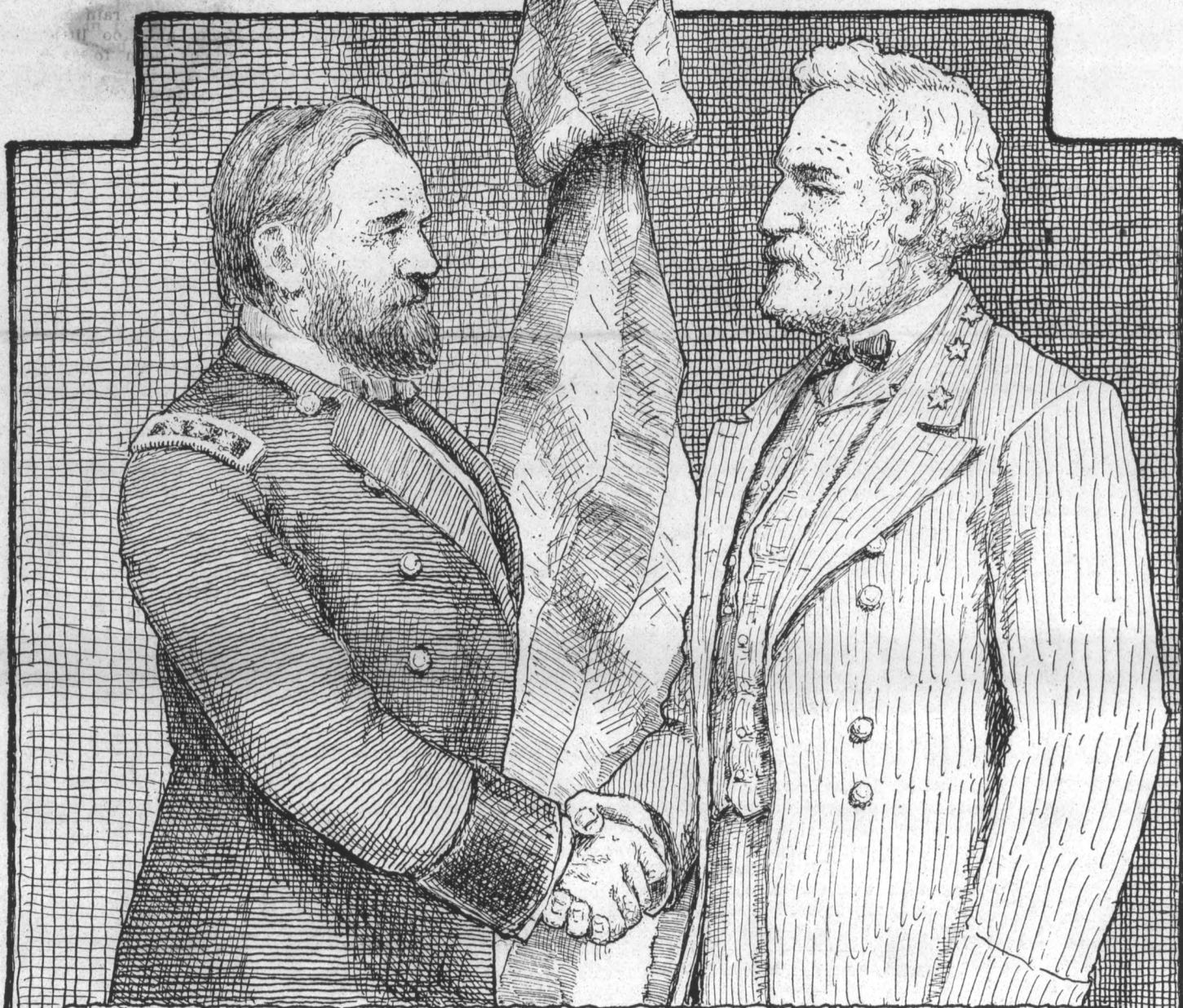


DECORATION DAY MCMXIV

# MICHIGAN FARMER



LET US HAVE PEACE.

L.O. Peets.

VOL. CXLII.

DETROIT MICHIGAN  
SATURDAY MAY 30, 1914.

NO 22.



## FARM NOTES.

## Fertilizers and Soil Fertility.

I have been a reader of your valuable paper for three years, and get a great deal of good out of it. Last fall I sowed some commercial fertilizer with my wheat and must say it looks very good this spring. I also used fertilizer on my oats and intend to on my corn and potatoes, but a great many of my neighbors tell me I will have to continue its use and will finally ruin my land or get it so poor that it will not grow anything at all. I practice the following rotation; I plow clover and timothy sod for corn, disc up the ground the following spring for oats and in the fall plow down all the manure I can get and sow to wheat, or top-dress with the manure and seed to clover with just a little timothy, leaving it to hay and grass for two years. Each time I sow a little fertilizer, say about 150 lbs. per acre for wheat and oats, and about 90 lbs. per acre for corn. I contend that this system will build up my land. Am I right or wrong?

Allegan Co.

J. S. C. S.

There is nothing whatever in the theory that commercial fertilizers injure the productive power of the land where they are intelligently used. It will be found that in practically every case where that theory is advanced by a farmer it is by one who has had no personal experience in the use of fertilizers or who has made no study of the question and has used them unintelligently, if at all. It will also be found that the most successful farmers in a community are the ones who use commercial fertilizers most liberally. As an illustration, the writer only yesterday called on one of the most successful farmers of Shiawassee county, who has used fertilizers for the past 25 years and by this means has, without the aid of live stock, maintained his farm in such a high state of fertility that he gets much above the average crop yields in his community. His land would produce better than similar land which has not been so fertilized without the use of further supplementary fertilization, but it will produce more profitably with it, and this is the reason that he continues to use commercial fertilizers, and not because he must to grow the same kind of crops that his neighbors produce, and the same is true of every farmer who uses fertilizers in an intelligent manner.

Whether the crop rotation practiced by the inquirer, with the fertilization described, will permanently maintain the fertility of his soil, will depend somewhat upon his general plan of farming, as well as the nature of his soil. The plan would, in the writer's opinion, be materially improved by applying the manure to the sod ground to be plowed for corn or potatoes, since by this plan the manure could be gotten onto the land with less delay after it is made and insure the better conservation of this source of plant food. With this change in method and with sufficient manure to cover the sod ground plowed each year, a light supplementary fertilization with commercial fertilizer, such as is noted in this inquiry, should serve to maintain the land in its present state of fertility and perhaps gradually improve its crop producing power. Otherwise it would be better to shorten the rotation a year and plow down the clover after cutting one year, to insure the addition of sufficient vegetable matter to keep the soil in a good mechanical condition and well supplied with nitrogen.

Where fertilizer fails to give profitable results it will generally be found that the soil is deficient in organic matter, and the first step toward its permanent improvement should be to remedy this condition.

## Plowing Down Straw.

Kindly advise me as to the best way to rot straw so as to apply it to be plowed in for manure. I have about five tons that I want to put on this way.

Delta Co.

I. C.

It will not, in the writer's opinion, pay to compost this straw as a prepa-

ration for its application to the soil to plow down. The most profitable way to use straw is as an absorbent in stables and yards to prevent the waste of liquid fertilizers, but where there is an excess of straw available over the amount which can be profitably used in this way, it can be spread on the surface, preferably on sod ground, with excellent results. If spread thinly on sod after haying in midsummer, the straw will form a desirable mulch and stimulate growth of the grass, and there will be more vegetable matter to plow down, while it will be no trouble to plow under the straw when so handled.

## Midsummer Seeding of Alfalfa.

I would like to have the opinion of some of your readers in regard to a field I have. It is a ridge. Clay and sand, and has been run quite badly. It is in rye now. Would it be advisable to turn down the rye after corn planting and give it about six loads of manure per acre and work it in good and sow to alfalfa? How late in the season would it be advisable to do this work?

Gratiot Co.

A. P.

The plan as suggested for seeding this land to alfalfa would be an excellent one, and should give good results. If, however, the manure is spread on the land after plowing and worked into the surface, it would be better to keep the land cultivated for some weeks to kill the weeds before the alfalfa is sown. It would, in the writer's opinion, be a better plan to spread the manure on the rye and plow same down, then fit the land and sow the alfalfa as soon as a good seed bed could be prepared and the weather conditions were suitable. It should be remembered that alfalfa does best on a good firm seed bed, but if it is sown any time before the middle of July, it will make such a rapid root development that it will make as good use of the manure if plowed under as suggested, as would be the case if it were spread on the surface and worked into the soil. Alfalfa may be successfully seeded as late as the last of July, but it is preferable to sow it not later than July 15, in order that it may make a good top growth with which to go into the winter, so it will stand a far better chance of surviving a hard winter under these conditions.

## Rape Pasture for Small Pigs.

In a recent issue of the Michigan Farmer there was a long article on rape pasture for hogs. Now some people claim they have found that rape pasture is liable to be injurious to white pigs. Can you give me any information on this subject?

Osceola Co.

E. L. J.

Where small pigs, and especially white pigs as suggested in this inquiry, are turned into a growthy pasture and allowed to run through same when wet with dew, it will sometimes have an irritating effect upon the skin. However, if the pigs are turned into the pasture before it has made a large growth, this will not occur to any extent, and if the pasture is not overstocked at this time, it will not be materially injured by such pasturing.

## MORE ABOUT STONE ROADS.

Interest in the recent articles by Mr. J. A. Kaiser relating to the stone roads built in Fayette township, Hillsdale county, prompts me to ask for the following information: What is the cost of the stone crusher, separate from a steam roller? What is the cost per mile for the upkeep of crusher? Is it essential to have a steam roller?

Livingston Co.

C. H.

Taking up the above questions in their order, will say that the cost of the stone crusher separate from the roller, is \$1,500. When Fayette township first commenced the construction of crushed stone roads, the machinery was obtained on trial, at a rental charge not to be collected, provided the machinery was purchased after trial. The experiment in this kind of road construction proved satisfactory and the outfit was purchased, thus saving the rental charge.

In regard to the cost of up-keep per

mile, it is not practicable to give accurate figures at this time, owing to the fact that the crusher is comparatively new, this being the fourth season it has been in use. It is possible, however, to give a fairly accurate estimate, based on use for a series of years. The highway commissioner of the township under whose supervision most of the stone roads have been built, estimates this up-keep to be somewhere between \$150 and \$200 per mile. The commissioner is at present, probably best fitted to make this estimate of any man in the township, owing to his long experience and thorough knowledge of the outfit, and his figures will doubtless prove to be close to the exact cost.

Concerning the steam roller, it may be said without reservation, that either a steam or gasoline roller is absolutely essential. In order to construct crushed stone roads properly, a roller of 10 tons weight is required. An amount of rolling amounting to 30 days' work is done on each mile of road built. Much of this rolling is done in the evening, after the work with the crusher has ceased. It is the practice to roll down the newly built road and also that which has been constructed on previous days. It is the opinion of those competent to judge, that these roads cannot be rolled too much. The more rolling the better. The heavy roller has been found to work excellent results in the repair of roads, in taking out ruts, etc., and is used for this purpose, each spring. A mile of state reward gravel road built some years ago is easily repaired in this way.

It is not the policy of Fayette township to go in debt in order to construct stone roads. The matter is in the hands of the voters, and should the tax for this work seem too heavy, they have the power to cut down the mileage to be constructed. It is the policy of the township, however, to build only good roads, even though the work should proceed slowly. Road improvement is bound to come, everywhere in Michigan. Why not construct the best and most permanent road possible? It is the policy of the township, also, to construct these roads first, where most needed, regardless of whether the bad spot be in a main road or a crossroad. Long stretches of deep sand are being converted into hard, smooth, stone roads. So far, the cost per mile, exclusive of wear on machinery, has been \$12.00. This allows, of course, for the payment of \$1,000 reward money, by the state.

Hillsdale Co.

J. A. KAISER.

## WHEN TO APPLY LIME.

"The best time to apply lime," says M. A. Batchell, of the College of Agriculture, Ohio State University, "is during the preparation of the seed bed for corn. The thorough cultivation of this crop mixes the lime with the upper soil. By the time clover is sown on that soil, the lime has changed it from a sour to a sweet condition. The time for applying lime, however, admits of wide variation. Usually a busy spring compels the farmer to spend his time in getting ready for the season's planting. If liming is neglected, it can be done at the time of the preparation of the seed bed for wheat. Lime should not be applied to the surface and immediately plowed under as this tends to place it too far from the surface where it is needed. Neither should the caustic forms (hydrated lime and quicklime) be applied in connection with manure and fertilizers. It is better to plow the manure under and put the lime on top of the soil. In case the manure is desired for top-dressing, the lime should be worked into the soil at least two weeks prior to application of the manure. Likewise it is well to apply the lime some time previous to commercial fertilizers."

