately 87.2.

The condition of the apple crop on August 1 was 47.8, as compared with 49.6 last month, 46.3 on August 1, 1909, 52.2 on August 1, 1908, and 55.4 the ten-year average on August 1.

MICHIGAN CROP REPORT.

Wheat.—Aside from a few complaints of smut, correspondents quite generally report wheat of good quality and the yield above the ten year average. The average estimated yield per acre in the state and northern counties is 18, in the southern counties 17, in the central counties 20 and in the upper peninsula 15 bushels. The per cent of plowing done for wheat in the state and central counties is 12, in the southern counties 13 and in the northern counties 7.

The total number of bushels of wheat marketed by farmers in July at 87 mills is 100,758, and at 81 elevators and to grain dealers 130,426, or a total of 231,184 bushels, indicating that the crop of 1909 has been disposed of by the producers. Ninety-eight mills, elevators and grain dealers report no wheat marketed in July.

Rye.—The average estimated yield per acre in the state and northern counties is 15, in the southern counties 14, in the central counties 16 and in the upper peninsula 19 bushels.

Corn.—The condition of corn as compared with an average in the state is 79, in the southern counties 77, in the central counties 82, in the northern counties 84 and in the upper peninsula 81. The condition one year ago was 84 in the state and southern counties, 83 in the central counties and 87 in the northern counties.

Oats.—The estimated yield per acre in the state is 30, in the southern counties 31, in the central counties 32, in the northern counties 26, and in the upper peninsula 25 bushels.

Potatoes.—The condition of potatoes as compared with an average in the state is 72, in the southern counties 70, in the central counties 73, in the northern counties 80 and in the upper peninsula 75. The condition one year ago in the state and central counties was 86, in the southern counties 85 and in the northern counties 90.

Beans.—The condition of beans, compared with an average per cent in the state is 85, in the southern counties 81, in the central counties 90, in the northern counties 91 and in the upper peninsula 70. The condition one year ago in the state was 90, in the southern and northern counties 89 and in the central counties 91.

Sugar Beets.—The condition of sugar beets as compared with an average in the state is 85, in the southern counties 84, in the central counties 87, in the northern counties 90, and in the upper peninsula 73. The condition one year ago in the state and southern counties was 88, in the central counties 89 and in the northern counties 85.

Clover.—The yield per acre of clover hay in tons, in the state is 1.31, in the southern counties 1.34, in the central counties 1.48, in the northern counties 1.01 and in the upper peninsula 1.21.

Timothy.—The yield per acre of timothy hay in tons, in the state is 1.15, in the southern counties 1.20, in the central counties 1.26, in the northern counties 0.86 and in the upper peninsula 0.96.

Pasture.—The condition of pasture as compared with an average in the state is 64, in the southern counties 63, in the central counties 68, in the northern counties 65 and in the upper peninsula 54. One year ago the condition in the state was 75, in the southern counties 76, in the central counties 79 and in the northern counties 67.

Apples.—Severe frosts, ravages of insects and the extremely dry and hot weather during the month of July have so injured the apple crop that this year's yield will be the lightest in the past ten years. The prospect for an average crop in the state, southern counties and upper peninsula is 24, in the central counties 25 and in the northern counties 22. One year ago the prospect was 53 in the state, 43 in the southern counties, 61 in the central counties and 82 in the northern counties. The winter varieties that promise best, are in their order: Baldwin, Northern Spy, Ben Davis, Russett, Wealthy, Wagner and Talman Sweet. Of the early sorts the most promising are Dutchess, Red Astrachan, Fameuse, Maiden Blush and Pippin.

Peaches.—The prospect for an average crop of peaches in the Michigan fruit belt is 39 per cent and in the state 49. One year ago the prospect was 77 and 67 per cent respectively. The varieties that promise best are in their order: Elberta, Crawford, Hill's Chili, Gold Drop, Kala-

CROP AND MARKET NOTES.

Genesee Co., Aug. 6.—Refreshing showers have visited this section within the past two weeks and all vegetation has started growing anew. Sugar beets stood the dry weather finely and show good growth. Corn now adding daily to its height. While the showing is not equal to some years the yield will not be bad as a whole, provided further conditions

prove favorable. Rains will help beans and late potatoes which are now doing well. Pastures better than a month ago but the usual mid-summer shortage is reported. Weather cool for a few days following a severe hot spell.

Oscoda Co., Aug. 5.—This summer has been very hot, dry and windy, and still continues dry with only light scattering showers, not nearly enough for growing crops. Hay crop was very light but of good quality and secured in fine shape. Wheat and rye fairly good, but no threshing yet so cannot tell what yield will be. Oats very short and light on sandy soil, a little better on heavy soil but not up to the average. New seeding all gone on account of drought and grasshoppers, which are very numerous in different localities. Corn looking good in fields where a good stand was secured, but many fields have a poor stand, it having been destroyed by cutworms. Potatoes looking well but in need of rain. The bugs have been very troublesome this season. The cucumber stand is very uneven, some fields having a fairly good stand and others very poor. Much replanting was done, which will make them late, picking has been started by those having the best stand. All kinds of fruit is very scarce. Where any apples are to be found, they are dropping very badly. Milk supply shortening up, as the pastures have been dried up for a long time, but cattle are looking well yet. Cattle, 2½@4c; hogs, dressed, 10c; butter, 20c; butter-fat, 27c; eggs, 17c per doz.

Emmet Co., Aug. 5.—There were several fair showers during July which kept pastures from drying up entirely and gave quite a good growth to second crop clover. August 4 we had a good shower that has wet things down good. Corn appears to be growing nicely but the stand is uneven. The oat and pea crop will be light owing to unfavorable conditions prevailing during June. The crop of early potatoes will be light. Later planted fields are promising better results. Winter wheat was exceptionally good, both as to yield and quality. Oat and pea harvest under way. No threshing done yet in our neighborhood.

Oakland Co., Aug. 6.—Harvesting practically completed and the threshing machines busy. Grain yields are generally light, although there are some good yields of wheat and some oats that yield fairly well, although the oat crop averages the lightest in many years, if not within the memory of the "oldest inhabitant." Exceedingly dry weather has prevailed since early June, relieved in isolated localities by local showers during the past two weeks. Pastures and all growing crops have been greatly benefited in such favored localities, but no general rains have occurred, and the prospects are very poor for normal yields in sections which were not covered by the showers which have given temporary relief where they have fallen. Early potatoes are very small and the late crop will need rain soon for normal development. Corn has not yet suffered so seriously that rain would not relieve the situation, but unless rain falls soon it must be a short crop as ears are now setting. Little preparation being made for fall sown grain as yet. Clover seedings are generally spotted and an entire failure in many fields. Farmers are beginning to let go of their wool at prices ranging around 22 and 23 cents for medium grades. Little stock going to market at this time.

Clare and Northern Isabella Co.'s, July 27.—Very dry weather with an occasional light shower. Haying nearly done and a rather light crop. Wheat nearly cut and promises a good yield. Beans looking well, also corn, but suffering for rain. Early potatoes a failure with a poor outlook for late ones. Huckleberries very scarce and high. Butter, 23c; eggs, 16c; wheat, 34c; oats, 32c.

Lapeer Co., Ind., Aug. 5.—Continued dry, very dry with hot sun. No heavy rain since May, only light showers. Wheat good quality and yield 20 to 32 bu., good average generally over the state. Oats and hay light crops; corn good but cannot mature a crop until it rains. Potatoes, prospect good for late crop if it rains soon. Our late crop was planted last of June and can mature in September with good conditions. Pastures short and some are feeding bran regularly and hay once a day. Cowpeas did not come up for two weeks and now growth is very slow, too dry, only barely live. Madison, Ind., reports 23 days rain in July, some corn could not be cultivated; oats could not be cut for ten days after they were ripe, a good crop but could not harvest it. Seymour, medium crop, wheat good yield but quality not the best. Columbus, corn and wheat an extra prospect, oats medium. Extreme dry weather prevails only in the north section of state. Wheat, \$1; potatoes, \$1; butter, 30@35c; eggs, 21c per doz.

Williams Co., Ohio, Aug. 2.—The weather is very hot and sultry. Have had several heavy rains and one severe electrical storm which did considerable damage. The wheat is all harvested and a good deal threshed, turning out fairly well for the amount of straw. Grasshoppers destroyed the oat crop pretty badly. The early potatoes are not a very good crop, most of them taking second growth. The late potatoes look as if they would be a good crop. Plums and peaches are getting ripe, blackberries are a fairly good crop for this year. Grasshoppers are also destroying the young clover and damaging clover seed.

Polk Co., Wis., Aug. 1.—We have had a rain on an average of once a week in July. Haying is through with crop ranging from one to 20 loads on farms. Very good wheat. Barley is about a total failure, oats a fair stand. Corn is very good for this time of year, with a good prospect of a lot of ears. Potatoes are not very good. Some grain is cut. Wheat, \$1.10; oats, 50c; barley, 65c; rye, 70c; new potatoes, \$1; butter, 30c; eggs, 12½c a dozen. A few farmers have plowed their hay fields and either seeded to millet or corn, so as to get enough roughage for the stock.

GRANGE

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

WHY FARMERS NEED ORGANIZATIONS.

Some Points to be Emphasized at this Month's Rallies.

Farmers should organize because their interests are so nearly identical.

Farmers have interests which should be protected and this can best be done in an organized way.

Organization presents the best methods of business dealing. The farmers should have the best and the Grange affords that.

Organization not only demands attention, but commands it as well.

Organization of capital and labor has made it possible for the farmers to obtain greatest results in an unorganized way.

Organization demands organized competition.

Organization is necessary to progress, so farmers must have a progressive organization.

Organization insures development; it is a step forward for the farmer.

Organization brings industries together to devise ways and means to better their conditions; why will not the same association benefit the farmer?

By organization man has been able to ascend the scale of civilization, so by organization will he be able to ascend to a still higher plane of progress and prosperity. Farmers are men and agriculture by God's will is the greatest calling of man. Protect it then by organization.

Agricultural industry furnishes the majority of the nation's wealth and is the basis of all wealth. Why, then, should not agriculture be the best protected of all industries? Organization insures protection.

Organization of interest insures respect, influence, recognition and power; the farmer needs these things that he may be able to receive a square deal.

By organization in a compact, conservative body the farmers can secure wise and equitable legislation, and be assured that the interests of agriculture are fairly represented where lawmakers meet.

The farmers in every community should have a permanent economic organization which recognizes the rights of all men and insures to them justice, and to the wife equal influence and dignity, and where all may meet in advancing a common cause.

To the American farmer no organization can be more highly recommended than the Grange, because it furnishes the social, educational, fraternal, co-operative and legislative features so essentially necessary in completing a well balanced farmers' organization in whose meetings all can find something worthy of their effort.

THE GRANGE IN OTHER STATES.

Massachusetts Granges Defend Birds. The most distinct victory in legislation which the Granges of Massachusetts have ever achieved was in the defeat of house bill No. 395, which proposed to let down the bars on the present excellent bird law of Massachusetts and permit spring shooting of seven different bird species. This bill had tremendous backing, including practically all the sporting interests of the state, and for a time there was every indication that it would win out, especially when the legislative committee on fisheries and game reported unanimously in its favor. But toward the last the friends of the birds throughout the state became aroused, and nearly every subordinate and Pomona Grange in Massachusetts took action in behalf of the birds. Letters by the thousands were written to the representatives at the statehouse, while the state was fairly flooded with literature. On the morning of the debate it was a general topic of conversation around the statehouse that Grange influence on legislation was to be given a good test that day in view of the active position the Order had taken in the matter. The debate lasted nearly all day and was very spirited, resulting in a victory for the birds by a roll call vote of 122 to 85 and the complete defeat of the fisheries and game committee. State Master Charles M. Gardner was one of the most vigorous defenders of the birds and spoke on the floor very earnestly against any letting down of the present protective law on birds, which are so essential to agricultural success and progress.

Washington Wants Change in National Grange Representation.

At the last meeting of Washington State Grange, held early in June, the following resolutions relative to a change in National Grange representation were unanimously adopted.

Whereas, State Granges representing a majority of the membership have now en-

dorsed a change in the basis of representation in the National Grange, and a majority of these State Granges have endorsed the federal plan first proposed on behalf of the Washington State Grange, and because it is desirable that there be unity of action upon the part of the several states, and that the change should be established without delay, therefore, resolved, that the endorsement of the federal plan of representation is hereby reaffirmed; and that the worthy master and executive committee are hereby instructed to take up the consideration of this matter and confer with the masters and executive officers of the National Grange and all State Granges to the end that a definite plan of action may be agreed upon and presented at the next meeting of the National Grange.

Resolved, further, that as soon as a plan shall have been endorsed by five State Granges, the executive committee is hereby directed to formally ratify the same on behalf of the Washington State Grange, and immediately to submit the proposed measure to the subordinate Granges for endorsement; also that the masters and secretaries of all subordinate Granges in this state are hereby urged to secure prompt action in their respective Granges, and to return to the state secretary official reports of said action in order that our national delegates shall have the evidence to submit to the National Grange at next November's annual session; also that our National delegates are hereby instructed to present this evidence to the National Grange immediately on assembling, with demand for immediate action thereon with a view to securing the immediate admittance of the additional delegates, to the end that the Patrons of all states shall be equitably represented at the next National Grange session and all sessions thereafter; and that these additional delegates shall be selected in accordance with the plan agreed upon immediately after the subordinate Granges have formally endorsed the plan, and that their per diem and expenses, in accordance with the terms of payment to all other national delegates shall be guaranteed, advanced, or paid by the State Granges, provided such payments are not secured from the National Grange, and that this resolution shall be the authority for the payment of such amounts out of the State Grange treasury.

COMING EVENTS.

Grange Rallies and Picnics.

Northern Lenawee Co. Grange and Farmers' Clubs, at Sand Lake, Putnam's Landing, Saturday, Aug. 13.

Kent Co. Pomona, at Silver Lake, Cannon township, Kent Co., Wednesday, Aug. 17.

Pomona Meetings.

Charlevoix Co., with Norwood Grange, Thursday, Aug. 18.

Grand Traverse District Grange, at Long Lake town hall, Wednesday and Thursday, Sept. 7 and 8.

Western (Ottawa Co.) with West Crockery Grange, Saturday, Aug. 13. L. W. Oviatt, state speaker.

FARMERS' CLUBS

ANNUAL PICNICS.

Ray Farmers' Club, of Macomb Co., will hold a basket picnic meeting on August 18, at the home of Walter Green.

The Wise Farmers' Club, of Isabella Co., will hold their eleventh annual picnic at Stevenson Lake, six miles southwest of Clare, on Tuesday, August 23. Augustus Lynch will give the address of welcome and Senator Dickinson, candidate for Lieutenant Governor, will respond, and the several candidates for governor will do the talking. Everybody welcome.

The Shiawassee County Association of Farmers' Clubs will meet at McCurdy park Wednesday, August 17. An excellent program has been provided, consisting of several addresses by prominent men on practical subjects and papers by prominent club members, some of which will deal with the problems which confront the ladies in the farm home. Good musical and literary features will abound, and altogether the program is an especially attractive one, which should make the day most profitable as well as most enjoyable to Shiawassee county Club members.

CLUB DISCUSSIONS.

Children's Day.—The June meeting of the Ray Farmers' Club, of Macomb Co., met with Mr. and Mrs. J. A. Priest on Thursday, June 9. About 70 congregated to listen to the recitations and songs of the little folk. These were interspersed by two violin solos by Mr. O. J. Smith, of Romeo, and two vocal solos by Mr. Edward Newberry, also of Romeo. After the program, the crowd assembled in the dining room and did justice to the many good things prepared by the farmers' wives. After supper all adjourned, feeling themselves fully repaid for the afternoon spent so pleasantly. The next meeting will be held August 18, in the form of a basket picnic, in the woods at the home of Walter Green.—Hazel M. Green, Cor. Sec.

Young People's Day.—One of the most enjoyable gatherings of the North Marshall Farmers' Club was held with Mr. and Mrs. John Woodworth, July 20. It was young people's day and the meeting held with the eldest couple in the club's membership. They have traveled life's journey 49 years together. It mattered

not that their snug little home was a modern bungalow, for the spacious carriage barn had been transferred into an excellent dining hall where the 70 guests were served at small tables by the young ladies with a small menu known to this Club. After the social dinner hour the tables were cleared away and the dining hall was converted into an entertainment hall where an excellent program was given, the host giving two of his entertaining recitals. The water came from a well that the old, old poem did justice when it told of the "old oaken bucket" and the day was one long to be remembered. The August meeting is with Mr. and Mrs. Edward Kay, August 17.

The Institute Worker.—The Maple River Farmers' Club, of Shiawassee Co., held its July meeting at the pleasant home of Mr. and Mrs. Elmer Waugh. The attendance was one of the largest for some time and the program full of splendid discussions. The busy harvesting season over, a large number of visiting friends from the city and other Clubs were present and greatly helped in their able discussions of timely questions of economic importance. Hon. A. B. Cook gave an excellent talk on "The True Function of the Institute Worker," in which he somewhat surprised his friends in saying that all the institute workers were not the most progressive farmers. It is a hard matter to get a real busy farmer to travel over the state and attend institutes at the price paid. The farmer who is making a great success of his business is a business farmer and his work occupies all his time.

"The Farmer's Dietetic Errors" was the subject of a very thoughtful and suggestive paper presented by Mrs. Nettie Rush Reynolds. The farmer is not as careful in the selection of eatables as he ought to be. There are two kinds of food required to build up and sustain the working of the body. Carbohydrates and nitrogenous food. Farmers eat too much meat during the summer months. The French are less inclined toward eating large amounts of meat and consequently are more free from diseases.

The High School.—The program for the remaining part of the afternoon was furnished by the young people. Harold Richardson acting as chairman. "My four years' experience in high school" was the theme of an essay read by Vera Richardson, who spoke of numerous incidents relative to high school life. High school opens the door to higher education. No one should feel that a high school course fits them for life's work. It simply prepares them to lay plans for future development of the mind.

The Passion Play.—Vivian Bilhimer read an excellent paper on the "History of Passion Play," in which she reviewed a biblical incident showing its influence upon the mind. No other incident has more permanently fixed itself and directly influenced the mind of mankind than the passion play. Miss Bilhimer's paper was ably composed and well delivered.

The Young People in Club Work.—Harold Richardson gave a short talk on the part young people should have in Club work. He expressed gratitude that a part of one month had been recognized as a young peoples' day and they had been given an opportunity to show their interest in Club work. The future Club material lies in the young people. If they are allowed an opportunity to take part on the program they will grow up feeling they have a part to perform on every monthly occasion.

"Entertaining Friends" was the subject of a splendid paper by Mary Hardy. We should endeavor to make our visiting friends feel they are at home when visiting us. They should not be made to think they are a burden and must perform daily work. Have friends visit you when you are least busy and have time to spend with them.

The Dairy Cow vs. Poultry.—The Conway and Handy Farmers' Club, of Livingston Co., was very pleasantly entertained at the home of one of the new members, Mr. and Mrs. Fred Rathbun, July 29. Not a large gathering on account of oat harvest, but a goodly number of both members and invited guests. The subject, "Which is the most profitable investment, \$75 in pigs, cows or hens?" Thomas Sharp being absent, was opened by Stephen Horton, who favored the cow; the cow has done more for the farmer and farms than any one thing. Hogs were all right in their place, but were hardly ever in their place, could carry them feed three times a day or they would squeal on you, but of course there was good money in hogs at present prices. Hens would do well for him; by digging up the crops, eating all he would feed them, lay a few eggs, then set the rest of the time. H. Benjamin gave the hens more credit but thought the cow a good investment. Mrs. Croop favored hens. F. Curtis thought the cow by all means the best to keep the farm and expenses up. F. Rathbun favored cows on account of increase and steady income. E. Collier thought if he only had \$75 to invest he would buy a hen as he would not want a cow at those low figures.

The Country Mother's Vacation.—Mrs. Curtis gave a fine paper on "The vacation for a weary mother with children." She mentioned three classes, wealthy and working mothers of the city, and country mothers. Wealthy mothers were weary from social duties and went to the summer resorts and sea shore. Mothers that work in factories or take work home would like to go to a quiet place where they could be free from their tiresome task and have good food; nothing could be better for those mothers than to see the children growing rosy and their happy faces, by what nature provides. The remaining class often stay at home on duty or go away and worry. Don't blame a husband because she has lost her beauty, most men would prefer her not to be a crank on housework, but make a home. If she, too, could go to a quiet place where there were no white dresses, and rest with nature and the children. Mrs. C. Fuller thought to go out with the children was a change from daily home work and was in a way very restful. Others followed by short talks. The August meeting of the Club will be held at the home of C. Fuller and wife.

MARKETS

DETROIT WHOLESALE MARKETS.

Grains and Seeds.

Wheat.—The winter wheat crop just harvested in this country, quantity and quality considered, is perhaps one of the best ever grown; on the other hand, the spring wheat does not promise well, and the government crop report has cut off from the prospective yield of that variety more than was added to the winter kind because of the latter's improvement the past month. The final conclusion of the figures of the federal reporters is, therefore, favorable to the farmers and the bulls. But just now there is little prospect for any material advance on account of the rapid selling by farmers in sections where threshing is done. The situation in Chicago is burdensome to the bulls for they cannot unload the fast multiplying offerings as they come in from every wheat growing quarter to the west and southwest. The little active buying on the part of western millers does not absorb the offerings scarcely any and the demand from abroad being dull, leaves the trade where better values cannot be immediately expected, although crop conditions might warrant such a change. One year ago the price for No. 2 red wheat was \$1.05½c per bu. For the past week quotations were:

	No. 2	No. 1	Red.	White.	Sept.	Dec.
Thursday	1.03	1.03	1.03½	1.06½		
Friday	1.04½	1.04½	1.05	1.07½		
Saturday	1.03½	1.03½	1.04	1.07		
Monday	1.02½	1.02½	1.03½	1.06½		
Tuesday	1.02½	1.02½	1.03½	1.06½		
Wednesday	1.02½	1.02½	1.03	1.06		

Corn.—During the month of July the corn crop diminished in prospective yields, according to the government report, and the observations of the reporters appears to have had a stiffening influence upon the trade. The decrease in points is over five for the country; Michigan's crop went back two points. The greatest declines were reported from the western states of the corn belt and the best crop will be harvested in the south should the predictions of the reporters prove true and conditions continue till harvest time. One year ago the price for No. 3 corn was 71c per bu. Quotations for the past week are:

	No. 2	No. 2	Mixed.	Yellow.
Thursday	66½	68½	67	69
Friday	66½	68½	66½	68½
Saturday	66	68	66	68
Monday	66½	68½	66½	68½
Tuesday	66½	68½	66½	68½
Wednesday	66½	68½	66½	68½

Oats.—The crop is given by the federal authorities as one point below the ten-year average, and about a half point below the mark for July 1. Standard oats have shifted to the new-oat grade which accounts for the change in the quotations for standard given below. The trade is firm. Michigan's crop has depreciated during the month. One year ago the price for No. 3 oats was 53c per bu. Quotations for the week are:

	Standard.	Sept.
Thursday	42½	37½
Friday	42	37½
Saturday	37½	37½
Monday	37½	37
Tuesday	37½	37
Wednesday	37½	37

Beans.—The state crop report gives the conditions of beans as five points below the condition a year ago. The central and northern counties appear to have the best crop. The local prices, which are nominal, were advanced for cash beans on Friday. Quotations for the week are:

	Cash.	Oct.
Thursday	\$2.32	\$2.10
Friday	2.35	2.10
Saturday	2.35	2.10
Monday	2.35	2.10
Tuesday	2.35	2.10
Wednesday	2.35	2.10

Cloverseed.—On Tuesday there was evidence of activity on the local market and the price which had been advancing for the past fortnight dropped 15c. The crop reports coming to this office indicate that the yield over much of the state will be surprisingly small, for the dry weather was with us in just the right time to do damage. Quotations for the week are:

	Prime Spot.	Oct.
Thursday	\$8.10	\$8.10
Friday	8.40	8.40
Saturday	8.50	8.50
Monday	8.50	8.50
Tuesday	8.35	8.35
Wednesday	8.50	8.50

Rye.—The market is steady and lower. The nominal quotation is 74c per bu., which is 2c below the price of a week ago.

Flour, Feed, Provisions, Etc.

Flour.—The flour trade is active at last week's figures, and the mills are very busy on contracts to be filled. Quotations are:

Clear	\$4.60
Straight	4.80
Patent Michigan	5.10
Ordinary Patent	4.90

Hay and Straw.—The quotations below are for new hay which accounts for the change from the figures of last week. Market is firm and supply short. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$16@16.50; No. 2 timothy, \$15@15.50; clover, mixed, \$15@15.50; rye straw, \$7@7.50; wheat and oat straw, \$6.50@7 per ton.

Feed.—All grades steady with last week. Carlot prices on track: Bran, \$23 per ton; coarse middlings, \$24; fine middlings, \$27; cracked corn, \$27; coarse corn meal, \$27; corn and oat chop, \$24 per ton.

Potatoes.—The potato crop of the country is about 10 points below last year's crop according to the estimates of the crop reporters of the federal government. Michigan's margin is larger still. Local trade is firm. They are quoted at 75c per bu.

Hides.—Steady. No. 1 cured, 10c; No.

1 green, 8c; No. 1 cured bulls, 9c; No. 1 green bulls, 7c; No. 1 cured veal kip, 10½c; No. 1 green veal kip, 8c; No. 1 cured calf, 14½c; No. 2 kip and calf, 12½c; No. 1 horeskins, \$3.50; No. 2 horeskins, \$2.50; sheepskins, as to amount of wool, 25@75c.