## Practical Science.

## THE CONSERVATION OF SOIL MOISTURE.

BY FLOYD W. ROBISON.

With the abundance of rainfall which we have in this state at certain periods of the year, it seems indeed strange that there should at any period of the year be a lack in available moisture in the soil. During the year we have, as a rule, between 30 and 40 inches of rainfall and this is ample, were it properly distributed, to take care of the needs of growing crops. But while we have no specially distinct rainy season and dry season, there are certain periods of the year in which rainfall is more abundant than at other times. During such periods there is a great excess of rainfall and therefore a desideratum in farm management is the perfection of a drainage system which will permit of the carrying off of the excess rainfall without detriment to the soil and to growing crops.

We have just enough rain in this climate so that we have come to depend in farming operations almost entirely upon rain arriving in proper season, and too little have cultural methods been followed such as are necessary in the states of the middle west where rainfall in season cannot be depended upon.

Excepting in certain localities in this state, irrigation is not practiced and with the amount of rainfall which we have during the year in most instances irrigation is unnecessary, but some of the principles governing the science of dry-farming must be put into operation for maximum crop production.

## The Conservation of Soil Moisture.

The conservation of soil moisture is a very necessary adjunct to successful farming in Michigan and cultivation is practiced more, we think we may safely say, with this end in view than with the elimination of weeds and vegetable growth foreign to the crop.

## The Capillary Water of the Soil.

The moisture of most benefit to the growing crop is the soil moisture, that is, the moisture which comes in contact with the roots underneath the soil. This moisture, of course, not only serves as the fluid medium for plant growth, but it carries with it the entire nourishment of the plant, or at least, the administrative agents which administer the nourishment to the plant. This is accomplished through what is known scientifically as capillarity in the soil. This capillarity occurs in exactly the same manner as that in which the oil in a kerosene lamp is fed through the wick to the flame. The influence of the capillary attraction causes the water in the soil to mount higher and higher until it reaches the surface where, through the influence of the sun's rays or through the influence of the demands of the growing crop, it is removed and thus creating temporary deficiency at this point, more water is drawn up.

## Water Removed by Crops is Enormous.

Unless one has observed the matter closely, there is a very slight perception indeed of the enormous amount of water which is necessary for the supplying of a growing crop during a day. Thousands and thousands of gallons of water are pumped into the air, as it were, through the respiratory processes of plant growth, and this water reaches the plant through the process in the soil known as capillarity. To divert all of the capillary water of the soils to the rootlets of plants is the farm problem involved during the growing months in which, as a rule, rainfall is unevenly distributed upon the earth.

(Continued on page 580).



# Horticulture.

## Ward Orchard Notes.

This is truly the rush season on a fruit farm and we are probably experiencing more the usual rush on account of the extra work of getting things in running order. But, as yet, the delays we have had have been nothing serious.

We have kept two of our spray rigs working up to blossoming time, and have covered the second time before the blossoms, the Spies, Baldwins and Shiawassee, the varieties which are the latest in blossoming and the most susceptible to scab we have.

In spraying we maintain about 200 pounds pressure and have two men to a rig, one on the rig and the other on the ground. Unless the wind is very strong, we spray both rows as we go, the man on the tank taking care of the tops and a great share of the head of the trees, and the man on the ground the lower parts, giving the trunks special attention. The trunks are well sprayed because they have been neglected in the past and some of them are affected with canker and winter injury.

### Spraying Equipment.

We use the regular eddy chamber nozzle, which some call an enlarged vermole, using one to each rod. The rods are eight and ten-foot lengths, and for the man on the tank we allow a little over ten feet of hose, while the man on the ground gets between 25 and 40. For the after blossom spraying we intend to use three leads of hose on each rig, with two men on the ground and one on the tank.

Had it not been for the numerous unpreventable delays we would have had the work up in good shape, because we are quite sure that we have now the equipment to take care of things in time. In addition to the regular equipment which was on the place when we took charge of it we purchased a 15-30 tractor and a tractor disk, which is a cutaway disk of 40 disks, and makes a 12-foot cut. We realized that if we were to cultivate the orchard in good shape we would need eight or ten teams. These teams would be necessary at this time of the year, but in a few months most of them would be standing idle. The original cost, and the cost of keeping that number of horses would be large and the number of hours you can work the teams would be limited by their endurance. With the tractor we can keep going every daylight hour and even work at night if necessary. The night work we have tried out and find that it works very satisfactory. One ordinary automobile gas light furnishes plenty of light for this work. It was quite interesting to see the tractor, which may be likened to a one-eyed monster, traveling around the field at night.

### Saving Time in Spraying.

In addition to the tractor being a tireless worker in cultivation, we are going to use it to great advantage in spraying. We have a thousand-gallon tank mounted on heavy trucks and with this we shall have the tractor haul water to the four spray rigs in the field. We found that over half of the time was consumed by the spray rigs going to the spray shed to fill up. From the farther side of the orchard the spray shed is about three-quarters of a mile away and traveling this often during the day takes time. In a short test of the tractor hauling water for the spray rigs we found that it nearly doubled the number of tanks of spray each rig would put on. So, instead of applying six to eight tanks a day, each rig will apply from 12 to 14. This will be a decided advantage

in applying the next spray, with which ones does not have very much latitude in the way of time for the best results.

At the present writing (May 19) Wagener, Wealthy and Duchess trees are in full bloom and are blossoming very heavily. The Jonathans are also budded well and will be out in a few days. The Shiawassee, Baldwin and Spy are not going to blossom as fully as the others, but still have enough to set for an ample crop. Our blossoms were not out during the bad weather of the week of the 11th, and we can see no bad results in any way from that weather, except that it delayed us a little in our work. The weather conditions at present are ideal and by all prospects we are in for a big crop of fruit.

### SPRAYING APPLE TREES WITH NITRATE OF SODA.

Horticulturists are familiar with the effects of ether upon plants and its use in forcing plants is now a common practice. Exposing the dormant plants for short periods to the fumes of the anesthetic results in hastening the blooming period and consequently the practice has become of commercial importance.

We are now learning of another similar practice which promises to become of importance to fruit growers in some localities. About two years ago we heard of an experience of a California apple grower in spraying some of his trees with a solution of nitrate of soda. The orchard in question was composed of Yellow Bellflower trees which had been unfruitful. The trees blossomed abundantly, but fruit failed to set, so the owner reasoned that an application of nitrogen would be beneficial. Consequently, nitrate of soda was applied to the trees in the usual form and as spraying operations were then in progress, he concluded to dissolve it upon his trees. He apparently had no reason for using the material in this way and the thought was probably suggested simply by the use of the spraying machine.

### Applied to Ground and Tree.

The fertilizer, in both forms, was applied at the same time, which is about two months before the blossom open. The sequel showed, probably much to his surprise, that the trees that were sprayed with nitrate solution set an abundant crop of fruit, while the other trees gave the usual poor crop.

The story of this result was spread broadcast throughout the country for what it was worth and a number of experiment stations have been interested in the subject. The first bulletin, however, recording definite experiments, recently appeared from the Department of Agriculture—Research Bulletin No. 5.

In brief, their plan of experiment was as given above and the results were the same, viz.: the trees blossomed about two weeks earlier and set an abundant crop of fruit, while the untreated trees were unfruitful. It was also noticed that the buds on the treated trees were more plump and apparently more vigorous.

### Results of Experiments.

The authors do not attempt to explain the reason for this effect nor have their experiments gone far enough to warrant definite conclusions. However, these results open up a broad field of inquiry for if certain materials applied to trees at the right time will cause early blossoming and lessen the effect of sterility, why may it not be just as possible to find some solution which will also retard

bloom and at the same time increase fruitfulness? In seasons like the present, when state-wide damage has befallen the peach crop, such possibilities are more than likely to be dreamed of, but more particularly in the case of damage from late spring frosts. The retarding of the blossoming period for only a day or two could often mean the difference between success and failure.

Then again the possibility of medicating trees is suggested so that they may more readily withstand the ravages of diseases. Experimenters have long been interested in this subject, but, so far, with scant results. But no doubt the California experiments will stimulate such inquiries and it is likely that a great advance in the knowledge of this general subject may soon be made.—Prof. W. Paddock, Ohio College of Agriculture.

### TRANSPLANTING.

Plants to be moved into permanent quarters in the open ground from hotbeds and flats should have been subjected to a few days of open-air treatment—allowed to go rather dry at times and hardened off by full exposure to the sun; they should be well watered the night before transplanting and, if possible, moved while still fresh in the morning. Only as many plants should be lifted at one time as can be got into the ground before they wilt seriously. Everything should be in readiness for planting before a plant is lifted from the bed—all planting lines marked out.

In lifting plants from the hot-bed or flats great care should be exercised that the tender, fibrous roots are not injured; pass the trowel well down below the lowest tip of the roots and lift a block of plants together; separating them as they are set in the ground.

The condition of the weather, so that it is free from frost, is not of moment but the ground should be in condition to allow of the forming of a dust mulch about the plants or advantage should be taken of a spell of rainy weather.

### Setting the Plants.

In setting the plants a hole should be made of sufficient size to accommodate the roots, the plant placed therein and a portion of the soil drawn about it and pressed rather firmly about the roots; the hole should then be filled with water and when this has soaked away the remainder of the soil drawn up and a dust mulch formed about the plant to retain the moisture about the roots. Plants set in this way will require no shading or protection, no matter how hot the sun, but should the moisture draw to the surface or a shower follow the planting the ground should be gone over with a hoe or other tool and the dust mulch restored. Do not water for three or four days after transplanting, but maintain the dust mulch unimpaired.

When by overcrowding in the bed or flats the plants have kneed over, it will be well to set them deeply enough in the ground to provide an upright growth for the stem; tomatoes which have become badly bent and have started root growth along the stem may be trenched in the entire length of this growth to advantage, leaving only the upright part of the stem above ground. Plants which have made too rapid a growth and may have a portion of the leaves removed before planting, cabbage and cauliflowers being especially benefited by this method.

Branch Co. IDA D. BENNETT.

Keep the newly set small fruit plants well tilled. Pick the blossoms off of all of them, especially the strawberries. With the latter it is desirable to allow the plants to put all their energy into the making of good rows of plants.

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## Live Stock.

### INDIANA CATTLE FEEDERS' CONVENTION.

The Seventh Annual Spring Convention of the Indiana Cattle Feeders' Association, held in Lafayette, Saturday, May 16, was one of the most successful meetings of the organization. The attendance, owing to the very favorable weather for farm work, which no doubt kept many at home, was not quite up to the high record of last spring, but was somewhat above the average, being between 300 and 400 people.

The meeting was called to order at 10:30 a. m., by President Maurice Douglas, of Flat Rock, Indiana, who gave a short and interesting talk on the cattle feeding business in general. His faith in the future of the industry is shown by the fact that he has recently erected, at a considerable cost, an extensive cattle feeding plant.

#### Results of Feeding Trials.

The results of the feeding trial at Purdue which has just been completed, were discussed by Mr. F. G. King. The cattle used in the experiment had been purchased on the Chicago market during the first part of November and were valued in the feed lots by commission men from Chicago and Indianapolis, at \$7.45 per cwt.

The cattle in Lot 2 were fed a ration of shelled corn, cottonseed meal and clover hay. They gained in 175 days 426.9 pounds per steer at a cost of \$12.21 per cwt. The selling value of the cattle in the feed lot, as placed by the commission men on the basis of the Chicago market, was \$8.60 per cwt. This shows a loss of \$4.17 per steer, not including the pork produced and a profit of \$6.73 per steer including pork.

The cattle in Lot 3 were fed shelled corn, cottonseed meal, and native alfalfa hay. They gained 405.6 pounds per head which, it will be noted, was somewhat less than the gain made by steers in Lot 2, where clover hay was fed. This was at least partly due to an unthrifty steer in Lot 3 which fell far below the average in rate of gain. The results of this one trial indicate that clover and alfalfa hay have practically the same effect upon the rate of gain with fattening cattle. The cost of gain in Lot 3 was \$13.88 per cwt. and the selling value was \$8.50 per cwt. in the feed lots. Owing to the higher cost of alfalfa which was \$18 per ton, the steers in this lot lost \$11.50 per head, not including pork produced, and including pork the loss was \$1.03 per steer.