Provisions.—Mess pork, \$23; family pork, \$23.50@25; medium clear, \$22.50@23.50; smoked hams, 16½c; dry salted briskets, 14½c; shoulders, 14c; picnic 12½c; kettle rendered, 13½c per lb. hams, 13c; bacon, 18@19c; lard in tierces, 25@75c.

Dairy and Poultry Products.

Butter.—Creamery butter went up another cent the past week. The failure of the pasture lots is cutting down the offerings. Dairy offerings are steady at former prices. Quotations are: Extra creamery, 29c; fruits, do., 28c; dairy, 23c; packing stock, 21c per lb.

Eggs.—Eggs are coming to the market in good supply from every source and the demand is large enough to keep the deal steady and firm at the price that prevailed for a month back. Fresh eggs, case count, cases included, are quoted at 17½c per dozen.

Poultry.—Broilers are steady at 17@18c per lb; hens show an advance and are now quoted at 15½@16c; old roosters and stags are down to 10c; ducks lower at 14@15c, and also geese at 11@12c, while turkeys are higher, now selling at 18c per lb.

Cheese.—Michigan, late made, 15c; Michigan, fall made, 17½@18c; York state, 18@18½c; limburger, old, 17@18c; Swiss, domestic block, 23@24c; cream brick, 16@16½c.

Calves.—Steady. Choice to fancy, 11@11½c; ordinary, 10½c.

Fruits and Vegetables.

Apples.—Indications are that the fall and winter apple crop will be below the yield of 1909. They are selling at \$3.50@4 per hamper.

Cabbage.—Steady. Selling at \$1.75 per crate for new.

Blackberries.—Market steady; supply is limited. Selling at \$3.50@4 per bu.

Huckleberries.—Selling at \$3.50@4 per bushel.

Peaches.—Of fair quality. One-fifth bushel basket quoted at \$25.

Vegetables.—Beets, 25c per doz.; carrots, 20c per doz.; cucumbers, 40@50c per doz; eggplant, \$1.25@1.50 per doz; green onions, 10@12c per doz; head lettuce, 75@90c per bu; mint, 25c per doz; parsley, 20@25c per doz; radishes, 15c per doz; spinach, 65c per bu; turnips, 40c per doz; watercress, 20@25c per doz; wax beans, \$1.25 bu; pieplant, 20c per dozen.

OTHER MARKETS.

Grand Rapids.

Fruit ranged as follows on the city market Tuesday morning: Apples, 80c@1.50; pears in small baskets, 25c; plums, 90c per half bu; peaches, \$1@1.25; blackberries, \$2.25; red raspberries, \$2.50. First home-grown osage melons appeared, bringing \$2.50 per bu. First home-grown outdoors tomatoes were on the market, selling at \$1.75@2. Other vegetables range as follows: Butter beans, 75c; celery, 15c; onions, 12c; sweet corn, 12@15c; cucumbers, 15c doz. or 75c bu; cabbage, 80c; red cabbage, \$1; squash, 75c; potatoes, 80@90c. Dressed hogs are off half a cent, bringing 11½c. Live poultry is unchanged at 12@13c. The wheat market is off 1c; No. 2 red quoted at 94c; No. 1 white, 93c. Farmers are getting \$15@17 per ton for hay. The egg market is unchanged at 17@17½c. Both dairy and creamery butter are up 1c, dealers quoting the country merchants 23@29c respectively.

New York.

Butter.—Prices fractionally higher with market firm at the advance. Creamery specials quoted at 29½@29½c; extras, 28@28½c; thirds to firsts, 24@27c.

Eggs.—Market firm. Nearby eggs are quoted at 28@32c; fresh gathered extras, 20@22c; firsts, 18½@19½c per doz.

Poultry.—Market irregular like demand. Live quoted as follows: Western broilers, 18c; fowls, 15c; turkeys, 16@20c per lb.

Chicago.

Wheat.—No. 2 red, \$1.00½@1.02½; September, \$1.01@1.01½; December, \$1.04½. Corn.—No. 2 mixed, 64½c; September, 63½c; December, 60½c.

Oats.—No. 3 white, 36½@38c; September, 36½@37c; December, 38½c.

Butter.—Market strong with a tendency toward higher values, an advance of 2c being made in creamery the past week. The strengthening influence is the effect which the dry weather is having upon production. Quotations are: Creameries, 25@29c; dairies, 23@26c.

Eggs.—Market steady and higher for good stock. Prime firsts, 18c; firsts, 17c; at mark, cases included, 10@14c per doz.

Hay and Straw.—Market steady with the extreme values of the past few weeks still ruling. Prices given below are for old hay. New hay beginning to come in and quoted \$3@4 per ton lower than old. Quotations are: Choice timothy, \$21@21.50; No. 1 timothy, \$19.50@20.50; No. 2 do and No. 1 mixed, \$18@19; No. 3 do and No. 2 mixed, \$14.50@17.50; rye straw, \$9@10.50; oat straw, \$7.50@8; wheat straw \$6.50@7.50.

Potatoes.—Receipts light, prices showing a sharp gain. Choice to fancy new, \$2@8.5c per bu; fair to good, 75@80c.

Beans.—Prices show another slight increase and the market has a firm undertone. Choice hand-picked are quoted at \$2.48@2.52; fair to good, \$2.45@2.47; red kidneys, \$3.75@4.25 per bu.

Wool.—Trade is fairly active and prices are held firm. Unwashed fleeces from all bright wool sections are quoted as follows: Fine heavy, 13@15c; fine delaine, 20@22c; fine medium, 22@24c; medium, 23@25c.

Boston.

Wool.—The growers who held their wool last spring can take courage for conditions are growing more favorable to the seller. The manufacturers are not discriminating between different kinds and this would show a general demand for the made product. The following are

the leading domestic quotations on the market here: Ohio and Pennsylvania fleeces: Delaine washed, 34c; XX, 30c; fine unmerchanted, 24@25c; ¼-blood, 27@28c; ¾-blood, 28@29c; delaine unwashed, 26@27c; fine unwashed, 20@21c. Michigan, Wisconsin and New York fleeces: Fine unwashed, 19@20c; delaine unwashed, 24@25c; ¼-blood unwashed, 27@28c; ¾-blood unwashed, 27@29c; ¼-blood unwashed, 26@27c. Kentucky, Indiana and Missouri: ¾-blood, 23@27c; ¼-blood, 26c.

Toledo.

Clover Seed.—Clover seed suffered a break of 27½@30c on Tuesday, while alsike was off 20c. Closing quotations were: Cash, \$8.30; October, \$8.32½; alsike cash, \$8.30; August, \$8.30.

Elgin.

Butter.—The butter trade is firm at 29c, which is an advance of 1 cent since last week. The output for the week amounted to 918,000 lbs., compared with 944,600 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

August 8, 1910.

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

Receipts of stock here today as follows: Cattle, 125 cars; hogs, 8,800; sheep and lambs, 6,200; calves, 1,000 head.

With 125 loads of cattle on our market here today, the feeling on all grades was much better, in fact, the cattle all selling from 15@25c per hundred weight higher than last week, with the exception of hold over cattle, which it was impossible to raise the price on.

We quote: Best 1,300 to 1,500-lb. steers \$7.25@7.60; good prime 1,200 to 1,300-lb. do., \$6.85@7.25; best 1,100 to 1,200-lb. shipping steers, \$6.35@6.90; medium butcher steers, 1,000 to 1,100 lbs., \$5.40@5.90; light butcher steers, \$5@5.25; best fat cows, \$4.75@5.25; fair to good cows, \$4@4.50; common to medium do., \$3@3.75; trimmers, \$2.50@3; best fat heifers, \$5.75@6.25; good fat heifers, \$4.75@5.50; fair to good do., \$4.25@4.50; stock heifers, \$3.75@4; best feeding steers, \$4.75@5; medium to good do., \$4@4.25; stockers, all grades, \$3.75@4; best bulls, \$5@5.50; bologna bulls, \$4@4.25; light thin bulls, \$3.75@4; best milkers and springers, \$5@6.50; common to good, \$25@35.

The hog market opened 15@20c higher than Saturday's close and all selling that was yarded in time for the market.

We quote prices as follows: Heavy hogs, weighing from 250 lbs. up, \$8.85@9; mixed and medium, \$9@9.20; yorkers, \$9.30@9.40; pigs, \$9.50@9.65; stags, \$6@6.75.

The lamb market opened active and about a quarter higher than last Monday; most of the best lambs selling \$7@7.25. Yearling lambs \$5.75@6. Look for about steady prices balance of week. Sheep were steady today, and the prospects are for about steady prices the balance of the week.

We quote: Spring lambs, \$7@7.25; wethers, \$5@5.50; cull sheep, \$2.50@3.50; bucks, \$2.50@3; yearlings, \$5.75@6; heavy ewes, \$3.90@4; handy ewes, \$4.25@4.60; veals, choice to extra, \$9.25@9.50; fair to good do., \$7.50@8.50; heavy calves, \$6@7.

Chicago.

August 8, 1910.

Received today: Cattle, 24,000; Hogs, 32,000. Same day last year: 22,053; 38,985. Received last week: 50,185; 92,916. Same week last year: 42,090; 72,999.

Following last week's sharp price upturn in cattle trade sellers were in expectancy of a reaction today but this did not materialize. Receipts of 24,000 were quite moderate and included 5,000 western rangers. A strong demand for good to choice native steers afforded prices firm to 10c higher than last week for these grades, while medium and plain natives were unchanged and the western rangers sold 10c higher. General demand for steers reflected all of the strength noted last week, good indication of a satisfactory beef situation in beef trade both locally and in eastern quarters. Quality of marketings continues plain although the influx of thin western rangers is not as heavy as last week. The same applies also to cornbelt grass-fed stock. Rains in sections where moisture has been badly needed seem to have put a check on feeders' desire to liquidate and this is proving a material aid in dispelling a bearish tendency in the market. Prime beefs topped at \$8.50 and a fair quota of choice grades went at \$7.75@8.25. Hogs were marketed in quite moderate volume, a run of 24,000 showing up today instead of an expected supply of 30,000. Prices were boosted 10@15c higher than last Saturday, a \$9 top being registered for light weights while choice butchers sold at \$8.90, but best price for heavyweights was \$8.25 and the poor and rough heavy packers ranged down to \$7.25. Average weight of hogs last week, 254 lbs. was heaviest since week of Sept. 14, 1907, and stood 5 lbs. heavier than two weeks ago, while comparing with 231 lbs. a year ago. Sheep and lamb supplies at the outset of the week were 32,000. Native muttons held steady while breeding stock made firm rates. Western sheep sold 10c lower than last week and native and western lambs went at 25c decline. Best lambs sold to slaughterers at \$6.75, while 66 lb. ewes, bought for breeders, cost \$7. Common to good native lambs went at \$4.75@6.50 and choice Idaho lambs made \$6.75. Native yearlings topped at \$4.85, western breeding ewes at \$5.50, and native ewes for slaughter sold largely at \$3.75@4.35.

Cattle receipts on Monday last week were of good proportions, exceeding 23,000 head, but they were moderate in volume at other times, and much of the recent decline in prices was recovered. Heavy rains in dry regions throughout

the west were a boon to cattle feeders, as they revived the pastures, which were in wretched condition, and this stopped the widespread liquidation of thin cattle. There were rather general advances of 50@60c over the low points a week earlier, and extreme instances showed a rise of as much as 75c. Native fed steers went chiefly at \$5.50@7.60, with the better class of heavy shipping cattle taken at \$7.65@8.50, and not many lots choice enough to go higher than \$8. The poorer grassy light steers brought \$4.60@5.75, while a medium class of steers sold at \$6@6.95, with good steers bringing \$7@7.60. Butchering cows and heifers had a good sale at \$3.30@6.40, while a consignment of 63 fancy 785-lb. heifers sold for \$7.25. Cannery and cutters were fairly active at \$2@3.25, and sales were made of bulls at \$2.75@5.25, while calves brought \$3@8.50 per 100 lbs. and milch cows \$25@60 each, eastern buyers wanting choice springers. Stockers and feeders attracted a larger demand, and smaller offerings put prices largely 15@25c higher, stock steers going at \$3.15@4.80 and feeders at \$4.40@5.85, but not many feeders sold over \$5. Western range cattle arrived in much larger numbers, and their average quality was the poorest seen in years, causing prices to rule comparatively low for the greater part. Western range steers went largely at \$4@5, with feeders selling well below these figures, while a few prime fat steers brought \$6.70. Western range cows sold at \$2.75@5.55. As great numbers of common range cattle are ready to come to market, such stock may be expected to sell comparatively low.