The cattle in Lot 4 were fed shelled corn, cottonseed meal, corn silage and clover hay. They gained 431.8 pounds per head. The cost of gain was \$10.74 per cwt. and the selling value was \$8.70 per cwt. The profit per steer not including pork, was \$3.41, and including pork the profit was \$10.95 per steer. Comparing Lot 4 with Lot 2 shows the results secured from adding corn silage to a ration of shelled corn, cottonseed meal and clover hay.

Lot 6 was fed the same as Lot 4, except the clover hay was replaced by oat straw. The rate of gain was slightly greater than in Lot 4 and the cost of gain was reduced 50 cents per cwt. by the use of the cheaper roughage. The selling value of the cattle was the same in both lots. The profit per steer in Lot 6, not including pork produced, was \$4.94, and including pork was \$12.94. This is in accord with the results secured last year from these two rations and indicates that where cattle are on a full feed of corn, cottonseed meal and silage they will eat such a small quantity of dry roughage that the nutritive value of such dry roughage is of very little

importance. Oat straw, owing to its lower price, proved more profitable in this ration than did clover hay.

Lot 5 was fed the same as Lot 6, except that four pounds of cottonseed meal daily per thousand pounds live weight were fed instead of two and one-half pounds. They gained 423.4 pounds per head. The cost of gain was \$10.90 per cwt. The selling value was \$8.70 per cwt., indicating that they carried the same degree of finish as Lot 6. The profit per head, not including pork, was \$2.89 and when the pork produced is credited to the cattle the profit per head is \$10.38.

Lot 1 was fed the same as Lot 6, except that soy bean meal was fed instead of cottonseed meal. The cattle receiving soy bean meal were too "loose" most of the time and did not relish their feed as much as those receiving the cottonseed meal. The cost of gain was \$10.94 per cwt. and the selling price \$8.60 per cwt. in the feed lots. The profit per head was \$2.41 not including pork, and \$11.22 per head when the returns from the pork are added.

Lot 7 was fed the same ration as Lot 4 except that native alfalfa hay replaced the clover hay. The rate of gain was 415 pounds per head. The cost of gain was \$11.57 per cwt. The selling valuation was \$8.40 per cwt. which was the lowest lot in the experiment. Not including pork, the loss per steer was \$3.89, the profit per steer, including pork, was \$5.56.

#### The Effect of "Free Meats."

At the close of Mr. King's address and the discussion which followed, lunch was served in the judging pavilion. This was followed by the address of Mr. J. T. Alexander, of Chicago, on "Free Meats," and its effect upon the producer and consumer. He said in part: "At the very moment when growers needed every possible incentive for breeding operations they were assured that cheap beef could be insured by the simple process of wiping out the tariff. I assert, without fear of successful contradiction, that this ill-advised legislative action defeated the very object sought, reduction of cost to the consumer; but for free trade thousands of small breeding herds would have been established and the 1914 calf crop would have furnished far more assurance of relief for the consumer than a few thousand tons of chilled and frozen beef of dubious quality from South America. Fear discourages human energy, and it was fear of a deluge of foreign beef that restrained many score land owners from breeding operations."

"In my judgment the United States is capable of producing an adequate quantity of beef, but to insure that supply condition, a continuance of present prices will be necessary. We have the capital, brain, muscle and feed, and only lack confidence in the permanent profitability of the industry. As long as cattle and beef are admitted free, considerable numbers of the former and quantities of the latter will be imported."

#### Beef Production Profitable.

Following Mr. Alexander's address, Mr. J. D. Waters, of Dawson, Illinois, gave a very interesting talk on his methods and experiences in breeding and feeding cattle. His experience shows that through a series of years the cattle business has proven profitable and he thinks the future holds just as bright prospects. He says: "The prospects for breeding our own cattle was never as bright as at the present time."

In conclusion Mr. Waters said: "I fully believe the chances are very slim to find a better occupation than

to breed and produce the kinds of cattle that I have spoken of, and to become a breeder and tiller of the soil, I consider one of the greatest honors."

F. G. KING, Secretary.

### LIVE STOCK NEWS.

D. H. Robinson, of Daviess Co., Mo., has come to regard the silo as a necessity to farmers of the corn belt states if they intend to carry on feeding cattle. Last fall he bought in the Kansas City market 117 head of heifers, which he fed on silage largely and marketed three carloads of them recently in the same city at \$8 per 100 lbs. He has one carload left. He can figure out a profit, he says, which is more than he could have done had it not been for the silage used in fattening them. Mr. Robinson built two years ago four silos of 150 tons capacity each, and he has discovered that no other feed can compare with it for cheapness. It goes farther as a forage feed than hay or fodder, or any rough feed he ever used.

Stock feeders living in territory tributary to the Chicago market where corn has been abundant have been unloading their cattle carried through the winter, and recent receipts have embraced a good showing of pretty good cattle, but such steers as bring \$9 and over are scarce. However, there have been a good many \$8.50@8.90 cattle that served killers' purposes and are convertible into good beef. Fat little yearlings are in active demand at good prices, with especial favor shown to high-dressing yearlings selling at \$8.75 and upwards, but half-fat yearlings are strongly discriminated against. The best course for owners of little cattle to follow is to feed them out, for the more finish they carry the better they sell, and there is no danger that they will be marketed this summer too liberally.

The wool market shows an unmistakable advancing tendency, and active buying is expected all summer. It is stated on good authority that the world's clip this year is insufficient to operate 75 per cent of its loom capacity, and it has been predicted that the domestic clip will be used up in the course of six months, necessitating much increased imports from abroad. Of late, western sheepmen have waked up to a realization that they sold their clips at too low prices. In Montana it is difficult to buy wool below 20 cents a pound.

Recent bad breaks in the Chicago hog market caused many stockmen to wait for rallies in prices before selling any more hogs. There is no oversupply of swine in the country, and decidedly fewer hogs have been slaughtered in the west since March 1 than for the corresponding period last year. The packers are anxious to have hogs placed on a lower basis, but they are still bringing much higher prices than in most former years and are making large returns for their care and feed.

Prices asked for young stock cattle look so radically out of line with the prices paid for fat ones that intending buyers are exercising caution. Stock steer calves have brought as high as \$8.50 per 100 lbs. in the Chicago market recently. At Missouri river markets the proportion of stock cattle arriving is large, but such cattle are arriving rather sparingly in Chicago.

Chas. Osborn, a farmer and stockman of Rock Is. Co., Ill., carries feeding cattle from two to three months on silage and cottonseed meal, and he finds that this method is considerably cheaper than feeding corn, although it does not put on as much flesh. He says corn can be placed in silos, which are rapidly growing in favor with farmers in that region, for about \$2.50 per ton, and two tons of silage will equal one ton of clover.

L. S. Larrison, Winnebago Co., Ill., showed up in the Chicago market recently with a carload of 1346-lb. beef steers which brought \$9.10. They were bought in the Chicago market as feeders at \$7.85 and made gains of 500 lbs. while on feed, or an average of almost four pounds a day.

Recent reports gathered from five far western states, comprising Montana, Wyoming, Idaho, Oregon and Utah, show that the 1914 wool clip will run approximately 25,000,000 lbs. below that of last year. Owners who have any wool left are in no great hurry to sell.

Horses were not in excessive supply last week, and although the general demand was only fairly large, prices remained mostly steady with the bulk of the sales below \$200 per head. Pairs of farm geldings sold at \$300@400, and drivers sold singly at \$100@150, pairs of drivers going at \$150@250. A few prime heavy drafters brought \$285@310 per head, but most drafters sold around \$225@275, while wagoners brought \$185@240.



## Dairy.

CONDUCTED BY COLON C. LILLIE.

### MAKING BUTTER FROM ONE COW.

We have a cow which gives about 14 to 15 quarts of milk each day. She is part Jersey and the first one we ever had; as we have had no experience in butter making I would like a little information as to how it is done.

Wayne Co.

P. A. R.

Making butter from one cow, good butter, is quite a serious proposition. We practically have to go back to primitive methods of butter making, raising the cream by the gravity process in pans. The principal way used to be to use a small glass churn like a two-gallon crock or something of that sort for a churn. They didn't have a sufficient amount of cream to pay to have a hand-separator, neither did they have enough to pay to have a barrel churn or a box churn.

Now, the trouble in making good butter from one cow is that you have to leave the cream so long before you get a sufficient quantity to churn, that it is almost impossible to make the best of butter. Where one has a good-sized herd so that he can churn every day, he has no trouble in making gilt-edge butter. If you have few cows and let the cream stand quite a long while it is liable to get bitter and have other off flavors which prevents you from making the choicest kind of butter. However, if you are willing to do all of the work by hand and are particular about it, you can make good butter from one cow.

Put your milk in a six-quart pan and set it in just as cool a place as you have in the summer time. If the cow is part Jersey the cream will rise better than it will with some other breeds, because the globules of fat are larger and will more readily come to the top. Skim the milk into the cream jar when it is ready to be skimmed and set it away in a cool place. Do the next milking the same way and you can put it into the same crock if it is kept cool, because the cream is cool when it is skimmed. If you have a hand-separator and the cream is warm you will have to cool it before you mix it with the older cream.

When you have accumulated enough cream for a churning, and you ought not to wait over three days, then gradually warm the cream up to 70 degrees and let it stand over night. Cool the cream down to 60 degrees before churning. You can rig up a little churn with a stone crock and have a lid made to cover it, and a dasher made. By working the dasher up and down you can break the globules of fat and get them to accumulate together in masses.

If you use this old-fashioned dasher churn you will have to take the butter out of the churn with a ladle and put it into a butter bowl and wash it the best you can. Work it over in water a couple of times anyway, until the water runs away clear. Then suit the taste. Work the salt in and let it stand over night, then work it again and then you can make it into rolls or pack it into a jar. Remember the most important thing to get fine butter where you have such a small amount to churn, is to churn often.

### VALUE OF ROOTS AS SUCCULENT FEED—ALSO COMPARED WITH GRAIN.

Not having a large enough herd to justify a silo I am inclined to attempt the feeding of roots if they can be had at a reasonable price. Last winter my ration was limited to mixed timothy and clover and about 10 to 12 lbs. per day of mixed grains. If I fed about 30 lbs. of roots per day—turnips, rutabagas and mangels in succession—how much reduction could

I make in the grain ration? I am sure that the cows would be benefited by the succulency of the roots but the latter are quite expensive to buy and I could not afford to feed them unless I could make a corresponding saving in the cost of either the grain or the hay as fed last winter. What should be the approximate cost per ton of the different roots mentioned? Would appreciate an early reply in order that I may contract for the growing of the roots, if necessary. They are rather scarce in this part of our county.

SUBSCRIBER.

The Dakota Experiment Station has found out that 10 pounds of roots will take the place of one pound of grain, and if you feed 30 pounds of roots per day you can get along with three pounds less of grain. You will get better results with three pounds less grain and 30 pounds of roots in the place of the three pounds of grain than you would with an all-grain ration, because a succulent food has a greater value than its chemical analysis would seem to indicate. Succulency adds very much to the ration because it makes it more palatable. It keeps the digestive organs of the cow in better condition and she can consume more dry food and assimilate more of it, and consequently produce better results.

As to the value of roots their chemical analysis would seem to show that they are quite as valuable as corn silage, ton for ton, and undoubtedly their succulency is of a greater value. If a man argues that corn silage is better than roots he simply argues that it is a substitute for roots. Experiments show that the succulency of corn silage will take the place of the succulency of mangel wurzel beets or turnips, but no one argues that corn silage is better. The argument is that you can grow so much more corn per acre than you can of roots that it is more profitable to feed corn silage than to feed roots. Not only that, but it is more economical to store the silage. It can be done in a more economical way. Consequently most all dairymen have given up the idea of growing roots for succulency and grow corn instead, but there isn't any question but what you can get just as good results with roots as a succulent food as you can with corn silage. The chemical analysis of roots are equal in food value to one pound of timothy hay. Therefore if timothy hay is worth \$15 per ton one could afford to pay \$5 per ton for roots or for silage. Ordinarily these crops barely sell for as high a price as that, but one could certainly afford to pay \$4 or \$5 per ton for the roots. If it wasn't for the trouble of growing them, and also the expense of storing them, and the fact that they are not suitable for feeding in the summer time when the pastures are short, more roots would be fed today than are now being fed.