Hogs started off last week slow and much lower in price, a Monday run of over 30,000 head spelling disaster for sellers, although shippers took nearly 8,000. The drop in prices was wired all over the feeding districts, and to such a widespread extent did stockmen withhold supplies that a great falling off in receipts was beheld on subsequent days. This imparted strength to the market, although shippers were very moderate purchasers, and prices underwent some sharp advances, the upward movement being led by light hogs and pigs, which have continued the favorite sellers. They are scarce, and heavy hogs predominate greatly, the recent receipts having averaged in weight 249 lbs., which is much heavier than in former years. Extremely heavy hogs were the slowest sellers and the last to advance in value. There has been a widening out in the spread of prices, and unless the number of 140 to 170-lb. hogs increases before long and the heavy hogs decrease in proportion, the range will increase considerably more.

Sheep and lambs were marketed unevenly last week, being plentiful at times and scarce at others. The Montana, Idaho, Wyoming and other ranges contributed the greater part of the receipts, and lambs were the best sellers, although fat wethers, as well as feeding sheep and lambs sold well. Prices fluctuated considerably, but breeders were firm at all times, and Idaho breeding ewes were free sellers at \$4@5, while some big bunches of Washington range yearling breeding ewes went at \$6. They were shipped to Indiana, Ohio and Michigan. Feeders paid \$6@6.50 for range lambs, \$3.50@4.25 for wethers and \$4.60@5.45 for yearlings. Lambs sold at an extreme range of \$5@7.15; ewes at \$3@4.40; wethers at \$4.10@4.50 and yearlings at \$5@5.75. Large supplies of range sheep and lambs may be expected for the remainder of the shipping season.

Horses are having a moderate sale at present, the general demand being as large as could be expected in early August. Supplies are ample, and common animals are too numerous. Wagon horses go at \$150@185 per head, and small southern chunks are slow at \$50@95. Heavy draft horses sell at \$170@300, drivers at \$150@300 and mules at \$150@275. Most of the sales of feeders are made at \$170@225. Local teaming interests are paying \$150@275 for mules.

LIVE STOCK NOTES.

A. L. Brown, of Wyoming, reports many parts of the range as entirely bare of grass, while water is scarce, making it a hard question what stockmen are going to do with their cattle and sheep. When the entire country was open a man could drive his stock around, but now that it is all fenced up and the headwaters and many of the streams controlled by Frenchmen and farmers, it is only possible to move the stock from the range to the market. Mr. Brown adds that very little hay is being put up, and it is almost impossible to buy or contract for any. Some good rains have fallen recently, but the ranges were too far gone for the moisture to be of any immediate benefit. It will make some feed, but that is about all. The cattle are not in bad shape yet, but they must be gathered and shipped as soon as possible, so that stockmen are awaiting anxiously the outcome of the corn crop and the consequent demand for feeders.

Drought-stricken regions have been marketing thin hogs, but the great bulk of the hogs coming on western markets are fat and unusually heavy. No intelligent farmer is sacrificing his healthy growing pigs at this time unless absolutely forced to by unfavorable circumstances. Large numbers of spring pigs are being fattened rapidly for the market receiving the very best of care and all the corn they will clean up. Later on they will be given green corn as a change of diet.

Michigan and Ohio stockmen are good buyers of feeding lambs and sheep in the Chicago market, liberal supplies of thin flocks from the ranges forced in by the drought affording fine opportunities to pick up good bargains. There is also a growing demand for good yearling breeding ewes, rangers being usually preferred.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

August 11, 1910.

Cattle.

Receipts, 608. Market active and 10@15c higher than last week on common grades. Butchers, good grades, no higher. We quote: Best steers and heifers, \$5.50@6; steers and heifers, 1,000 to 1,200, \$5@5.25; steers and heifers, 800 to 1,000, \$4.75@5; grass steers and heifers that are fat, 800 to 1,000, \$4.75@5; grass steers and heifers that are fat, 500 to 700, \$3.50@4.25; choice fat cows, \$4.50; good fat cows, \$3.75@4.25; common cows, \$3.25@3.75; canners, \$2.25@2.75; choice heavy bulls, \$4.50; fair to good bolognas, bulls, \$3.50@4.25; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.25@5; fair feeding steers, 500 to 1,000, \$4@4.25; choice stockers, 500 to 700, \$3.50@4; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4.50@6; common milkers, \$2.50@4.

Bishop, B. & H. sold Newton B. Co. 4 cows av 907 at \$4; to Kamman B. Co. 4 steers av 1,092 at \$5.25; to Mich. B. Co. 19 do av 1,047 at \$5.50; to Sullivan P. Co. 1 do weighing 960 at \$5, 2 heifers av 785 at \$4.25, 1 cow weighing 800 at \$3.65, 3 bulls av 700 at \$3.65, 1 do weighing 1,500 at \$4.25, 1 do weighing 1,120 at \$3.85; to Erban 3 butchers av 766 at \$3.70, 1 cow weighing 690 at \$3, 1 steer weighing 930 at \$6, 4 do av 905 at \$5, 1 bull weighing 1,100 at \$4, 8 butchers av 735 at \$3.80; to Goose 1 bull weighing 1,080 at \$4.25, 2 cows av 960 at \$3.50; to Sullivan P. Co. 2 do av 1,200 at \$4.50, 1 do weighing 1,020 at \$3.50, 8 butchers av 1,006 at \$4.25; to LaBoe 4 do av 867 at \$4.90; to Bresnahan 1 cow weighing 1,020 at \$3.25, 1 do weighing 1,280 at \$4.50, 2 do av 900 at \$3, 3 do av 1,000 at \$3.75.

Roe Com. Co. sold Newton B. Co. 31 butchers av 801 at \$4.25; to Rattkowsky 9 do av 780 at \$4.30, 5 do av 806 at \$4.25; to Erwin 16 stockers av 757 at \$3.75.

Spicer & R. sold Bresnahan 8 heifers av 537 at \$3.40, 1 cow weighing 900 at \$2; to Sullivan P. Co. 1 heifer weighing 830 at \$4.75, 1 do weighing 1,230 at \$4.50, 1 do weighing 1,000 at \$4, 6 butchers av 1,308 at \$5.60, 10 do av 820 at \$4.60, 1 heifer weighing 650 at \$4, 1 cow weighing 920 at \$3, 1 do weighing 940 at \$3.50, 5 butchers av 622 at \$3.75; to Thompson Bros. 1 cow weighing 890 at \$2.75, 2 do av 1,125 at \$3.90, 4 do av 1,120 at \$4, 5 heifers av 614 at \$4; to Goodwin 12 stockers av 600 at \$3.90; to Kamman B. Co. 31 butchers av 795 at \$4.40; to Gerish 29 do av 851 at \$4.55; to Lachalt 14 do av 802 at \$4.45; to Fry 10 do av 693 at \$4.15; to Schlischer 6 do av 773 at \$4.25; to Heinrich 4 steers av 712 at \$4.65, 4 do av 735 at \$4.65, 14 do av 870 at \$5, 3 do av 600 at \$4; to Rehfuß 6 stockers av 553 at \$3.40, 9 do av 633 at \$3.90; to Wilson 8 butchers av 716 at \$4.35; to Goose 6 bulls av 533 at \$3.40, 5 heifers av 586 at \$4; to Marx 5 steers av 986 at \$5.

Haley & M. sold Bresnahan 1 heifer weighing 810 at \$4.50, 3 cows av 1,145 at \$4, 3 do av 1,045 at \$3, 7 butchers av 534 at \$3.70; to Goose 3 cows av 1,040 at \$4, 3 heifers av 450 at \$3.65, 2 do av 835 at \$3.60, 1 do weighing 780 at \$3.25; to Sullivan P. Co. 4 cows av 1,090 at \$4.40, 1 steer weighing 990 at \$5.35, 1 cow weighing 1,100 at \$3.75, 2 oxen av 1,325 at \$5, 2 bulls av 975 at \$3.80, 4 do av 832 at \$3.80; to Kamman 4 heifers av 500 at \$3.70; to Schuman 5 butchers av 744 at \$4.30; to Thompson 8 do av 775 at \$4.40; to Regan 11 do av 560 at \$3.90; to Applebaum 3 do av 533 at \$3.40, 11 do av 754 at \$4.15; to Schlischer 3 steers av 600 at \$4; to Erwin 12 stockers av 534 at \$3.75; to Erban Bros. 1 bull weighing 1,070 at \$4.

Robb sold Regan 11 butchers av 552 at \$3.75, 3 steers av 610 at \$4, 11 butchers av 771 at \$4.55, 5 bulls av 606 at \$3.25.

McLachlin sold Kamman 3 cows av 1,170 at \$3.75.

Same sold Sullivan P. Co. 8 bulls av 553 at \$3.25, 1 do weighing 960 at \$4.

Johnson sold Schlischer 5 butchers av 784 at \$4.30.

Veal Calves.

Receipts, 486. Market 25@50c higher than last week. Will close lower.

Best, \$9.50@9.75; others, \$5@8.75; milch cows and springers, good grades, \$3@5 higher.

Calf market closed 75c@1 lower than opening.

McLachlin sold Mich. B. Co. 2 av 140 at \$8.75.

Johnson sold same 5 av 165 at \$9, 2 av 250 at \$6.

Sharp sold Hammond, S. & Co. 7 av 170 at \$9.25.

Haley & M. sold Thompson Bros. 2 av 175 at \$6; to Newton B. Co. 9 av 160 at \$9, 5 av 160 at \$9.25; to Parker, W. & Co. 5 av 165 at \$8.50.

Roe Com. Co. sold Mich. B. Co. 3 av 210 at \$7, 14 av 150 at \$9.25.

Spicer & R. sold Mich. B. Co. 14 av 155 at \$9, 7 av 165 at \$9.50, 5 av 160 at \$9.40, 8 av 155 at \$9.40, 10 av 138 at \$9; to Friedman 3 av 145 at \$9; to Goose 3 av 200 at \$5, 14 av 180 at \$8.50; to Newton B. Co. 25 av 165 at \$9.75; to Burnstine 3 av 250 at \$8.50, 15 av 170 at \$9.75.

Groff & D. sold Marx 10 av 147 at \$9.75.

Bishop, B. & H. sold Hammond, S. & Co. 3 av 155 at \$9.50, 6 av 145 at \$9, 8 av 160 at \$9, 7 av 180 at \$9, 6 av 150 at \$9; to Sullivan P. Co. 4 av 155 at \$7.50, 8 av 180 at \$9, 13 av 160 at \$9; to Parker, W. & Co. 14 av 140 at \$9, 3 av 225 at \$7, 8 av 150 at \$9; to Sullivan P. Co. 3 av 155 at \$9.50.

Sheep and Lambs.

Receipts, 2,675. Market steady at last week's prices.

Best lambs, \$6.75@7; fair to good lambs, \$6.25@6.50; light to common lambs, \$5.50@6; yearlings, \$5; fair to good sheep, \$4@4.25; culs and common, \$3@3.50.

Spicer & R. sold Mich. B. Co. 14 lambs av 65 at \$7, 15 sheep av 80 at \$4, 31 do av 95 at \$4, 10 lambs av 48 at \$6, 71 do av 78 at \$6.60, 30 do av 72 at \$6.80, 23 sheep av 90 at \$4, 10 do av 120 at \$4.25, 2 do av 105 at \$3, 15 lambs av 58 at \$6.25.

Haley & M. sold Stocker 21 lambs av 65 at \$6.75; to Newton B. Co. 126 do av 80 at \$6.50; to Young 66 do av 85 at \$6.60; to Sullivan P. Co. 6 sheep av 120 at \$5; to Thompson Bros. 5 do av 125 at \$4.50, 28 lambs av 75 at \$6.60; to Gordon & B. 55 do av 70 at \$6.60, 5 sheep av 110 at \$4. Roe Com. Co. sold Barlage 10 sheep av 98 at \$3.50; to Sullivan P. Co. 11 do av 125 at \$4; to Eschrich 93 lambs av 73 at \$6.40.

Bishop, B. & H. sold Hammond, S. & Co. 2 sheep av 140 at \$3, 10 do av 104 at \$4, 10 lambs av 59 at \$6, 103 do av 75 at \$6.50, 12 do av 65 at \$6.25, 14 do av 55 at \$6; to Parker, W. & Co. 93 do av 75 at \$6.50; to Mich. B. Co. 14 sheep av 120 at \$4.25, 19 do av 110 at \$4.25, 29 yearlings av 80 at \$6, 21 sheep av 110 at \$4.25; to Sullivan P. Co. 23 lambs and sheep av 55 at \$5.50, 6 lambs av 52 at \$6, 92 do av 70 at \$6.65, 33 do av 75 at \$6.75; to Gordon & B. 56 do av 77 at \$6.75, 8 do av 55 at \$6; to Fitzpatrick Bros. 34 do av 70 at \$6.65, 21 sheep av 95 at \$4, 29 lambs av 73 at \$6.80, 25 do av 77 at \$6.50, 16 sheep av 90 at \$4.75, 28 yearlings av 80 at \$5.50, 26 lambs av 75 at \$6.50; to Hammond, S. & Co. 10 do av 76 at \$6.50, 14 sheep av 80 at \$4.50.

Weeks sold Mich. B. Co. 19 sheep av 120 at \$4.25, 29 lambs av 70 at \$6.60.