### MILK REQUIRED TO RAISE A DAIRY CALF.

A series of tests was conducted by the Illinois Experiment Station to demonstrate the value of milk in calf raising and to ascertain the minimum amount of milk necessary to insure to the calves a satisfactory start in life. The first test was preliminary and indicated that during the first two weeks the calves must be fed a reasonable amount of milk containing about three per cent butter-fat (this to be gradually changed to skim-milk), the calves receiving practically all of their nourishment up to eight weeks, from the milk. Following this, a grain supplement may be fed. In the second test in which the average amount of milk used was 152 pounds of whole milk and 435 pounds of skim-milk, the calves made an average gain of 65 pounds during the first 70 days of their lives. During the third test more whole milk was fed, but it was found to be unnecessary. The cost of the milk fed each calf varied from \$1.61 to \$4.62, which is considered comparatively low.

## Seeing the Difference

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# DE LAVAL

AND OTHER

## Cream Separators

IT DOESN'T TAKE AN EXPERT KNOWLEDGE OF mechanics or a long working test to tell the difference between the De Laval and other cream separators.

ON THE CONTRARY, WITH A 1914 DE LAVAL machine placed beside any other separator the difference is apparent at first sight to the man who never saw a separator before.



IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction; the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together; the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, he will still further *see the difference*.

IF HE WILL GO A step farther and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL take the two machines home, as every De Laval agent will be glad

to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks, he will see still greater difference in everything that enters into cream separator practicability and usefulness.

THE MAN WHO TAKES EVEN THE FIRST STEP indicated in seeing for himself the difference between the De Laval and other cream separators doesn't put his money into any other machine one time in a thousand.

THE COMPARATIVELY FEW BUYERS OF OTHER separators are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to *see the difference* for themselves.

THE WISE BUYER OF A CREAM SEPARATOR TODAY does see this difference when buying his *first* separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a *second* separator a year or two later.

EVERY DE LAVAL AGENT CONSIDERS IT A PRIVILEGE to show the difference between the De Laval and other separators, and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it.

THAT'S THE REASON WHY FOUR BUYERS OUT of five are buying De Laval Cream Separators in 1914 and why the use of De Laval machines will, before long, be nearly as universal on the farm as already is the creamery and milk plant use of power or factory separators.

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DETROIT, MAY 30, 1914.

## Decoration Day, 1914.

"Lest we forget,  
Lest we forget."

As the years roll away and we see in clearer perspective, the four terrible years of half a century ago when the nation was rent in twain in the black and crimson hurricane of civil war, the heroic figures of Grant on the one side, and of Lee on the other, loom highest on the fighting lines.

And as we look back from this distance, the one has come to personify the battle spirit of the North and the other the battle spirit of the South in that mighty conflict over which the great-hearted martyr President, like a brooding angel spirit, seemed at last to draw the hearts of all men after him as a guiding star of good will toward men.

While Decoration Day, or Memorial Day, is in honor of all the American soldier dead, yet the idea of the day was born of the spirit of that great civil strife and from that period will probably always issue its most revered imagery and its deepest inspiration.

Astounded, even while applauding, the world gazed upon the historic field of Gettysburg in the early days of July last year and beheld the venerable survivors—victors and vanquished of all history's most magnificent charge of fifty years before—repeating its great striking incident without guns or bayonet or cannon; but with the outstretched arms of good will and closing with the warm handclasps of love and loyalty to a reunited country under one flag.

Among the men who wore the blue and among the men who wore the grey, those of the broad minds and big hearts shared the brotherly forgiving spirit so admirably displayed by Grant and Lee, and the former voiced truly the great American heart's most earnest desire, when he said, "Let us have Peace."

Grant, the sturdy, the alert, the sleepless, the comprehensive, whose great mind carried the myriad sided problem of a colossal war and in which the battle was but an incident. And yet, simple hearted, approachable and candid, he was Lincoln's strong arm, realizing and in heartiest sympathy with his chief's great purpose—a reunited people dwelling together in peace and harmony.

How characteristic it was of Grant in fixing the terms of surrender at Appomattox, to say, "Let them take all their horses home with them; they will be needed in the belated spring plowing!"

And on the other side is Lee, the

superb, chivalrous, soldierly gentleman, the beloved leader, honestly, courageously, self-sacrificingly, following to its ultimatum an unhappily narrow sense of duty. With what fine dignity and tender-hearted shrinking from useless sacrifice of human life, he accepted the inevitable! No wonder the South loved him, and the North respected him!

After the war an insurance company offered its presidency to General Lee at a generous salary; the general said that he knew nothing of the insurance business and was told that they simply desired the influence of his name as its president, among the people of the South. How splendid was Lee's reply: "If I have any influence among the southern people or among any people, it is not for sale."

Our cover design this Decoration Day seeks to recall the real spirit that triumphed in the world's mightiest civil conflict; to recall its matchless leaders—the priceless services to the nation of one magnanimous and far-seeing in victory; the exemplary conduct of the other in defeat—returning without ostentation, to a loyal national allegiance.

Verily so long as that spirit endures beneath her folds, Old Glory will stand for a united nation, invincible in peace or war.

"God help us to be true,  
All truly loyal to  
America:  
Old Glory ever bright,  
For world-wide peace and right  
Lead always toward the light  
America."

### CURRENT COMMENT.

**Our Agricultural Wanderlust.**

In the collection of census data, an attempt was made to determine the average length of occupancy of farms in the United States. The resulting data has been compiled, and a bulletin will shortly be issued showing the length of periods of occupancy of farms by states, geographical divisions and sections.

One of the most important facts shown by this data is that some 52 per cent of all farmers who answered the questions satisfactorily had occupied their farms less than five years. In the north 57 per cent of the farmers had operated their farms for five years or longer, while only 22 per cent had lived on them for one year or less. In the country, however, more than one million farmers reported that they had operated their farms less than one year, while 628,000 reported a residence of one year. Of course, the moving about is mostly done by tenant farmers, especially share tenants, 52.27 per cent of this class of farmers being reported as having occupied their farms for one year or less, and only six per cent of share tenants had occupied their farms for ten years or over, while 48 per cent of owners had occupied their farms for this length of time.

An encouraging feature of these statistics is the fact that there is a much greater stability of occupancy shown by the farmers of the north than those of the south or west, a stability which is reflected in the average crop yields of the north as compared with either the south or west, as is proven by figures showing the average yields in these different sections of the country. It is clearly shown by the information gathered that it is not only better for the individual farmers but for the communities in which they live, where periods of occupancy are comparatively long. While the stability of the home owning farm population is necessarily greater in every case than that of the tenant population, this is an argument for a longer occupancy of the same farms by tenants where the land must be rented at all. This is in line with the experience of other countries, and should be an incentive to closer and more businesslike rela-

tions between farm owner and farm tenant, both of whose interests would be better served by lengthening the average period of the occupancy of farm lands.

### Road Bee Day Advice.

Since the issue of the Governor's proclamation setting apart June 4 and 5 as official road bee days in Michigan, information from several points in the state indicates that in many communities needed road improvement will be accomplished by the donation of labor by public spirited citizens. In view of this prospect, State Highway Commissioner Rogers has issued an open letter to road officials, in which he offers pertinent advice mostly of a negative character. Included in his letter of advice are several "Don'ts" as follows:

Don't try to do too much.

Don't start more than you can finish. You cannot build a macadam road, nor very long stretches of gravel road in two days.

Don't haul gravel onto roads that have not been properly graded and drained.

Don't plow up long stretches of road and leave them impassable.

Don't scrape sods onto the traveled roadway and leave them for passing vehicles to smooth down.

Suggestions as to what may be done to the best advantage are also made, such as the removal of logs, rocks, stumps and stones from the roadway, the filling of holes, the covering of spots of sand with clay or gravel, draining wet places, scraping off sod margins where they hold water in the roadway, the making of road drags of planks or split logs, and the perfecting of arrangements for their use after rains throughout the season, etc.

Attention is called to the fact that while all of these things will be of great value to the roads of the state, they will not be accomplished unless the work is well planned and performed under intelligent supervision, and a plea is made for the effective organization of the work in every road or school district for the purpose of giving this first state-wide road bee an honest trial as a means of effecting needed improvements in the seventy thousand miles of Michigan roads.

### State Reward Roads.

A subscriber asks for information as to what constitutes a state road, intimating that there has been some discussion in his community as to whether the payment of the state reward on a gravel or stone road makes it a state road. Properly speaking, we have no state roads. All roads are built and cared for by the townships in which they are located, or by the county at large in the case of certain selected main roads where a county has adopted the county road system. In order to promote the building and maintenance of permanent roads, the state has organized a State Highway Department and appropriated funds for the payment of a fixed reward to the township or county which builds a permanent road in accordance with certain specifications, after the road is inspected and approved by the state department. Such state reward roads, however, remain under the control of the township or county building them and must be maintained by the lesser municipality, the state having nothing more to do with them. This explanation is made for the benefit of other readers who, like the inquirer above mentioned, may not fully understand the functions undertaken by the state in the matter of road building.

### DEALERS PREFER ADVERTISED GOODS.

Walk through the store of any live, up-to-date dealer and you will see that most of his stock is made up of advertised lines of merchandise.

The reason for this is that dealers know the advertised article is usually better than the unknown article, and that the advertiser will stand behind his article and guarantee satisfaction.

This is important to the dealer who wants to hold his trade, for it relieves him of much of the responsibility.

Most of the articles advertised in the Michigan Farmer can be purchased of some dealer near you.

### HAPPENINGS OF THE WEEK.

#### National.

The lake steamer W. H. Gilbert was rammed by the Caldera off Thunder Bay in Lake Huron last Friday morning, and the former vessel went down in four minutes after the crash. The entire crew of 23 men was saved.

Police-Lieutenant Becker, of New York city, who was recently tried the second time for participating in the murder of Herman Rosenthal in 1912, was found guilty of murder in the first degree last Friday night.

The gigantic cantilever crane built by the United States government at Mare Island, San Francisco harbor, for shipbuilding purposes at a cost of \$250,000, burned Sunday morning. Beneath the crane was the \$2,000,000 war vessel which the government is building. The vessel was damaged by the flames.

Colonel Roosevelt, who arrived from his expedition through South America last week, will visit Washington on Tuesday, call on President Wilson at the White House, and later deliver a lecture on a river he and his party discovered in the upper Amazon region, and on other points observed during the expedition.

Rev. Louis Patmont, a prohibition lecturer and writer, who mysteriously disappeared March 31 during a local option campaign in Westville, Illinois, was found alive Saturday, a prisoner in an abandoned farm house 300 miles away. From his story he had been cruelly treated. It is believed that his abductors were enemies whom he had made during the campaign.

Leslie Clark, chief corporation clerk in the office of the secretary of state, was killed in an automobile accident on May 24.

Charles S. Mellen, former president of the New Haven railroad, at a hearing the past week, gave the interstate Commerce Commission much inside information relative to the negotiations between that road and the Grand Trunk a few years ago, pointing out that a transaction involving the use of over \$11,000,000 was made and that he was not allowed to know what became of the money.

#### Foreign.

By the end of this week it is expected that the mediation conference at Niagara Falls, Canada, will have reached a plan of settlement of the differences between Mexico and the United States. No intimation is yet given as to the proposals of the different representatives since the sessions are secret. General Carranza, chief of the rebel forces, refuses to send an envoy to sit with the others during the deliberations, but has sent a message to President Wilson in which he declares he will be willing to consider any solution of the Mexican problem which may be decided upon by the mediators. It is also hinted that the rebels will stop hostilities until the conference has arrived at some conclusion.

The third reading of the British home rule bill will be made this week and barring unforeseen movements will become a law, thereby giving to Ireland a parliament of its own. The people of Ulster, a northern province of Ireland, are determined that the protestant inhabitants of the island shall be excluded from the operation of the bill and threaten to establish a provisional government and mobilize an army of well-armed volunteers as soon as the bill leaves the house of commons.

The militant suffragists of England attracted considerable attention last week by their attack upon Buckingham palace, where they had gone to present a petition to the King. On the following day pictures worth thousands of dollars, and which cannot be replaced, were destroyed in art galleries of London. Sunday parades were made through the streets. In several places near-riots occurred and finally Mrs. Pankhurst, the undaunted leader of the women suffrage movement in England, was arrested.

A million torches and lanterns illuminated Tokio Sunday night as the body of the Empress Dowager Haruko was borne through the streets in a beautiful car drawn by white oxen.

Francis Kossuth, national leader of the Hungarians in their political struggles, died at Budapest Monday morning, at the age of 73.



# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION



The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

This Magazine Section forms a part of our paper every week. Every article is written especially for it, and does not appear elsewhere

## Remembering Those Who Saved Our Land.

FOR home and for country" was the spirit of the soldier of '61. He went forth to die, if necessary, that his country might live. He offered all on the altar of patriotism. In camp, on the march, at the battle front, he gave himself a ransom for his country.

It is not to be doubted that if any generation before or since were to be called upon to make the sacrifice, it would be done. But a gracious providence has ordained that this has not been necessary.

Only now and then are men called forth to war. Other generations must construct anew out of the elements that pass through the siege of battle.

But as nature supplies the ages with wheat through the little kernel, and as she replenishes the forest with oaks from the common acorn, so she protects nations by the spark of patriotism implanted in the breast of her people. When a crisis comes this spark mounts into a flame that would consume the enemy and save the land. When peace reigns the spark is kept aglow with the remembrance of the sacrifice made by those who were called.

And what a sacrifice it was that kept us from national dissolution in the sixties. Fathers and the older brothers were giving their lives on the battlefields in the south. Homes were made desolate. Mothers, daughters and the younger brothers struggled to fill vacant places, to keep the home supplied with necessities, and to send food, clothes and bandages to the soldiers in the field. Day after day they worked and waited

and watched—hoping and fearing—hoping that the war would soon close, or fearing that in the columns of the missing they might read the names of those they loved. And the men, they struggled through trackless swamps, they swam the streams, they marched into the mouths of thundering guns, they lay on fields, suffering from wounds, they languished and starved in prisons, or wasted away in hospitals. Such was the sacrifice. It cannot be measured, it can only be felt

with a feeling that wells up from the bottom of the heart. And to those who think and dream of the things they did, comes a little of its awfulness when they run the gantlet of those terrible struggles. The spirit of loyalty at Fort Sumpter; the despondency of Bull Run; the victories of the dauntless little Monitor, at Forts Henry and Donaldson; the terrible slaughter at Pittsburg Landing and Shiloh, at Iuka and Corinth; the long wait about Vicksburg, and its

render of Lee at Appomattox—these, and many other events of the great war impress every American with the great sacrifice of life, a sacrifice to save the nation.

"Fold up the banners! Smelt the guns! Love rules. Her gentle purpose runs. A mighty mother turns in tears, The pages of her battle years, Lamenting all her fallen sons!"

It is altogether fitting, therefore, that we remember the sacrifice and do honor to the men and women who offered themselves up that the nation

might live. And that generations yet to come may know of the deeds of our fathers let us build monuments to their memory. And over the graves where the great commanders and the common and the unknown soldiers

lay, may hands of love strew flowers and upon the waters may blossoms be spread in acknowledgement of our debt to the men who struggled and died upon the deep. Let us stir the blood of youth with their deeds of patriotism that its spark may be kept

alive for battles yet to come, for battles of peace, we hope, of war, if need be.

And while these things mean much to the men who remain with us from the time of the great war, the significance will be magnified or diminished, according as we direct the affairs of the land they saved for us. There can be no honor in the tribute of the pettifogger; no reward in the words of the damagogue; no recompense in unlawfulness, iniquity and

injustice. The cost has been too great for the men who wore the blue to believe that we are sincere in our admiration of their courage and valor, if we at the same time treat our country with indifference.

While problems during times of peace may not stir the hearts of men so deeply as do the activities of war, there is need that they be met with the same devotion and patriotism that prompted the men of '61 to answer the call of Lincoln. So we may go forth and build monuments to our heroes, rear marble to the very heavens and inscribe it with the finest sentiment, yet should we leave the other undone, our building will be in vain and our words hark back to us as mere mockery.

We shall bring to the strong hearts who yet feel the inspiration of the fife and drum and fall into line as of yore, a cup of cold water; we shall let them lean upon our shoulder; we shall proffer them our carriage, to take them where they would go; we shall do whatever we can to lighten their hearts and make the declining years of their lives happy and at the same

time we shall whisper to them in confidence that the work of freedom which they so courageously began, shall continue; that what they did was not done in vain.

So, as we go forth on this Memorial Day to pay tribute to the soldiers of the past, let us keep in mind that our words and acts will have their largest significance if they stand out in full relief on a background of faithful service for the country they loved. We must prove our words by deeds.

### Her Soldier Lover By ALONZO L. RICE

Oh, weary eyes that closed against the light,  
And hands that would have rested for awhile;  
Oh, feet that halted long ere fell the night,  
And pallid lips that had forgot to smile.

Her life was nearly compassed by her door,  
Her view was narrowed to one little pane;  
The only news from foreign wave or shore  
Her visitors related—wind and rain.

The morrow dawned and brought the olden view,  
The selfsame prospect she saw yesterday;  
The coming year held nothing strange or new  
To while the slow and dreary time away.

Each day was passed alone; there, was no call  
Nor laughter of a child, no footstep quick.  
Only her ancient timepiece on the wall  
Notching the silence with persistent click.

The morning found her anxious for the light  
As though some journey waited for her feet  
To lands of great desire; far in the night  
Her flaring taper lit the empty street.

And passing there, the stranger would inquire  
Of the unvarying light and newly trimmed.  
When winter fell how leaped the freshened fire,  
The welcome of the hearth was never dimmed.

Her daily household cares were bounded by  
A circle small; there was no lifted latch,  
Nor stocking out at heel and toe, to try  
Her patience with a puzzled darn or patch.

The frayed and wrinkled edges of her shawl,  
As in a dream, she smoothed with nicest hand;  
Each day with careful eye she ranged them all,  
The toys and trinkets on her little stand.

There lay her Bible (untouched, unopened now),  
With spec a-top; it has a few worn leaves  
Where rest fair tresses from a childish brow,  
Or else the picture—Ruth among the sheaves.

But there was naught, no mark of sentiment  
Within her life to show she once was young;  
That she with care-free heart a-Maying went  
Or sought the nest gay oriole had swung.

If there was aught, she hid it well from sight,  
And no one questioned her; but one could see  
That often in the deep, still noon of night  
She sought a rosewood casket, turned the key:

And there were little keepsakes—useless all.  
We treasure such for memories they give,  
The long lost scenes that they once more recall,  
The vanished forms and faces they bid live.

A soldier's photograph and stained with tears  
She held most dear; he was her lover true,  
Who left her when began the war-vexed years.  
He looked so jaunty, uniformed in blue!

His letters told her that he prospered well:  
One more promotion waited soon, and then  
A stranger's hand informed her how he fell  
At Stony Point, and leading on his men!

The flight of time with her did not appear,  
And patience born of hope she did not lack.  
She thought from out the realm of yesteryear,  
He would remember and at last come back!

Her heart was young and warm with the caresses  
He gave at parting, nor we guessed the truth  
Who only saw the snow drift in her tresses,  
The wrinkles telling of her passing youth.

One eve fell chill: the light did not appear,  
The dawn of day revealed the saddened truth—  
For she was dead—his letters lying near—  
Her Bible open at the Book of Ruth!

might live. And that generations yet to come may know of the deeds of our fathers let us build monuments to their memory. And over the graves where the great commanders and the common and the unknown soldiers lay, may hands of love strew flowers and upon the waters may blossoms be spread in acknowledgement of our debt to the men who struggled and died upon the deep. Let us stir the blood of youth with their deeds of patriotism that its spark may be kept



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## Agricultural Conditions in Palestine.

By PROF. ALFRED VIVIAN.

**T**HE agriculture of Palestine has one great handicap and one great advantage. The handicap is the division of the year into a wet and dry season. The advantage is that almost the entire country lies on limestone.

The rainfall at Jerusalem amounts to 28 inches annually, but it all comes during the five or six months from November to April, after which comes six months of cloudless sky with drying sunshine. A better distribution of the rainfall would work wonders. On the plains of Jaffa, where water for irrigation can be obtained, wonderful crops are produced, the oranges being especially famous. Indeed, many of the semi-tropical plants can be grown here. Sugar cane is raised in limited quantities, but is mostly used as a confection, and hundreds of men and boys may be seen chewing pieces of cane.

It must be confessed that the bare hills around Jerusalem and from there to Jericho looked most unpromising at first, but we noticed here and there a grapevine that was flourishing, and even on the roughest hillside would be found an occasional olive tree. Our guide, who was raised on an American farm and who has lived for seventeen years in Palestine, says that anywhere upon these hills the olive and the vine will grow, but that the number of olive trees is decreasing yearly instead of increasing. One reason for this is the suicidal taxation policy of the government. The taxes are assessed upon the crop produced instead of on the land, so a large crop merely means more taxes. To make the matter worse the government sells to the highest bidder the right to collect the taxes and furnishes him with soldiers to enforce the collection. The result is that the collector demands anything he sees fit, and the poor native has no recourse. In many cases the tax on the olive tree has amounted to more than the value of the crop, and thousands of trees have been cut down and sold for wood because of this fact. This state of affairs coupled with the easy going ways of the Arab, has resulted in agricultural retrogression instead of progress. The foreigners whose own government protects them from such injustice have a better chance than the native, and a few successful olive groves have been started with foreign capital.

The Arab follows the same methods in vogue in the earliest Biblical times. He sows the seed in the fall on the surface of the ground, and then goes over it with what he calls a plow, which is nothing more than a stick with a shovel on it about as wide as one shovel on an ordinary corn cultivator. This works the ground about two inches deep, and if it jumps a few feet, or runs around a weed, or is turned aside by a stone—why should he worry about it? Allah is good, and the crop will come some way; and he does not want a crop that is too big or the tax collector will take it all.

The high natural fertility of the soil in such places as the field of Rephaim is shown by the fact that crops have been grown annually for at least 4,000 years with this kind of culture, without manure of any kind, and while there is no way of telling exactly what the soil produces, our guide estimates the yield of wheat at about 25 bushels to the acre of tillable ground. One can not but wonder what the soil would do with good treatment. Perhaps it is a wise provision of nature to limit the rainfall under the conditions.

Such a thing as improving varieties of olives, fruit, etc., has never occurred

to the Arab. He plants a twig of olive or fig from any source; says "It is from God;" and that is the end of the matter. In a way he knows better than he does, but his own government discourages him from doing his best.

The Jordan valley could be made a veritable garden if the river were utilized for irrigation. At present the waters of the Jordan are of value to no one. Wherever water is available the soil of the valley produces remarkable crops, the oranges being among the finest in the world. The storage capacity of the Sea of Galilee could be enormously increased at little expense, to furnish water to irrigate during the dry season, but no one cares to invest capital under so capricious a government.

Everywhere, apparently, the prickly pear cactus will grow, and it was gratifying to find that the American Colony had made a short experiment in feeding the cactus to dairy cows which was eminently satisfactory. Alfalfa has also been grown without irriga-

tion, producing three cuttings during the season and living through the summer drouth. With cactus and alfalfa and a better breed of dairy cows, Palestine can indeed be made a "land flowing with milk and honey" for it is already a wonderful land for the honey bee.

Among the unusual fruits met with was the "sweet lemon," a fruit much valued by the inhabitants for its juice, which resembles in flavor "picnic lemonade" except that the ice is lacking. Such wonderful grapes as this country produces—big, luscious fellows with individual berries larger than we have seen heretofore; the bunches often weigh as much as five pounds. So, while Palestine for the most part presents a scene of agricultural desolation, we feel that the possibilities are there, and perhaps in good time this much abused country will be ruled by a power with such foresight that husbandry will be encouraged, and the visitor will see flourishing fields and olive groves where now the glaring whiteness of the limestone rocks dazzle the eye. The means for the transformation are at hand.

## A State Declares War on the June Bug.

By VERNE S. PEASE.

**T**WO years ago this spring was distinguished as the period of affliction to farmers with the white grub. The pest was not universal over the northern states, but covering large areas the losses were heavy by reason of the ravages of this new problem for the farmer.

Perhaps the most extensive losers were in southern Wisconsin, in the dairying sections. Here pastures were killed, fields of sprouting corn turned yellow and died, and later in the season potato crops were damaged as much as 50 per cent. Entire counties were scourged; in some cases the areas that were not afflicted were small.

This set scientists at work, for it was realized that if the pests were not checked the entire country might in a few years be brought under its ban. It was then known that the white grub was no other than the offspring of the June bug; that the white grub is the second manifestation of the June bug in its three-year cycle. This year it is a June bug; next year it is a white grub; the third year it is in a chrysalis state (something like a cocoon) well down in the ground, below the plow.

It seemed impossible to reach the grub with any means of extermination; the chrysalis is hard to find, but the June bug has a way of appearing in public, although it is claimed by some entomologists that he makes but one flight in his life. Then he goes into the ground and deposits his eggs.

In southern Wisconsin there has already been noted an unprecedented number of June bugs, although it is not quite time for them to appear in force. And the entomological department of the college of agriculture, Wisconsin University, is in the field with experiments. It has five experiment stations in the sections worst afflicted two years ago, and one of these is at Lancaster, in the southwestern corner of the Badger state.