Johnson sold same 67 do av 75 at \$6.65.

Robb sold same 82 do av 70 at \$6.65.

Same sold Thompson Bros. 32 yearlings av 70 at \$5.

Groff & S. sold Marx 24 lambs av 75 at \$6.50.

Hogs.

Receipts, 2,162. Market 15@20c higher than last week on lights.

Range of prices: Light to good butchers, \$8.55@9; pigs, \$9; light yorkers, \$8.85@9; heavy, \$8.75; stags one-third off.

Roe Com. Co. sold Hammond, S. & Co. 148 av 220 at \$8.90, 18 av 215 at \$8.80.

Sundry shippers sold same 199 av 233 at \$8.90, 35 av 245 at \$8.75.

Spicer & R. sold same 252 av 190 at \$8.90.

Bishop, B. & H. sold Parker, W. & Co. 360 av 180 at \$9, 510 av 195 at \$8.90, 250 av 245 at \$8.75.

Friday's Market.

August 5, 1910.

Cattle.

Receipts this week, 568; last week, 1,295; market steady at Thursday's prices. Best steers and heifers, \$5.50@6; steers and heifers, 1,000 to 1,200, \$5@5.25; do. 800 to 1,000, \$4.50@5; grass steers and heifers that are fat, 800 to 1,000, \$4.50@5; do. 500 to 700, \$3.50@4; choice fat cows, \$4.50; good fat cows, \$3.75@4; common cows, \$3@3.50; canners, \$2.25@2.50; choice heavy bulls, \$4.50; fair to good bologna bulls, \$3.50@4; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair feeding steers, 500 to 700, \$4@4.25; choice stockers, 500 to 700, \$4@4.25; fair stockers, 500 to 700, \$3.50@4; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@5; common milkers, \$2.50@3.5.

Veal Calves.

Receipts this week, 514; last week, 978. Market strong at Thursday's prices. Best, \$9.25; others, \$5@8.75. Milch cows and springers steady.

Sheep and Lambs.

Receipts this week, 1,644; last week, 1,598; market steady at Thursday's prices. Best lambs, \$7; fair to good lambs, \$6.25@6.75; light to common lambs, \$5.50@6; yearlings, \$5.50@6; fair to good sheep, \$4@4.50; culs and common, \$3@3.50.

Hogs.

Receipts this week, 1,725; last week, 2,304. Market steady at Thursday's prices. Light to good butchers, \$8.80; pigs, \$8.80; light yorkers, \$8.80; heavy, \$8.50@8.65; stags one-third off.

The wool market is still showing considerable animation, and more buyers have shown up in Boston, indicating that the manufacturers believe prices have touched bottom and that future changes will be in the upward direction.

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 some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Wire Cut.—I have a brood mare that was cut badly on barbed wire; since then her legs swell and the wounds refuse to heal. S. J., Montague, Mich.—Clip the hair away from wounds and apply hydrogen peroxide twice a day; ten minutes later dust on some of the following powder: Equal parts oxide zinc, boric acid and powdered alum. If the sores are filled with fungus tissue burn it down with a red hot iron or lunar caustic once a day, until the center of wounds are lowest.

Cracked Heels.—For the past 12 months my five-year-old horse has been troubled with scratches. I succeeded in healing

the sores but they seem to open, discharge some and bother him more or less and do not remain cured. I use him for road driving. He stands in the stable a whole lot and seems to be in good health. J. S., Owosso, Mich.—Give 2 drs. Fowler's solution at a dose in feed three times a day for 30 days; also apply one part carbolic acid and six parts glycerine to sore heels twice daily. Perhaps you are feeding him too much grain.

Diseased Udder.—I am a very well satisfied reader of the Michigan Farmer, and come to you for advice regarding a cow that came fresh a month ago. Since then she has done fairly well, but one quarter of her udder is swollen and she gives little milk from it. The tube through teat is too large. H. F. C., Bangor, Mich.—Apply one part tincture iodine and four parts sweet oil to diseased quarter once a day and give her 1 dr. iodide potassium at a dose in feed three times a day for three weeks.

Teat with Two Openings.—I have a heifer that came fresh very recently that has two holes in one teat. The hole on side of teat is about one inch from end. Will it be necessary to use a milking tube and if so send me one or two and I shall remit by return mail. G. L., Ovid, Mich.—In order to heal the artificial opening the edges must be made raw and stitched closely together with silk, linen or catgut; the sewing material should be soaked in one part carbolic and four parts sweet oil before it is used. Apply boric acid to wound twice a day. It will be necessary to milk her through a tube and if you will measure length of teat before ordering, it will be sure to fill the bill. The 3/4 inch costs 35c; 3 inch 30c, delivered by mail. It may be necessary to leave the tube in teat part of the time when not milking.

Chronic Garget.—I have a cow that had several attacks of garget last fall and several attacks this season. However, none of them were severe. When the bag is swollen she passes gargety milk, but the attack only lasts a day or two. A. S. P., South Haven, Mich.—When she has an attack give her 1/2 oz. fluid extract phytolacca three times a day for two days and apply extract of phytolacca to udder twice a day.

Acute Indigestion.—Having derived much benefit from reading veterinary department of the Michigan Farmer, I come to you to ascertain what was the cause of my shoat's death. One month ago I bought a cream separator and have used it twice a day, but washed it thoroughly each time. These pigs are four months old, are fed some corn with the milk and have all the clover they care to eat. One of them died two weeks ago and another a few days ago, showing same symptoms as the other did; both bloated badly before death. H. M., Plymouth, Mich.—Your pigs died from acute indigestion. Perhaps the hot weather and over feeding on sweet milk and clover caused all their trouble. Add some salt or lime water to their milk, and feed them one-fourth less food during hot, sultry weather.

Garget—Using Milking Tubes.—Two-year-old heifer with first calf had inflamed udder when calf was one week old. She was quite a heavy milker; we milked three times a day to keep udder emptied and used iodine ointment and gave iodide of potassium; udder is now all right except one quarter. This began to milk hard soon after inflammation began. We used milking tube but teat keeps closing and now it is impossible to draw milk without a tube. I always sterilize tube but when I withdraw it there will be a drop of blood on end of teat. There is no bunch or soreness, simply seems to be growing up. I have another cow that I began to use milking tube on because she had a hole in the side of one teat, and while, before using tube she was an easy milker, now it is practically impossible to draw any milk from that teat without a tube. Would a teat plug open this teat so it will milk again by hand? I begin to think a tube is a dangerous thing to use if it always causes the teat opening to contract. A. L. L., Coldwater, Mich. If you will apply one part red-iodide mercury and eight parts lard to bunch in udder it will soften it. It always helps a case of this kind to give iodide of potassium twice daily. By using a teat plug it will help dilate the opening but if a stricture of the duct has taken place a steel sound should be passed through the teat.

The packers are discriminating against plain and common native grassy cattle in the Chicago and other western markets, buying thin cattle from northwestern ranges in preference. While this rush to market range stock lasts there will not be much of a chance for putting up prices for common cattle.

BUSHEL CRATES

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to pull their beans. You can put four rows in one and bunch them as you go along, saving stooping over which is very tiresome. You can pull them up or cut them off leaving the roots in the ground. The

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MEALY, a bald red variety, stiff straw, splendid for rich land. GOEN, a bearded red variety, hardy, good yielder, well adapted to a variety of soils. Price \$1.25 per bu., sacks included.

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WANTED—Exchange state right patent Crude Oil Burner State Michigan for land in southwest or anything of value. C. P. KENNEDY, Athens, Texas.

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MICHIGAN FARMS—Improved fruit, stock and grain farms, in Barry and Eaton counties, \$25 to \$75 per acre; splendid water, schools and roads. Low taxes. Write for List No. 4. BUCKLES & MATTHEWS, Hastings, Mich.

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(Late Director Wyoming Agricultural Experiment Station.)



Woman and Her Needs

At Home and Elsewhere



How Shall the Farmer's Wife Save Time? Have You Learned the Art?

EVERY once in a while I run across an article which fills me with a great deal of admiration for the writer, for I feel that she, or possibly he, is the possessor of a vast fund of unconscious humor. To this class belong those articles which advise farmers' wives to spend more time with their children and Mother Nature.

I always think that the person who wrote that article was a man who knew no more about a farm than he could learn by riding across the state on a 40-mile-an-hour express. Certainly no one who knows conditions as they are for the farmer's wife would have the temerity to tell her she should take more time to "list to Nature's teachings." It is something like telling the city editor of a big daily paper to take time to say his prayers three minutes before the paper goes to press, with a big murder just committed and a graft expose from the city hall to report.

If there is anybody busier than the farmer's wife, during the time when Nature is in the best mood to be studied, I should like to see that person. "Then is the high tide of the year" for her, with a vengeance. Fruit to be canned, jelly to be made, gardens to be kept up, vegetables to be dried, meals to be cooked, washing, ironing, scrubbing and mending, probably sewing, and seven days out of the week, company from the city to be entertained, this is the work for many a farmer's wife in Michigan.

Perhaps she has help, probably she hasn't, as domestic help is almost unknown in the country. Perhaps she has children to help her, but it is just as possible that she has children who are so small as to need care. She rises at 5 a. m., maybe at 4 o'clock, and from that time until dark every minute is full. Her husband may drop down on the couch after dinner for a ten-minute nap, but she washes the dishes while he snores. Usually the only time she sits down is at meal time, and during that half hour she jumps up a half dozen times to wait on the table.

And it is to this hard-worked woman a magazine comes, carrying the airy suggestion that she ought to spend more time with her children and the great, big, beautiful outdoors. "More time," when the cry of her life is for 48 hours in the day with which to get through her work. "Don't spend so much time cooking and baking," advise these good scribes. "Give the family plenty of fresh fruit and vegetables, buy things already prepared, and

take the time thus saved to devote to rest and your little ones."

Just suppose you live on a new farm and haven't the fruit, what then? Or if you do have it, is it not to take any time to pick it and prepare it for the table? And then, are you to expect men who do hard, muscular labor to be satisfied with a diet of fresh fruit and succulent vegetable which, while cooling to the blood, have practically no nourishing power? Men who work like farmers do,

building a sink with proper piping into which waste water might be emptied. A small table with casters might be bought on which all the dishes could be piled and pushed from dining table to kitchen and back to the sideboard or cupboard, thus saving steps. A gasoline stove or oil stove to replace the hot wood stove would make things considerably easier,

but these things all take money, which in some families is far from plentiful.

If the work of the farmer's wife is to be lessened, she is the one to say how it is to be done, for each family has its own individual problems. Will not some of the women who have solved the problem, tell us how they did it, in a letter to The Farmer.

DEBORAH.

Bringing the City Kitchen to the Country.

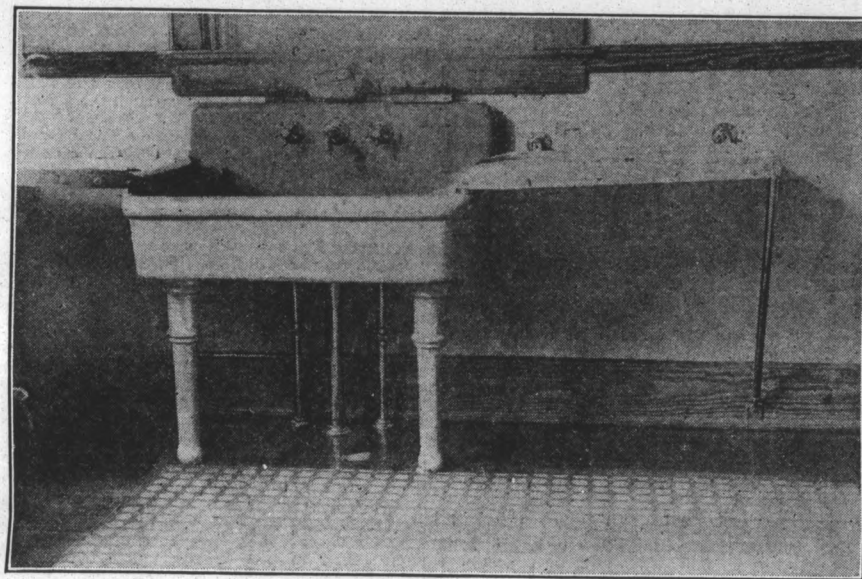
"What on earth do the women in town want of hired girls?" queries the country housekeeper. "What need have they of help? Why everything is made easy for them from the moment they get up until

door in the east let in floods of sunshine. Under the middle window in the north stands the work table, at the right of this under an east window, the sink, with its two drip boards, and at the left of the table the great range where famous dinners are cooked. The range is combination coal and gas with six ovens, including a warming oven and a broiling oven. Think of the way one can hurry things through on a busy baking day, with all these ovens to command.

The sink, instead of being white enamel, is of yellow composition, which does not show every stain as do the white ones, and consequently does not demand so much scouring. A thorough cleaning out with a good washing powder and a scalding after each meal with the use of a disinfectant keeps it clean and sweet. The drip boards are hung on hinges so they can be folded back out of the way when not in actual use.

But it is the refrigerator which makes the biggest appeal to the woman who understands the value of thorough cooling. This is built in one side of the large pantry, where it can be kept shut off from the heat of the kitchen. Instead of the small ice-box most families own, it is a collection of eight ice-boxes, reaching from floor to ceiling and from the pantry door to the side of the room. You who wrestle with the problem of keeping butter, milk and cream and vegetables and fruit cool without the milk and butter absorbing odors, think of having a separate compartment for everything. One ice-box for butter, another for milk and cream, a third for fruit, a fourth for vegetables, a fifth for meat and two others for other foods. The refrigerator is chilled with cold air which is brought up through pipes from the ice-plant in the basement, no ice being used in it anywhere. The inside temperature is kept at 40 degrees, a thermometer hanging in one compartment showing when the interior is too warm or too cold.

Such a collection of small cupboards and drawers as the pantry boasts, would fill the heart of a true housekeeper with envy. There is a cupboard for sugar and one for flour, cupboards for pans and skillets and pots and frying pans. Cupboards for linen and kitchen towels, in fact cupboards for everything one could think of. Shelves for staple groceries, canned goods and breakfast food, etc., and shelves full of jellies and delicious preserves line the walls. A sink in under



The Sink is of Yellow Composition.

need something more "fillin'," and so far in the scheme of things it is up to the good wife to cook hearty food. As for "buying food prepared," that is the screamingly funny part of this advice, the part which makes me sure the writers never saw a farm. Where is the woman who lives six miles from a store, that buys her food already prepared?

Of course the average farmer's wife works too hard. We will admit that. Of course she should have more time to devote to her children, more time for self-culture, more time for rest—just plain rest. But where is she going to get it? If she lives in a community where she can hire help, then the question is solved. It would be her duty to hire, even if the sum of money the good man planned to save was lessened. Other things might be done to make the work a bit easier, such as putting water in the house and

they go to bed. They don't even have to pump water out of the cistern to bathe themselves. They just turn a faucet, and there is a stream of water gushing out.

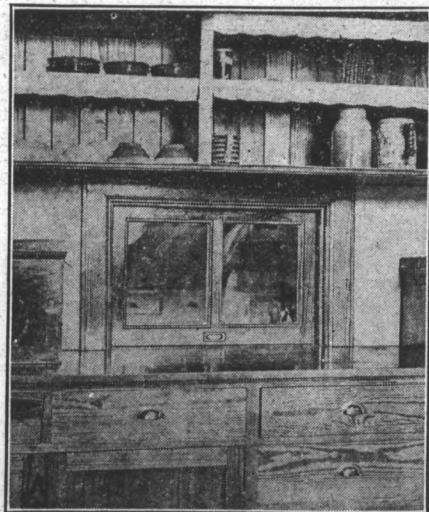
"They go down to get breakfast, and no empty woodbox makes them cross and puts breakfast behind. They scratch a match, turn a gas jet and a hot blaze spring up to boil the kettle and cook the eggs. They wash the dishes at a beautiful white sink, and then just turn the pan over and the water runs away. A refrigerator keeps their milk, butter and meat cool and sweet without the necessity of climbing up and down cellar stairs. On wash day, stationery tubs stand ready to be used, they turn a faucet and fill the tubs, and when through washing pull out a plug and the water runs away. They have no heavy tubs to life as we do, no water to carry or wood to bring in, perhaps even to split, no back-breaking work of any sort. I could do my own work and go visiting every day if I had things as easy as the women in town."

Thanks to the march of time and man's inventiveness, the country woman can have things just as easy, by the outlay of work and money. Even the farm kitchen can be supplied with water, gas and ice, no matter how remote from town. Many now have the water, the gas and ice are to follow.

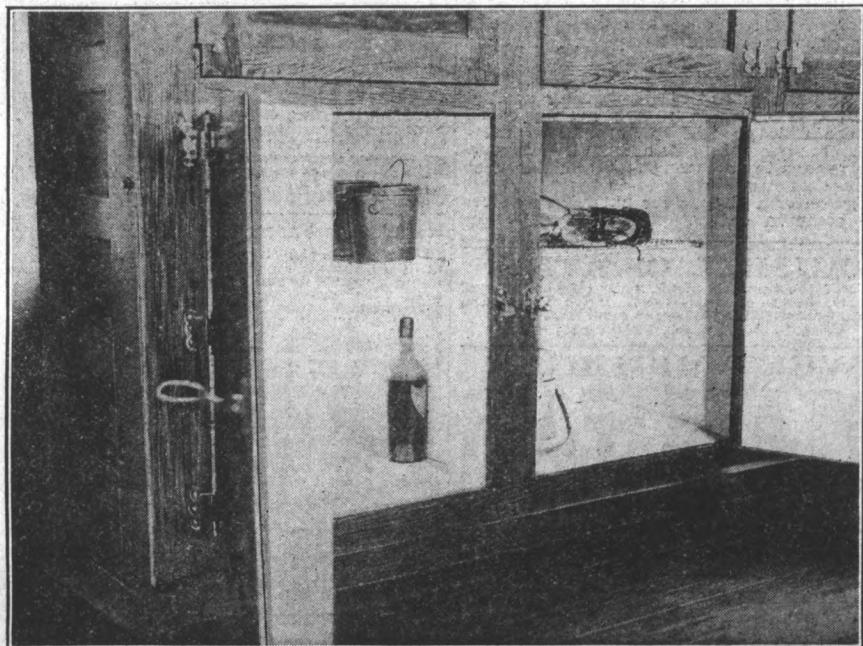
The kitchen of Mrs. H. B. Joy in her beautiful home at Grosse Pointe Farms shows how complete a kitchen may be made, though outside of the limits of a city. Gas, electric lights, a huge refrigerator, a vacuum cleaner system and a complete home laundry may be installed in any home, certainly should be in homes where the husband has all the latest improvements in machinery to make his own labor light.

Imagine doing your work in a great, light, sunny kitchen, where you needn't step outside or downstairs, for a thing. Your work would be simply cut in half.

In Mrs. Joy's kitchen, light and air are almost as unobstructed as out of doors, a point carpenters usually overlook when building a house. Instead of the dark, stuffy place we often find, three windows in the north and two windows and a sash



A Window Between Pantry and Dining Room Saves Steps.



Two Compartments of the Big Refrigerator.

an east window, with faucets for hot and cold water, is used for washing up baking dishes, for the cakes, cookies and pastry may be prepared in the pantry, and thus the necessity of working in the hot kitchen is obviated.

This pantry is connected only with the kitchen, and contains the utensils and foods which are necessary for use in that room. Alongside this pantry is a second which opens off the dining room and is stocked with the fine china and silver for use on the table. The two pantries are connected by a small window through which food may be passed to be carried to the dining room. Both open off the kitchen, from the side opposite the range, work table and sink.

A double sink for washing the silver and fine glass and china is a feature of this pantry, also. It, too, is beneath a window, so that the dishwasher has a glimpse of the beautiful out of doors, while at work, instead of the inevitable blank wall most country homes offer for study while at this cheerful occupation. The sinks in both pantries are really stationary dishpans, being galvanized iron sinks about 20x40 inches, divided into two compartments.

Beneath the sink in this second pantry is a steam radiator on top of which rests a rack where dishes are warmed for the table in winter. In summer they are warmed by an electric plate, which is arranged in a small cupboard so that all the heat from the current may be husbanded.

The question of how to take care of the platters is met in this pantry. A cupboard filled with shelves built just far enough apart to hold one platter. When one thinks of the cupboards where platters stand on edge back of the plates and other dishes, and slide down with a resounding crash if one forgets and removes the prop in front, the wisdom and economy of this arrangement may be seen.

"How about the floors?" I hear some one ask, since the cleaning of floors is one of the bugbears of housekeepers. The floors are of southern pine, treated to a coat of filler and several coats of oil, and need only to be wiped off with warm water. Sometimes suds are necessary but not always. But as plain wood floors are hard on the feet, squares of linoleum are in front of range, table and sink, and strips of linoleum lead down either side of the kitchen to the two pantry doors.

On the east side of the kitchen a broad porch with easy chairs and a small table, offer an inviting spot to drop down when a spare moment comes. From the porch, steps lead down into a lattice-enclosed patch of greensward for drying the clothes. A large clothes reel with plenty of clean grass for spreading down anything which needs bleaching insures white, sweet-smelling linen. For the farmer's wife who dares not spread anything on the grass for fear of the ever-wandering hen, the dirty-footed dog, or the pig who occasionally breaks his prison wall, this enclosure offers a valuable suggestion.

"How can they get gas for the range if they are on a farm," do you ask? I have already said they manufacture their own ice. The same reply will answer this question, for they manufacture their own gas.

THE MENACE OF THE FLY.

BY ELLA E. ROCKWOOD.

No one thing now existent furnishes so formidable a menace to public health as does the house fly. This is the ultimatum of scientists of highest rank, men who have made a study of the habits of the agile insect and who are now trying to arouse sentiment leading to its extinction. That this may be accomplished at an early day is to be ardently hoped if not honestly anticipated. So great is the danger from insect distribution of disease germs that several states have already taken action toward the extermination of this nuisance.

It is confidently expected that typhoid fever will fall far short of its past record in claiming victims once this can be done. Infection by typhoid germs, heretofore attributed chiefly to drinking water as the medium of communication, is now believed to be the work of flies. Instances sufficiently numerous to prove the fly guilty of this charge have been noted, and medical authorities agree that of the two, flies are more to be dreaded.

Aside from being an actual menace to health the fly is of such filthy habits that it is a wonder he has been tolerated by the housewife as long as he has. To a great extent this has been for the reason that no known method existed of keeping him outside. Spite of screens, however well fitting, he will slip in. If but one enters every time the door opens

that would be enough to make a sizable swarm at the end of a week. Evidently screens are not all that are required. Fly paper of various kinds are more or less effective, usually less. Traps, baited with sweets, catch a few and the familiar "swatter" is serviceable where their numbers are but few. Yet when all have been tried, everything possible done, the nuisance will but be abated, not exterminated. Nor can the latter be accomplished so long as breeding places are furnished and the eggs permitted to hatch unmolested.

In sections where war has been openly declared upon the fly, manure heaps are ordered screened, also stables, since it is in these places that the eggs are deposited. The suggestion to screen the stables would probably be favorably received by the horses, who would benefit directly thereby even were nothing gained otherwise.

The presence of garbage near the house calls flies. Note the numbers seen about the pails at the back door. To provide covers for these is a simple matter, and, by the by, this might save the lives of many small chickens, since the investigating turn of the youngsters often leads to death by drowning. The pails are a necessity, but they may be placed at a distance from the door, and kept reasonably clean.

Years ago some credulous ones believed that a balm of gilead tree planted near the house would keep flies from entering. Certain vines were held to possess this repellent property also, and were to be trained over the windows. A bottle of oil of pennyroyal left uncorked in a room was claimed to drive out both flies and mosquitoes. Now we know all these are failures and nobody depends on such things.

It is clearly up to our scientists to come forward with aid to the public and furnish an exterminating agent more powerful than any known at present. The housewife hates the fly. She fights him to the best of her ability. She realizes the menace he is in the home but up to date he is simply too many for her. She can't manage him.

Not alone in the homes of the people are flies to be dreaded. Think of the contagion possible all during the summer season and late into the fall through the presence of these germ-carriers in ice cream parlors, restaurants, groceries and meat markets. It is impossible to keep them off the food we are to eat before it enters the house, careful as we may be regarding this afterward. One fly leaves behind him swarms of bacteria after he has traveled the length of a piece of pie or cake upon our tables.

Let us hope some means may speedily be devised whereby this nuisance can be not only appreciably abated, but actually abolished. As individuals we may be able more or less successfully to do the one; only combined effort can accomplish the other.

SHORT CUTS FOR HOUSEKEEPERS.

If when making custard pie or pudding you thoroughly mix one tablespoonful of flour into each three tablespoonfuls of sugar, your custard will not whey.—T. F. C.

If the end of a shoe lace, from which the metal tag has been lost, is rolled to a point with mucilage or photo paste and dried, it will be as serviceable as ever.—E. L. R.

Try turpentine to take soreness out of corns.—E. M. C.

HOME QUERIES.