Here the grub did much damage, destroying pastures and timothy meadows; killing corn by the township, and later on gnawing great holes into half the potatoes that were in the ground. Already the June bug is out in numbers to alarm the farmers. They are watching the experiments with close interest.

It has been known right along that June bugs are attracted by lights in the early evening. They fly from dark until about ten o'clock on warm nights. To catch them, 16 Coleman

gasoline lamps have been set up on the farm of W. A. Johnson, two miles north of Lancaster, and these are lighted each evening. They are strong lamps—about 100 candle power. Each hangs immediately over a large pan of water—the pan is as large as a dishpan, and contains about four inches of water.

On warm nights great numbers of the bugs are drawn to these lamps and a large percentage of them are drowned. These 16 lamps are set at different points on an 80-acre tract. There are great numbers of the bugs in that vicinity, as is evidenced by the almost entire destruction of the foliage on cottonwood trees, a variety of leaves of which the bugs seem to be fond. Later on we shall give more news about the result of the experiments.

## SINCE FATHER WENT AWAY.

BY MILDRED M. NORTH.

There's an emptiness that's everywhere, headache hard to bear, We look and listen for him once again, I shall wait in vain to see him with the cattle at the bars, And the horses and the wagon in the lane. Sometimes I half forget he's gone—in fancy I recall The one through all my life so kind to me— And then it all comes back again, I miss him more and more, I yearn with aching heart his face to see.

Robins and the bluebirds return with sunny weather, But his voice and face we miss them every day, Each day at morning prayer we miss him when we kneel together; It is so very lonely since father went away.

There's "a rest" for all God's faithful ones, a balm for every pain, There's strength for every burden every day; There is comfort for each headache, and a help for every trial But how we miss him since he went away!

We miss his step at evening when the long day's work is done, We miss his voice at morning in the prayer, Each corner of the dear old farm speaks silently of him, We miss him, O, we miss him, everywhere!

Seems as if the Springtime had lost its sunny weather, It seems as if the robins sing less gay, But still I will be thankful we were so long together Although it's very lonely since father went away.



## How Unselfish Service Won a Double Victory.

By CHARLES N. SINNETT.

THE Reverend Norman Stanley returned to the parsonage discouraged. Soliciting funds for philanthropic purposes is a hard task under ideal conditions, but in a new town like Bingham where the people have many investments they are anxious to make when they have the necessary money, the work is doubly difficult. Out of seventeen men called upon, \$110 was subscribed toward the new church building. He had expected that these seventeen men would be sponsor for one-half the \$1,500 required.

"Here is some chicken broth. Mr. Matthews called just after noon and presented us with a fine fowl, neatly dressed. He said Mr. Gray, the old soldier, was very ill out on his ranch and that he would like to have you call." These words from Mrs. Williams, with whom the minister lived, caused the latter to forget his troubles, to hastily eat his evening meal and begin his long ride into the country to see the old soldier.

It was the last week of May and preparations had been made for holding Memorial Day services. Mr. Stanley had consented to participate in the program. The details of the services had been undertaken by Reverend Martyr, who had recently come from somewhere, to organize another church society in the little town. Not only had the pronounced tendency of the latter to get his work before the public proven something of a barrier to the building plans of Reverend Stanley, but persistent attention to lovely Miss Reynolds, a young lady of rare talents, was causing the gossips to declare that the new man would not only destroy the professional ambitions of Mr. Stanley, but would also win from him the love of Miss Reynolds to whom he was engaged.

On the day of the exercises families from everywhere for miles around turned out to pay tribute to the old soldiers. The mayor of the town presided. Several other officials, prominent business and professional men, Miss Reynolds, who was to sing, and the Reverend Martyr occupied seats on the platform. The young missionary looked as if he thought all his conquests were to be made complete that day. He sat close by Miss Reynolds and from his seat watched the rapidly gathering throngs with great eagerness. When at last the people had been seated and the old soldiers filed in and took their places, the mayor arose and said: "This is a great occasion of which we are justly proud. No one can commend too highly the work of the Reverend Mr. Martyr. He has graciously asked the other clergyman of the town, Mr. Stanley, to open these exercises with prayer, and also to speak of the great memories which cluster around this sacred day." Will the Reverend Stanley lead us in prayer?"

There was no immediate response as the mayor of Harvey sat down. Mr. Martyr was about to explain that Mr. Stanley was absent, when John Prescott hurriedly took a place in front of the stage on which the mayor and the other prominent people were seated.

"The roll has called for Mr. Stanley," he said. "I am not much gifted at praying, nor could I ever hope to fill the place of such a man as he is. But as a soldier who took part in the battle of Gettysburg, and many others of our nation's great struggles, I feel that I ought to respond when the name of Norman Stanley is called. For the last four days he has spent nearly every moment with the bravest soldier living in our township, Horace Gray, on his claim eight miles from town. As Mr. Gray stood firm and true by my side on so many battle fields, so this young man, the son of another brave soldier, is standing by his bedside. Before we leave this

place our comrade may meet his God, in whom he trusts. He urged the minister to come here, but he could not move him; he will stand by him to the last."

John Prescott paused to wipe away his tears which were falling fast. Then, in the breathless hush which lay on the great concourse of people before him, he went on: "Some men try to do great things to keep the eyes of men upon them. Such men as Norman Stanley, by giving their lives for the sake of our nation's heroes, think not of the world's applause. They will serve God and His soldiers. And on a day like this it is right for us to crown such men as the heroes they are. This young minister of ours has worked hard to build a church here. Fourteen hundred dollars is lacking of that sum. I hold in my hand two hundred dollars that have been given me for this purpose at the slight mention of this watchful care over comrade Horace Gray. I pledge one hundred more, though I am only a struggling townsman like the rest of you, and—"

"Hear, hear!" rose from every part of the vast crowd, mingled with hurrahs, and shouts, "We'll give!" When silence had in a measure been commanded by the old soldier he said: "One thing more before you have the chance to make this a most sacred Memorial Day by your gifts. Our minister, Normal Stanley, has put off his marriage day for the sake of having this church built, and also that he might be with this dying comrade of mine. I move you, sirs, that we raise enough money to build for this man a good parsonage that he may know that we never want a patriot like him to leave us. You know well the noble woman whom he loves, and that she is as ready as he to help in every good work."

John Prescott would have spoken much more out of his full heart, but the mayor rose and said, in the deep enthusiasm which the old soldier had imparted to every one of his listeners: "Let us do these things. And let us also begin to build the church today."

The cheers rose mightily to the clear May sky. Scores of men stood up to commend this work. Others shouted their gifts. In and out among the happy people moved men and women who added to their own gifts the gifts and pledges of hundreds of willing hands. As soon as some gave their donations they started towards the lot set apart for the church, or for teams and the well-filled lumber yards. Two or three times the Reverend Mr. Martyr tried to turn the strong current of patriotic thought and remind the people how much time he had spent in preparing his oration. But he quickly saw that this was of no use, and he gave his gift with the others, and tried to appear as one of the throng in grateful spirit.

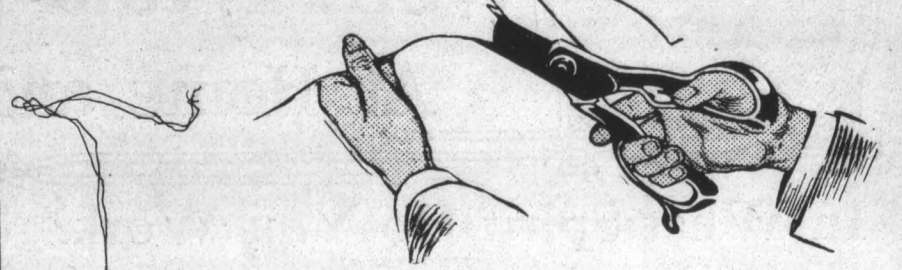
### A MEMORIAL GIFT.

BY L. M. THORNTON.

Because I love you well, oh Sweet-heart mine,  
I weave a wreath of bay,  
For one who sleeps beneath a spreading pine  
This many a by-gone day.  
Oh, long ago, ere I had opened eyes  
Upon this world his journeyings were o'er  
But one, perchance, who loved him,  
Sorrow-wise  
Wept at the knowing he would come no more.  
Because I love you well, oh Sweet-heart mine,  
I bear this wreath of bay  
For one who sleeps no friend or kindred near  
On this Memorial Day.  
Oh, long ago, upon a field of strife  
Death called while trumpets blared and bugles blew,  
So I, who hold you dearer than my life  
In this place crown the dead I never knew.

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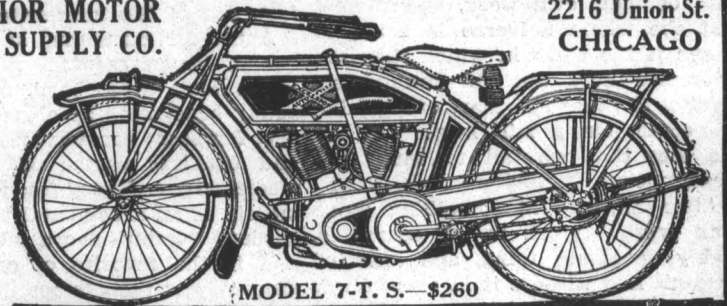
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# Woman and Her Needs

## At Home and Elsewhere



### In What Spirit Do You Work?

Do you remember that story in our old fourth readers about the old clock which suddenly stopped for no apparent cause? Everything was all right with the works but the pendulum absolutely refused to move. When weights, hands and dial demanded the reason the pendulum announced that he had been figuring up just how many times he would have to swing in the next 50 years and the thought tired him so he couldn't go on. Already he had been swinging back and forth a half century and wasn't a bit tired, but the thought that he would have to swing a few million times more in the next 50 years disheartened him so that he simply refused to budge. The wise old face, which had been looking out upon the world and forming sane conclusions as to life, hereupon called to the pendulum's mind the fact that he would only have to make one oscillation at a time, and asked him to try one and see if it tired him. The pendulum tried it, and not being tired, agreed to keep on swinging until he was, whereupon things resumed the even tenor of their way.

I wonder how many housekeepers got up this morning feeling exactly like that pendulum did when he struck? There were so many oscillations ahead for today and tomorrow and all the unknown tomorrows that the mere thought of them shriveled the weary housewife up and left her weak and helpless. Breakfast to get, children to hurry off to school, rooms to tidy, meals to cook, washing, baking, mending, spring sewing, housecleaning, gardening, chickens, you know all the rest that space forbids me to mention. And it settles down around you in the morning and leers at you and nags you to come on and get rid of it. You forget, don't you, that you've only to do one thing at a time, and that "according to thy days, so shall thy strength be?" I know I do, in spite of all the good advice I courageously write for others. Women are prone to over-estimate the importance of their own work, and to feel that the whole universe is going to smash if the thing in which they are interested does not go through according to schedule. Part of it is due to nerves, but a still larger part to the fact that we fail to catch the larger vision.

After all, life is something more than work. Work is, of course, a highly necessary thing, and most of us can't live without it in some form. But the spirit in which we work is of more importance than the task we do. If we look upon our work simply as a disagreeable something which must be gotten out of the way, something to be sighed over and hated, then it becomes to us a tyrant. But if we go to it with the idea that it is a gift to be enjoyed it becomes our best friend.

Not all of us can paint a beautiful picture, but with the aid of a scrub brush, scouring powder, hot water and soap we can make a picture of our workshop, the kitchen, and get as much enjoyment out of wielding the scrub brush as a half-starved, garret painter does from making the daubs he has hard work to sell. We may

not be able to sing divinely, but the song of a steaming kettle on our clean shining stove is much more alluring to a hungry man than any aria. Our work, the homely work of the housekeeper, may be to us drudgery or praise, according to the spirit in which

we approach it. We can enjoy each task as it comes, making of it an act of worship, or we can let it turn us into irritable shrews, who rush frantically about from morning until night with never a thought higher than the work table over which we bend.

One task at a time, and that done thankfully, let this be your working motto.

DEBORAH.

### A Herb Garden for the Farm Home.

By MANTHEI HOWE.

EVERY woman who likes good cooking and prides herself on skill in the housewifely arts, should own an herb garden. The country gentlewoman should be especially in favor of an old-fashioned garden of this kind, for a bit of the right herb changes the whole flavor of what might otherwise have been rather a flat meat or soup dish.