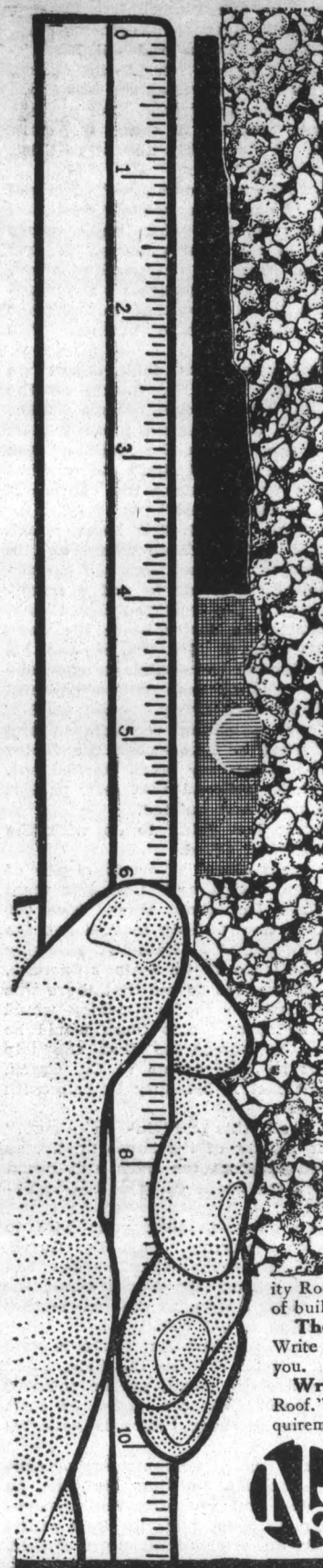
To one peck of beans cut up take one handful of salt, one teacup of vinegar and one gallon of water. Put all together and boil twenty minutes and can. I use this recipe every year and it never fails.—E. E. L.

Seven cups of cherries or currants, five cups of white sugar, one pound of raisins chopped, juice of three oranges and grated peeling of one orange. Put all together and boil till quite thick. Put in glasses and when cold cover with paraffine. It will keep any length of time.—E. E. L.

Dear Editor: Will you please publish in Michigan Farmer a recipe for making grape wine?—M. H., Standish.

Here is a simple way to make grape wine, and it is fine: Pick grapes from the stems, put in large stone jar a layer of grapes, then a layer of sugar; repeat until jar is three-quarters full. Place a heavy weight on top, put in cool place, let stand six or eight weeks then strain and bottle for use.—Mrs. N. L., Blissfield.

Dear Editor: Can any of the readers of the exchange column tell me of a simple remedy to kill flies around the house at once without the use of fly paper. I read it in the Michigan Farmer last year and have lost the paper.—C. M. G., Lenox.



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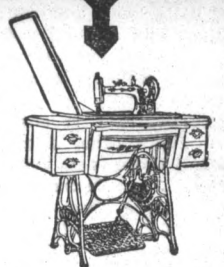
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HOME AND YOUTH

DAY DREAMS.

BY F. J. P.

My soul goes out to yesterday,
To thoughts of youth and rising sun,
Then swiftly sweeps as if to stay
Within some realm not yet begun.
I hold the master-mind awhile,
Of art and letters, love and prayer,
And know no thought that shall beguile
The heart of things, as something fair.

One-half the dream may pass away
With noonday sun or evening star,
But if I catch a single ray
Of that great good from off afar,
My hope shall not grow old with time
Or stress; the worth of things is still
As true as if this thought of mine
Were its own world of God-like will.

GETTING MRS. PARKS HOME.

BY HILDA RICHMOND.

"If I could only go home! If I could only go home!" wailed the sick woman in despair. "I'm going to die without seeing mother! I know I am!"

"Mrs. Parks, if you waste your strength in this way, you surely will die," said the young doctor with just a touch of impatience in his tone. He was very young—this was almost his first patient—and he had tried all his arts without avail. He took the restless hand in his strong, warm clasp and endeavored to soothe her, but she only wept the louder.

"Is she going to die?" asked the tall, thin girl in the forlorn kitchen as he went out for a glass of water. "Can't something be done for her?"

"Nothing that I know of unless she could see her mother," he answered. "Miss Hannah, can you quiet her in any way? She must stop this crying or she won't last a week. I don't like to give her a drug, but I'm at my wits' end."

"I've tried it, too," said Hannah Roswell briefly. "Her mother can't come because she's an invalid. But for the sake of these children she ought to be saved, if not for her own."

She lowered her voice so that "these children" might not understand, and bestowed another sprinkling of sugar on the slices of bread and butter she was handing out. She had washed the children till their faces shone, and their wet heads still showed signs of the vigorous cleansing they had received at Hannah's strong young hands, but they forgave her, and even touchy little Ben stopped sniffing as he saw his "piece" receive an extra dose of sugar.

"I'll tell you what I think," said Mrs. Gatch, the doctor's wife, who had also taken refuge in the kitchen to escape the pitiful wails of the sick woman. "We must get this woman to her mother just as soon as possible." Mrs. Gatch was a gentle, timid little creature, but she was wonderfully interested in her husband's success and felt that heroic measures must be taken to save his reputation as well as the patient's life. She was very sorry for the sick woman, but under her sorrow was the professional fear that if she should die it would be bad for Dr. Gatch's reputation in the community. Their little bank account was rapidly decreasing, and she did not want a funeral credited to her husband right in the start, as people would surely do in case Mrs. Parks died.

"Eleanor, that is out of the question, child! Her mother lives forty miles from here and there is no railroad to the place. Besides, Jim Parks can't pay for the medicines she uses, and a journey would be entirely out of the question." Dr. Gatch looked as if that settled the case, but he had yet to learn the ways of womankind.

"I know how I'd feel if I were sick and away from my mother," persisted the bride of a few months. "Sometimes I nearly die as it is of homesickness, and I'm well and strong, besides having a husband that amounts to something." Her gaze wandered to Jim Parks, languidly doing a few chores about the tumble-down barn, and unconsciously she spoke her inmost thoughts. The children had departed with their "pieces" to the yard so she could speak out. "And, besides, Charles, if she—she passed away in her own home she would be better satisfied, and folks wouldn't blame you."

"Let's take her home, Mrs. Gatch," said Hannah recklessly. "I know of a perfectly splendid plan! We'll put a cot in that long covered wagon of father's and drive to Oak Grove. It would only take us two days and needn't cost a cent. I just know father and mother will let me go, if you'll go along. I can't bear to see her die without having her last request gratified."

"I'll go, if Charles will," said Mrs. Gatch. "Let's start tomorrow morning, early. I'll go right in and tell her."

"Hold on, Eleanor!" cried the doctor, catching his wife's skirts as she was about to dash into the other room. "For mercy's sake, don't promise a thing we can't carry out. It's perfectly absurd to think of such a thing."

"Then we'll go by ourselves," declared Hannah. "I can drive two old horses as well as anyone, and when night comes we'll stop in some farm house. Mother will let me have the old gasoline stove, and we'll cook like gypsies by the roadside. It will be a sort of camping-out trip and we'll combine business with pleasure."

"Well, if your folks don't object we might try it," said Dr. Gatch, as the walls in the sitting room became louder, and his wife and Hannah pleaded their case. "If she dies on the road and you two have hysterics, I don't know what I'll do, but we can make the venture if you are so determined."

Like a flash Hannah flew home, which was only a little distance away, and in a few minutes she was back too breathless to speak, but able to nod a triumphant assent to the delighted Mrs. Gatch.

Very gently the doctor broke the news to the discouraged Mrs. Parks, and his wife and Hannah were jubilant when she dropped almost at once into a peaceful sleep. They were flying around making preparations—scrubbing the infants and planning what to take—when the doctor came out looking very much worried but, on the whole, relieved that his patient was comforted and quieted.

"What are you going to do with the youngsters?" he asked.

"Take them along! There's plenty of room in the wagon, and if we left them behind she'd fret about them. I've got to go home now to help mother get the provisions ready." Hannah shrewdly guessed the state of the doctor's finances, and she determined to see that there was plenty of food so that no money would have to be spent. Also there would be corn for the horses, so that the trip would not be burdensome to Dr. Gatch, who might feel it his duty to help with the expenses.

"What's all this carryin' on about?" asked the master of the house mildly, as he strolled in from the barn and found the kitchen the scene of quiet but vigorous work.

"We are going to take your wife to her mother tomorrow," said Dr. Gatch, suddenly remembering that no one had thought to consult Mr. Parks about the matter. "She'll have to see her mother if she's going to get well."

"That so?" inquired Jim Parks in mild surprise. "Goin' to take the kids, too?"

"Yes, your wife would not be satisfied without them. We are going to start early in the morning before it gets too warm."

Mr. Parks offered no comments or suggestions, but sat smoking his pipe on the doorstep and watching the preparations. Hannah came flying in like a whirlwind with an armload of clean clothes, almost upsetting the children in her haste, and announced that her mother said the doctor and his wife must stop with them all night so there would be no delay in the morning, an offer they gladly accepted, and it was late at night before silence reigned in the poor little house.

"How does it look?" asked Hannah anxiously as she led the way to the fine big barn where the wagon stood all ready for the start. "We have all had a hand in getting it ready."

"Well, I don't believe it will hurt Mrs. Parks a bit to take the trip," said Dr. Gatch, allowing some of the anxiety to fade out of his eyes as he looked behind the curtains. "I don't see how you could do so much in such a little time."

A cot was heaped with clean bedding, the gasoline stove was tucked partly under the seat, a box of provisions made a footstool for the driver, and there were places for all in the "Ark," as the Roswell children termed the long covered wagon. Mr. Roswell had picked it up at a sale years before, and on many occasions it had proved useful as a picnic wagon, a wagon for taking grain to the mill in wet weather, a playhouse for the small fry, and occasionally a nesting place for the Plymouth Rock hens that were the pride of Mrs. Roswell's heart. On this very occasion Hannah had rudely broken up the nest of a motherly biddy, to get the cot into place, but everything about the farm should have been used to the methods of the breezy Hannah who, in her seventeen brief years, had done more work and studying and getting into mischief than any two other girls of the neighborhood of the same age. She was just a bundle of energy, but withal so

trustworthy and sensible, that her father and mother always made no objection to her plans.

"Do you think we are setting out on a wild goose chase, Mr. Roswell?" asked Mrs. Gatch anxiously as they sat down to a bountiful supper.

"No, I think not," said Mr. Roswell. "And if it is a wild goose chase you'll come out all right. The horses are steady, and Hannah won't do anything rash. Don't be discouraged, ma'am, and you'll get along all right. Jim Parks is not much of a manager, but his wife is worth saving. Any human being is worth saving, of course, but Mrs. Parks isn't like her husband. It may restore her to health to take her home, and if she dies there she will at least have the comfort of seeing her mother once more. If I were sick and away from home I'd be pretty glad to have folks take enough interest in me to get me back to my old home, I guess. Well, when does the expedition start in the morning, Hannah? Six o'clock? All right! I'll have you all out, and mother will feed you well before you start. You can go in two days, and maybe come back in one, but I wouldn't hurry in this hot weather. You'll get along all right. I don't know as I'd be afraid to let Hannah make the trip alone in a case of emergency, but I'm glad she won't be alone with a sick woman on the road."

"With Miss Hannah as commander-in-chief of the expedition, I know we will succeed," said Dr. Gatch. "Now, I'll run over for another look at my patient, and then we'd better all go to bed early for that famous morning start. It was wonderful how she settled down this afternoon when she heard she was to go home. Poor child! It's dreadful to be poor and ill at the same time."

"She'll think she's rich when we get her home day after tomorrow," said Hannah, briskly. "We won't send her mother word, but just give her a joyful surprise. I can hardly wait to make the start!"

"How about dinner?" asked Hannah, as the sun grew hotter and hotter that August day, and the horses were halted under a huge oak tree for a rest. "Let's set up our kitchen in this fence corner and have some refreshments."

"I'm willing," said Mrs. Gatch, who was very tired. Little Ben Parks had taken a fancy to her, and she had had to hold the youngster most of the trip to keep him quiet. "I'm very hungry."

Everyone in the party wore shabby old clothes, the Gatches having hurried to town the afternoon before for their oldest garments, the Parks children possessed no other kind, while Hannah wore stout shoes, a short wool skirt and a gingham blouse. When the wagon was packed with necessary things there was little room left for luxuries, so each person had planned to stick to one outfit for the trip.

"I'll take care of the horses and get the water for the cooking, while you ladies get the dinner," said Dr. Gatch. "I think a good rest and a chance to sleep will help Mrs. Parks very much."

He even removed the harness from the tired animals to rest them, and led them to the farm house close by. In her anxiety to see her mother, Mrs. Parks had urged them out of the walk at which they started, and a long distance had been covered when they stopped for dinner.

"Taking a sick lady to her ma!" said the mistress of the farm house when Dr. Gatch stated his errand and asked permission to water the horses. "I want to know! Won't she come in and lay down on the bed a while? It must be awful, jolting along in a wagon this hot day. It won't take but a minute if she'll only come."

"No, thank you," said Dr. Gatch politely. "We have her on a cot, and she can't walk. I'll just carry a pail of water out to make a little tea, and water the horses, since you are so kind. We are going to rest until it is a little cooler."

He hastened back to the wagon and found Hannah in doubt as to her ability to make tea for the invalid in a tin pan. "I thought we had everything," she said ruefully, "but the little teapot was left out. That's what comes of starting in a hurry."

"I'll put some tea in a cup and pour boiling water over it," said Mrs. Gatch. "I think we can manage. She won't want very much of anything, and your mother put in those nice fresh eggs."