There are about 30 herbs that are the popular choice with gardeners for use as scents, flavorings and as medicines. But of course the woman on the farm will not care to grow all of these varieties. There are some, however, that she will not want to do without. One consolation for the busy housewife is the fact that an altogether satisfactory garden is possible without the expenditure of much time or work. About half of the herbs are perennial and the work in the beginning will do for many years with a little attention in the way of fertilizers each year.

Many of these herbs may be planted as edgings to borders or may be grown beside the paths or walks. Personally I like a bed given over entirely to the herbs. They are thus the more easily gathered and cared for when at maturity.

Such a garden requires a rich, well-worked soil. The seeds are to be sown in the spring, the latter half of May in the temperate zone is about right. Make shallow drills about a foot apart and sow the seeds. When the plants are up two or three inches thin out the rows.

The following list gives the usual favorites of the housewife:

Anise, for garnishing and flavoring; \*balm, lemon scented, used in making a tea; sweet basil, for flavoring soup; bene, used as a medicine; borage, for bees; caraway, used in breads and cookies; castor oil bean, used medicinally and very frequently grown merely as an ornamental plant for the garden; \*catnip, has a medicinal use and is the favorite of cats; chamomile, recalls the chamomile tea of our grandmothers; \*chive, mild onion flavor; coriander, seeds sweet smelling, used in cooking; cumin, for pigeons; dill, used in pickles; \*sweet fennel, the leaves are liked in sauces; horehound, the name suggests the old-fashioned remedy for "colds;" \*lavender, the most delightful and fragrant of herbs used as a scent; \*pennyroyal, medicinal; \*peppermint, one of the well known flavorings; \*rosemary, a seasoning; \*rue, supposed to be useful for roup in fowls (not a pleasant smelling herb); saffron, a flavor; \*sage, one of the best liked flavorings for meats, sausage and poultry; \*summer and winter savory, to be used in soups, meat and vegetables; \*sweet marjoram, leaves are used for flavor-

ing; \*tansy, used medicinally, has an odor that is not liked by many; spear-mint, another well known flavor; tarragon, not a favorite with those having only a small garden; \*thyme, a broad-leaved, English, pleasantly scented herb used for seasoning; French thyme, for seasoning; \*worm-wood, bitter medicinal.

The herbs marked with a \* are perennials.

If I might choose but five herbs for my garden I should take the following named in the order of their usefulness: Summer savory, chive, lavender, sage and thyme. Not being as fond of sage as many people are, I should even be willing to get along with just the first three if garden space was at a premium. But those I should have if I had to plant them in several plots, each no larger than a handkerchief, for they make all the difference in the world in the palatability of food.

Chive, of course, is best when used freshly cut and not dried, as are most of the others. It is a most appetizing addition to salads if one likes an onion flavor. It can be grown in the window garden in the winter and when served finely cut, in cabbage, potato, lettuce, or tomato salad, it gives a tang with none of the unpleasant feature of minced onion. It is decidedly worth any extra effort in growing it.

Summer savory is the herb that, of all others, I should not like to do without. I depend on the dried herb all through the winter months, and with its help ring pleasing changes on the beef and pork dishes. The Germans put up (or down, if you please), a few sprigs of this herb and pole beans in a brine. These deliciously flavored beans are then cooked with fresh pork and boiled potatoes. It makes a meal that is an appreciated change from the usual pot-roast dinner. A sprig of the savory in soup, pot roast, stewed or boiled vegetables gives a flavor to be obtained in no other way. And if you once acquire the liking for herb flavors in the food you will not care to go back to the old savorless recipes.

Everyone is familiar with the use of thyme and sage as flavorings.

Perhaps lavender cannot be called useful in the ordinary acceptance of the word. It is not used in food but it is nevertheless one of the most worth-while herbs in the garden. When growing it is beautiful; and dried, its clean and wholesome scent makes a joy of a trip to the linen drawer. It requires somewhat more shade than the other herbs and since it is not quite so hardy it should have a light covering during the winter months.

To get the best results with your

herbs that you intend to keep for winter use, cut them on a dry day, and either spread out on a paper to dry or do as our grandmothers did, tie them in loose bunches and hang them up in an airy sunny attic. If they do not dry quickly and are not placed so as to allow a free circulation of air they are apt to mildew and rot.

There is a paradoxical saying that the best time to prepare for Christmas is the day after. The carefully planned herb garden will furnish suggestions and material for gifts to be made by the generous country housewife. Here are just a few of the presents that the city woman would appreciate more than anything that you can buy for her in city stores in December:

A gay cretonne work bag containing lavender for the dresser drawers. Cretonne or silk pillows scented with lavender. Cretonne bag to protect the best waist or dress, with little bags of lavender sewn around the top of the hem on the inside.

A paper or cloth-covered box divided into three compartments containing dried summer savory, sage and thyme or sweet basil. With this gift you might very well send a tiny cookbook. It may be no more than an envelope with the slips of paper for the various dishes, but whatever form you decide on let it contain some of your best recipes in which you make use of these flavoring herbs.

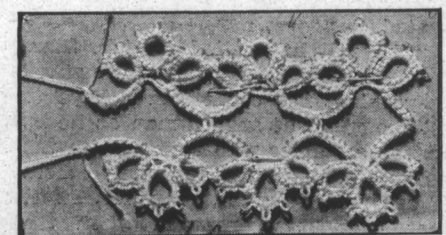
The small glasses used for peanut butter might be used to hold the herbs and a Christmas sticker and a gay label on each, would make three or a half-dozen of these a gift that will make the city woman rise up and call you blessed.

If it has not far to go you might even send a clump of chive from your kitchen garden. If you wrap a cheery red paper about the plant pot, the green of the herb and the red of its wrapper will make a gift in the true Christmas colors.

This has probably suggested dozens of other ideas that are adapted to your especial needs, but if you are to have these herbs to use next Christmas you must prepare your garden and sow the seeds now.

#### CLOVER LEAF INSERTION.

With both threads make 7 d s; with 1 thread make 6 d s, 1 p, 2 d s, 1 p, 2 d s, 1 p, 4 d s, draw up as closely as possible, make 4 d s and join in 3rd picot of 1 st loop, 2 d s, 1 p, 2 d s, 1 p, 2 d s, 1 p, 2 d s, 1 p, 4 d s, close ring; 4 d s join to last p, 2 d s, 1 p, 2 d s, 1 p, 6 d s, close ring. With both



threads make 7 d s, 1 p, 7 d s; then with one thread proceed with another clover leaf joined to the first as illustrated. To insure having both rows the same side out when finished, work back to beginning instead of beginning at first end to do the second row row.—L. S. G.



## Poultry.

### THE COST OF DESTRUCTIVE HAWKS.

When we see a large-sized hawk soaring above, we seldom realize how many dozen, or perhaps hundreds, of small or partly grown chickens it has carried away, which means a "dead loss" to the farmer or poultry raiser, of \$5 to \$10 annually.

Since I have been upon a farm I am sure that we have lost this amount of chickens each season by the pesky hawks, especially here, in Michigan, where there are so many shade trees for them to hide and nest in.

#### Hawks Cause Great Loss.

This last season we had pretty good luck with our chickens and did not lose many in this manner, for the fact that a neighbor swore vengeance on these destructive birds, killing 40 or 50 old and young ones which were carrying off all the chickens around here. For this reason our loss was the smallest we ever have had and we sold \$80 worth of young fowls.

Figuring on a basis that each farmer's loss is \$5 per season from hawks and owls, and with each township having 280 farms of 80 acres each, it will mean \$1,400 loss to each township, and about \$28,000 to each county. When you come to figure that Michigan has 40 counties or more, that are thickly settled, the loss in this state is enormous and will foot up to over a million dollars annually that is a useless dead loss to farmers and poultry producers. This great loss, with many others, helps to create the higher cost of living and is a useless burden on the whole country. If each state would provide a suitable bounty of 50 cents for old and 25 cents for young, on this destructive class of birds, it would be but a few years before they would be nearly all destroyed and the helpless, innocent little chickens would be left unharmed, to grow and be beneficial for our thanksgiving.

Washtenaw Co. B. F. WASHBURN.

### THE CHICKEN HAWK.

The name chicken hawk covers a multitude of hawks, harmless and harmful. We are liable to call anything in the shape of a hawk that is flying within sight of a poultry yard a chicken hawk. We immediately get a gun and pop it to them, killing a friend instead of an enemy. It is not, as many think, the large soaring hawks which cause the damage, but the small restless kind.

Of the half dozen hawks called chicken hawks, only two are of any serious consequence. These are the Sharp-shinned hawk and the Cooper's hawk. The Sharp-shinned is sometimes called the Sparrow hawk, but this name is also applied to the little falcon, which is about the same size. The little falcon is a valuable bird to the farmer, while the Sharp-shinned hawk is very destructive to small chickens.

#### The Two Most Destructive Hawks.

The Cooper's and the Sharp-shinned hawks are somewhat similar, though the Cooper's hawk is larger and heavier boned than the Sharp-shinned and the end of its tail is rounded instead of square, as in the case of the Sharp-shinned hawk. Both of these birds are very restless, but not very noisy. They fly swiftly and quietly from place to place looking for their prey instead of perching and wheeling aloft like the buzzard hawks do.

#### Which Hawks May be Legally Killed?

They come swiftly down upon their prey, and when they once visit a poultry yard they become frequent visitors until they are killed. Besides preying upon chickens they take small birds,

insects, mice and other small mammals.

These two species are the only ones which may legally be killed at any time in this state. The law seems to be a good one because most of our other hawks are highly beneficial.

The Cooper's hawk is probably the most common of the two and is the common chicken hawk of most farmers. It is found here at all seasons of the year, except probably, the two or three coldest months, while the Sharp-shinned hawk is one which migrates.

Among the other hawks which are sometimes called chicken hawks, are Red Tail and Red Shoulder hawks. The Red Tail hawk occasionally gets bad habits and attacks poultry, but such occurrences are rare, as their favorite food is mice, squirrels, rabbits, etc. When it attacks poultry like the others, it makes successive visits. The Red Shouldered hawk is called the Hen hawk on account of its appearance, being similar to the chicken hawks. However, it is a friendly hawk as it never attacks the poultry, its favorite food being tree squirrels.

### MORE THINGS TO PLANT FOR THE POULTRY.

In the issue of the Michigan Farmer for May 9, 1914, was an excellent article entitled, "Things to Plant for the Poultry." The following notes are in the nature of a supplement to Mr. Chesley's suggestions, all of which are good.

Here in California, where we have had a chicken ranch, we have learned of several things which are fine to grow for the benefit of the chickens, either young or full-grown. Here, of course, the long, dry summers make it especially necessary to grow green food if the hens are to be kept laying and the growing stock to be put in good condition for their future work. But the same method could well be pursued in any part of the country where the owner of the chickens has only a limited run for his flock.

#### Chickens Fond of Kale.

One thing that is widely grown in California on purpose for chicken greens is kale (catalogued also as borecole). The variety chiefly used is the Jersey kale, a smooth-leaved variety growing three or four feet tall. Sometimes the curly variety (the Scotch), is used, which is very ornamental, but no better for the chickens than the other. The kale is generally sown in garden rows, and cultivated like any garden crop, and the lower leaves are picked or cut off and thrown to the hens, who are very fond of it.

#### Swiss Chard Especially Liked.

Another kind of greens of which the chickens can never get too much is Swiss chard. The young chicks especially are wild for the tender leaves, preferring it even to lettuce, and if the family is fond of greens on the table, you had better plant a large patch of this, for it is delicious cooked and served like spinach (and the midribs like asparagus), so the chicks are likely to be deprived of their fair share. This also can be used by cutting off the large outer leaves, and letting the others grow, though it never gets tall like the kale, but spreads out instead.

Essex rape is the third variety of chicken greens that I have in mind. It would be a good seed to sow in the yard method recommended by Mr. Chesley. We sowed it mixed with wheat, broadcast, and when it was about a foot high turned the chickens in and let them eat it to suit themselves. As it likes cool weather, govern your time for sowing accordingly. Both the other greens mentioned are sometimes grown in yards for the chickens to help themselves, but they never give them a chance to grow very large. EDITH G. HAWKES.

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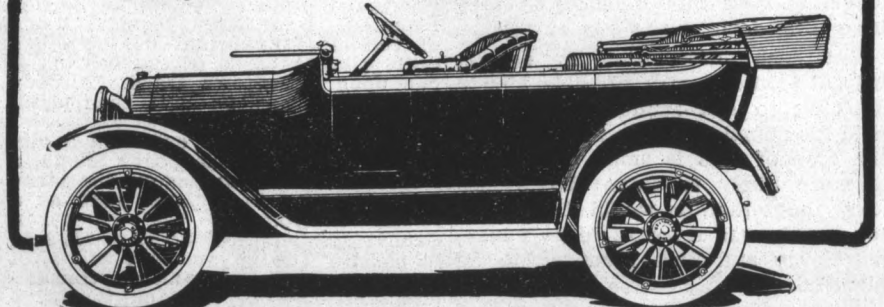
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# Farm Commerce.