"I've come with some chicken for that sick woman," announced an urchin, appearing from the farm house with a large granite kettle in his hand. "Ma, she's coming with some other things."

The "other things" proved to be a plat-

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ter of green corn piping hot, a pot of tea, a loaf of bread, a glass of jelly and some sliced tomatoes. "I don't see what I was thinking of not to ask you all over to dinner," she apologized, "but, of course, you wouldn't care to leave the sick lady. Pa's coming in a minute to get the horses. He says it isn't very good for them to eat green grass on a trip like this, so he'll feed them hay. No, I don't want you to thank me a bit. I'm sorry you won't all come over and rest in the house."

"How is this for camping out?" said Mrs. Gatch, as they all sat down to a bountiful repast spread on the grass, after Mrs. Parks had been fed and had drifted off to sleep. "I call it luxury, myself."

"I'd feel a little more luxurious if I were clean," said Hannah, "but a little thing like that doesn't matter. Look at those children's faces!" she said, pointing to the countenances liberally covered with plum jelly and a sprinkling of road dust. "Well, everything can be washed off after dinner at the farm house, for that blessed woman said we should come over and get all the rain water and soap we needed."

"Isn't she a dear?" said Mrs. Gatch, selecting another roasting ear from the heap. "I never saw such hospitality, except that shown by your mother, Miss Hannah."

"You'll find all country people just like that," said Hannah warmly. "I don't say that because I live in the country, but because it's true. I've been in town with my relatives a little, and I don't like the cold way your next door neighbors treat you. If we'd attempt to stop in a town tonight they would probably arrest us for vagrants, but out in the country people will receive us with open arms."

At that moment an automobile came tearing down the road leaving a heavy cloud of dust in its wake, and the people at the lowly table shuddered. They were leisurely eating the good food, and had no desire to have it mixed with road dust, but there seemed to be no escape. "O, Horace!" they heard a woman's voice say as the car slowed down in passing, "look at these people! How very interesting! Back the car up a little so we can see them!"

Before Hannah and the Gatches had realized what had happened, the whole party was on the ground looking them over coolly. "How, would you like to travel like that, Marie?" asked a man in a long coat loud enough for all to hear. "Isn't it an ideal way?"

"Where do you suppose they got that lay out for dinner?" said another. "Chicken, and green corn, and fried ham, and pie, and tomatoes—all the luxuries of the season!"

"What an absurd question!" said a lady with a silvery laugh. "Did you ever read how an army subsists on the march. These people must be just starting out in their career, for all the other gypsies I ever saw had a dozen or more children and that many dogs. I see only three youngsters in this party."

Dr. Gatch was about to say something when the auto party first began their remarks, but a touch of his wife's hand quieted him. "Let us hear what they say," she said in a low tone. "I am afraid I have been just as impertinent on occasions in calling on poor people. In fact, I am not sure that we have not treated poor Mrs. Parks as if she belonged to an inferior race of beings—at least we have her husband."

"How do people exist in such filth?" sighed the lady who had implored her husband to stop. "It is past all comprehension with me."

"Hush!" said her husband. "That fellow has a vicious look, and there is no telling what harm he may do if you make him angry. The best way is not to anger such characters." The party climbed into the car and went on their way, while Hannah and her friends laughed till they cried over the "vicious" looks sent after the swiftly moving car. The roasting cars were given a hot-water bath to free them from dust, and the chicken kettle that had been hastily covered with Hannah's gingham apron came to light once more as the feast was finished.

It was three o'clock before Mrs. Parks awoke and the trip was resumed. The whole party washed up at the comfortable farm house, and the good lady pressed upon them a basket of good things for the evening meal. "I'll be real anxious to hear from you," she said at parting. "Do drop me a card to say how you got along."

"We will!" called the departing people. "Don't worry a bit! We'll find some nice place to stay all night and by noon to-

morrow Mrs. Parks will be with her mother. Thank you ever so much! Goodbye! Goodbye!"

The moon was wonderfully bright that night, so the journey was prolonged until long after twilight. Slowly the wagon moved along the dusty highway, and the occupants so enjoyed the splendor of the evening, that it was with a start they found they must hurry to make plans for the night. Mrs. Parks dozed on the cot, and the infants snuggled down among the cushions, so that Hannah and the doctor and his wife rested as they passed along between solemn rows of splendid corn.

"I'll try right here," said Dr. Gatch, stopping at an old-fashioned large farm house where the lawn was so narrow the occupants of the wagon could hear all the conversation. "How do you do, madam? We are looking for lodgings for the night. We are—"

"We don't take lodgers," said a cold voice. "You've mistaken the place."

"I—I guess I have," agreed the doctor, hurrying back to the wagon. "How's that for country hospitality, Miss Hannah?"

"Oh, well," said Hannah, loftily, "there are exceptions to all rules. Try the next house and you'll find things different."

And her prediction proved true. "Going to Oak Grove?" said the mistress of the next farm house. "Well, you've got a long, dusty trip, I must say. When did you start? Just this morning? Must have drove pretty hard to be this far along. She ain't got nothing ketching, has she? In these days a body has to be careful."

"She is just worn out and needs rest," said Dr. Gatch. "We would like to get lodgings for the night."

"How many is there of you?"

"Four grown people and three children. Mrs. Parks is on a cot and would have to sleep on that."

"How old are the children?"

"All under six."

"Is it you and your wife and your sister?"

"The young lady is a friend of ours. I am a doctor, and my wife and Miss Hannah and myself are taking Mrs. Parks to her mother's home in Oak Grove," said Mr. Gatch, uneasily. He was very tired and anxious to get his party settled for the night. "Do you think you can find room for us. We are willing to pay a fair price."

"No, I believe not," said the woman slowly. "We don't make it a business to keep lodgers."

"Why on earth didn't you say so at first," muttered the doctor as he hurried back to the wagon. The children were fretting and Mrs. Parks moaning, so he hurried down the road to the next house in search of shelter. A huge dark cloud was looming up in the west and he feared the consequences if they should have to stay out all night with the invalid.

At the next house it looked as if they would find shelter, but just as the mistress of the place was looking Dr. Gatch over from head to foot, a woman in the sitting room beyond gave a little shriek and drew the woman at the door inside.

"Sister, don't believe a word he says," she said, in a tone loud enough for him to hear. "We passed that very man on the road this afternoon. He and some shiftless-looking creatures were eating right by the roadside, and several of the dirtiest children you ever saw were with them. Please, don't let them in!" It was the woman who had inspected them when the automobile stopped, and she evidently was visiting at the farm house. Without waiting to hear the rest of the conversation, Dr. Gatch abruptly turned and made for the wagon. He was now sure they would have to stay in the wagon all night and brave the rapidly approaching storm. His wife was bravely trying to keep back her tears, and Hannah was holding herself pretty well in hand, but it was an anxious party that drew up at the next little place—a mere hut, but a shelter from the summer storm if only the people would take them in.

"Drive right into the barn, stranger!" said the man, hospitably, when once more Dr. Gatch explained their errand. "A few months ago my house burned down and we're living in the new barn till we build another house. Hurry! The storm will catch you!"

The great doors were banged shut by the approaching storm, but the trembling little ones and the tearful Mrs. Parks, as well as Hannah and Mrs. Gatch, felt they were perfectly safe. With the storm raging and thundering outside they fell asleep on fragrant beds of new hay, and nothing disturbed them until the sun was peering through the cracks of the big doors next morning.

(Concluded next week.)

THE WEE THREE.

BY MARY F. BROKAW.

In a bright, happy home that I know there dwell
The little "Wee Three" that I love so well.

If this Wee Three
By chance you see,
You'll think them cunning as cunning can be.

They are up and alert at break of the day,
For their work, so important, allows no delay.

And each small one,
So full of fun,
Must have a part in the work that's done.

The cart must be mended, the horse must be fed,
The block houses builded, and picture books read.

Compare a bee
With this Wee Three—
'Twould seem as lazy as drone could be.

The house must be tended, the babies be dressed,
The naughty one punished, the good one caressed.

And these folks wee,
Aged one, four, three,
Are old and important as any can be.

These miniature men, and this matron sweet,
Through the daylight hours I often meet;
But in twilight gray
They vanish away,
And are seen no more 'till return of day.

And in their stead there come to me,
From out the twilight another three,
And these Wee Three,
Creeping up to me,
Are babies as tired as babies can be.

And I hold them close, as the night draws near,
And pray for my little "Wee Three" so dear.

That they may still,
With as earnest will,
Their places in life so cheerily fill.

And then I think of the close of day,
When our toil and strife shall have passed away.

Of the arms where we,
Like this "Wee Three,"
May lovingly rest in eternity.

FROM THE OPTIMIST.

Seymour—"I hear you have evolved a wonderful breed of laying hens?"

Ashley—"You bet I have! They beat anything I've ever seen. They don't need roosts."

Seymour—"Don't need roosts?"

Ashley—"No, sir; they're laying night and day."

Brown—"I see your friend, Mr. Waters, has petitioned the legislature to change his name."

Jones—"Yes; he expects to go into the milk business."

Ethel, aged three, had been to visit her cousins, two fun-loving and romping boys. She had climbed upon her father's knee and was telling him of her visit. "Papa, every night John and George say their prayers they ask God to make them good boys." Then thinking soberly for a few minutes, she said, "He ain't done it yet."

"Grandfather, I know what I shall give you for your birthday—a nice meersch-chaum pipe."

"That's good of you, my dear, but I already have one."

"That is to say, grandpa, you did have one. I've just broken it."

"Charley, dear," said young Mrs. Torkins, "didn't you say that horse you bought has a pedigree?"

"Yes," was the complacent reply.

"Well, knowing how unlucky you are with horses, I consulted a veterinary surgeon. You needn't worry. The doctor says it won't hurt him in the least."

"I reckon you have to watch your pocketbook and coat, etc., pretty close, don't ye?" a Western visitor asked his New York friend as they were starting out to see the city.

"O, no; ordinary vigilance is all that is necessary," responded the other. "New York is as honest as any other town."

"Wall, I guess I'll kind o' keep my eye skinned," ventured the skeptic.

When they were lunching in a restaurant, the New Yorker observed that his friend watched in a certain direction with an expression like that of a cat at a mouse hole. He was amused but politely did not remark about it until near the end of the meal.

"What are you watching so closely?" "Jest keepin' an eye on my overcoat."

"Oh, your coat's all right," laughed the New Yorker. "I'm not worrying about mine, you see, and they're hanging together."

"No, they ain't," drawled the westerner. "Mine's there, but a feller walked out with your'n 'bout ten minutes ago."

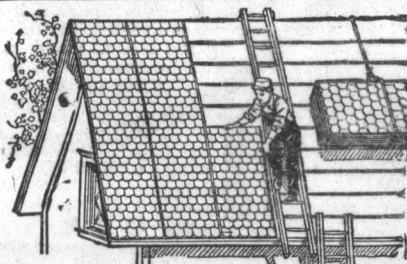
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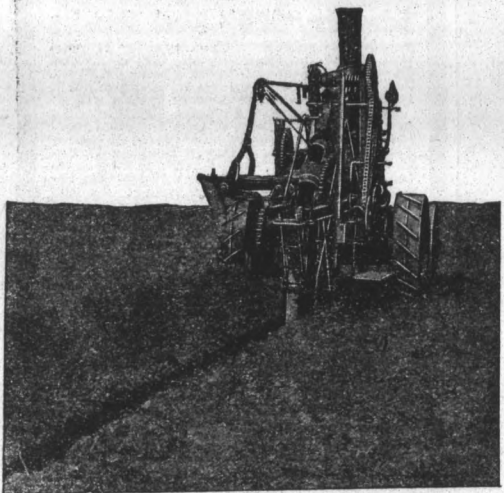
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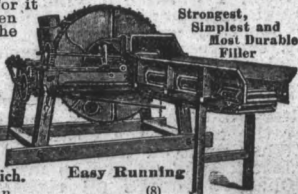
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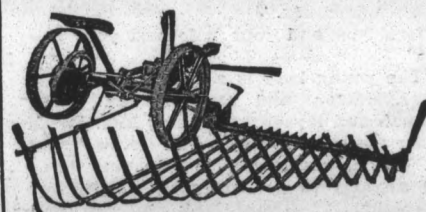
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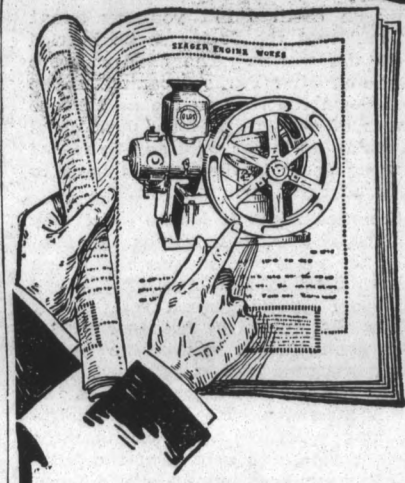
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