## Knowledge of Resources Helps in Marketing.

**A** WIDE knowledge of crop conditions is the first essential to intelligent marketing of farm products. Generally speaking, trading depends upon supply and demand, and since the demand for staple products amounts to practically the same year after year, (allowing for the increase of population), a careful survey of the supply gives one rather definite ideas as to what prices should be. If the crop is large over the entire country, then it is expected that prices will be lower, and on the other hand, if the yield and acreage are small the price is quite surely to be above normal.

Dealers in grains spend much money to get accurate information on the growing crops. They have local representatives throughout the entire grain producing section to keep them informed on any changes in the prospects. They hire experts who are sent out to study some uncertain factor that means much to future marketing. Then, too, they maintain agents in those foreign countries that produce grain to come in competition with grains grown here. Through these and other agencies, business men are able to have the best information on the outlook of the different crops, and on this information they base their decisions to buy or sell.

But such information is equally helpful to the farmer. It aids him in deciding to sell immediately, or to hold his supplies until a later date. If the crop of pigs is small a producer is more likely to make shoats into heavy hogs than he would if the coming supply was reported to be unusually large and feed promised to be plentiful.

So the farmer should be urged to make a careful study of conditions, not simply at the moment of selling, but throughout the growing season. It frequently happens that a single crop report is misleading. "An improvement in crop conditions" does not necessarily mean that the crop promises to be above normal, indeed, the state of the crop may be very low, even though it is improved over what it was a month earlier. By attention to many reports at different periods of the growing season, one is quite certain to understand what "an improvement in crop conditions" signifies. So it is important that the farmer should study from now on to acquaint himself with the status of crops throughout the country that he may be better prepared to talk to the buyer when the time to sell is here.

There are several sources of information published. The different states and the federal department of agriculture send out monthly reports on crop conditions. These are comprehensive and dependable. They will form a good basis for a thorough understanding of prospects. Co-operative societies frequently issue information on those crops in which they are particularly interested. These should be sought. Then the farmer's own paper brings to him letters from farmers themselves, stating just how things look in the particular localities from which the letters are posted. These messages direct from the farm are invaluable. They are written by men who understand crops and are able to judge them. They come every week and are full of news that can be readily interpreted by farmers themselves. The enlarged crop and market note service instituted by the Michigan Farmer within the past year will go far in bringing its readers to a full knowledge of crop conditions in those states competing with Michigan.

We urge farmers, therefore, to take

advantage of these means of gaining valuable knowledge on the progress of crops in different sections. To aid in this educational campaign there will be given in this journal in connection with the state and federal crop reports and the hundreds of letters from farmers all over the northern states, general reviews of the condition of important crops from week to week.

### CITY MARKETS IN MICHIGAN.

Jackson expects to have its new market building completed and open to the public by July 1. Stalls for the temporary market have been enclosed and will open soon. The new building will be of steel construction 52x165 feet, with a double row of stalls into which the farmers may back their loads. A bond issue was voted by the city for these improvements. The market which opened last fall was operated successfully under the plan of free stalls for producers only and with no business at wholesale with grocers, commission men or hucksters permitted. This year the new plan will be tried of charging a small rental for stalls and of allowing sales at wholesale at certain hours.

Lansing will open its city market this spring and Mayor Reutter says: "I will be at the market myself every morning that I can spare and will insist that the market committee is represented. I consider the market one of the most important of the city's enterprises because of the bearing it has upon out-of-town trade. Already many truck gardens have been planted here."

Muskegon plans to establish a city market this year and Henry Sixma, a farmer of that county, gave the farmer's viewpoint in a paper read at a recent meeting of the Muskegon County Horticultural Society. He said in part: "The city market will be a benefit to the farmer and the consumer alike. The only obstacle the farmer would meet would be the organized grocery element and here the farmer is lame, for his is the only occupation where organization does not seem to work. It appears to me that the farmer ought to see for himself that he is the goat quite often. I have seen hucksters meet the farmer and then turn round and sell to the grocer, thus making two profits between producer and consumer. The farmer's task lies not in raising more produce but in making a fair profit on the stuff he does raise." A. GRIFFIN.

## Crop and Market Notes.

### Michigan.

**Washtenaw Co.**—Farmers are unable to get on the fields, owing to the extremely wet weather. There is low ground under water. Oats are not all sowed, and very little corn land is plowed. Pastures are doing fairly well. Fruit trees are in bloom, and indications are for a good crop. Cattle and hogs are mostly sold, and there is not much grain in farmers' hands. Hens are laying well. Eggs 17c; butter 25c.

**Saginaw Co.**—Excellent crops of young pigs are reported, and the lamb crop is also excellent, except where early in the season, when cold weather caused severe losses. A fair wool crop is reported, selling at 22c per pound. A large acreage of oats was sown, which is already up. Wheat is looking fine, and meadows and pastures are in good condition. Eggs 17c; butter-fat 23½c at creameries. Horses are moving well at fair prices.

**Emmet Co.**—The season is cold and backward, trees are not yet in leaf, and spring grains are making little growth. Farm work is progressing fairly well. There are plenty of fruit buds in sight. Eggs 18c; butter 28c; beef 9@10c; hay \$15.

**Berrien Co.**—About the average acreage of oats was sown, and plowing for corn is well under way. There will be quite a large acreage of potatoes planted. Meadows are looking fairly well, and wheat looks good. Sheep raising has fallen off greatly in the past few years. Wool is bringing 24@26c. Nearly all fat hogs have been marketed. The crop of spring pigs is good. Fruit trees are in bloom, and indications are for a good crop except in the case of peaches, which will be only 50 per cent of a

crop. Spraying is carried on extensively. Butter-fat 24½c; eggs 17c; potatoes 58c per bushel.

**Shiawassee Co.**—Wheat and rye are looking fine, and meadows and pastures are starting to grow after the heavy frosts of last week. About 75 per cent of the pig crop was lost. There is a nice lot of lambs, which are doing well. There is an unusually large acreage of oats planted, and they are looking fine. Farmers are just starting to plant corn. Orchards and berries are in blossom, and it looks like lots of fruit this year. Eggs 18c; butter 22c; hogs \$8; beans \$2; wheat 93c; oats 40c; wool 22c.

**Sanilac Co.**—The weather is rather cold for growth of spring grain, but wheat is doing well. The hay crop, both old and new meadows, are a little below the average. There are not many small pigs. Feeders are turning off the stock at a fair profit. Some silos are being built. Fruit is rather slow in developing on account of the cool spring, but no damage is apparent. The bean acreage will be smaller than last year. Timothy hay \$12@13; wheat 92c; oats 36c; beans \$2; barley \$1.15 per cwt; wool \$21@24c; butter 24c; eggs 18c.

### New York.

**Niagara Co.**—At last fine weather has reached us and all are busy plowing for oats and potatoes and working orchards. All the lime and sulphur spraying is done. Fine prospect for apples, pears, cherries, plums and prunes, but almost none for peaches, which have winter-killed. Little damage was done to trees by mice and rabbits. On account of slump in nursery stock last year more orchards are being set out this year than last, but nothing to the number set in previous years. Wheat, rye, meadows and pastures are in fine shape. Most of the stock out to pasture now. There are very few sheep here and wool is low, 16@17c. Farmers keep from one to five hogs; hogs and calves 8@9c; eggs 21c; butter 20@21c; wheat \$1; corn 75c; oats 45c; rye 65c; cloverseed \$8@9; alsike \$10; bran \$26 per ton; corn meal \$28.50; cracked corn \$29.

### Ohio.

**Warren Co.**—Corn planting is in progress, having been delayed by the wet weather. The average crop of corn will be planted, but a small acreage of oats. The pig crop is larger than last year. More draft horses raised than formerly. Wheat and rye look better than usual for the time of year. Meadows and pastures only fair, owing to last year's drouth. Fruit prospects above the average, and there is more spraying done than usual. Local prices: Eggs 16c butter 20c; corn 65c; wheat 89c; hogs \$8.25; milch cows \$60.

**Highland Co.**—Sheep and lambs are plentiful. Lambs 6@6½c per pound; wool 23c. The pig crop is fair. Farmers are beginning to plant corn. The wheat and rye are looking good, and meadows and pastures are in good condition. Fruit prospects are good, but there is no spraying done. A great many peach and apple trees have died. Eggs 17c; butter 20@25c; potatoes \$1@1.25 per bu; corn 80c per bu; hay \$12; hogs \$8.

**Coshocton Co.**—The last week of April and the first week of May have been rather showery, and oat sowing has been delayed, though a large acreage was sown. The average acreage of corn will be put in, and most of it will be sown within the next two weeks. New meadows and pastures are in excellent condition and growing nicely, and most of the stock is out on the pastures. There are bright prospects for a heavy cherry and apple crop. Peaches will be a success only in certain parts of the county. There is not much spraying done. The pig crop is very large and the lamb crop about the average. Spring lambs are bringing 8c. Wool buyers are offering 22c for unwashed wool not yet shorn. An average number of new orchards are being set out. Grocers are paying 18c for butter and 17c for eggs. A large number of farmers are selling cream. The hog market is active at \$8.50@9. The horse market is dull yet.

**Brown Co.**—Meadows and pastures are looking well. There was not much grain sown owing to the late, wet spring. There are the best prospects for wheat and rye in many years. Peaches, pears and cherries were injured by the cold weather, and apple prospects are only fair. There are a good many fruit trees being set out. The pig crop was large, and all seem to be doing well. Spring lambs are looking well on account of the fine pasture. There has not been much wool sold yet, the price being 20@24c per lb. Mixed packers 8@8½c; hay \$16@18 per ton; corn 85@90c per bu; butter 20c; eggs 16c.

**Wayne Co.**—The weather has been very cold and wet, with light frosts. Farm work is very backward, and a

large acreage intended for oats will not be sown owing to the late season. Some corn ground is plowed, but very little planted. Prospects for wheat are fair. The pig crop is about the average. Apple trees are in bloom. There is not much spraying being done. Butter 20c; eggs 16c; wool 20c per lb.

**Carroll Co.**—Oats are coming up nicely. Very few farmers have their corn planted, as the ground has been too wet to plow. Meadows are in fine condition, and wheat and rye are growing nicely. All live stock looks well, but there are not as many sheep kept this spring as usual. Butter 20c; eggs 16c; wheat 90c; corn 75c; oats 45c; cloverseed \$7; timothy seed \$2; potatoes 90c per bushel.

### Indiana.

**Jay Co.**—The pig and lamb crops are below normal in this section. The wool clip is of fair quality, and the price offered is 18c. The oats planted look fine, in spite of two weeks of very wet weather, and the acreage put in is more than last year. Some corn is planted, and under favorable conditions the remainder will be in within a week. Wheat is in excellent shape; rye is heading out. Meadows are coming along fine, and show a bumper hay crop. There were several slight frosts in the last two weeks, but the fruit crop does not seem to be damaged. The orchards have had two sprayings. There was much damage to shrubs and fruit trees by mice. The peach crop will be a failure, as the trees show no signs of life. Eggs 18c; butter 25c; hogs \$8.10; cattle \$6@7.50; wheat 96c; oats 36c; corn \$1 per cwt.

### Wisconsin.

**Polk Co.**—Seeding is just finished and corn ground is being prepared. The average amount of spring grains is less than in former years, more corn being planted. All meadows are looking fine, and pastures are good. A number of apple and plum trees have been set out. Eggs 15@17c; butter-fat 29c; oats 33c; barley 50c; potatoes 40c.

**Pierce Co.**—There has been an increase of nearly 25 per cent in the number of pigs over that of last year, and hogs are healthy. The lamb crop is normal. Several farmers have disposed of flocks, while a few have bought anew. Blood stock is the aim. No wool has been sold, as shearing has not been finished, and it is generally pooled. Many head of stock will soon be put out on pasture. The acreage of oats and barley is somewhat above the average. The acreage of corn and alfalfa increases each year. Apples are not an important crop, and little spraying is done. The prospects for small fruits are good. Eggs 16c; butter-fat 26c; butter 25c; potatoes 48c. There is no grain to be sold, as it is fed out, but market prices are: Wheat 80c; oats 32c; barley 48c; rye 50c; flax 85c.

### Missouri.

**St. Louis Co.**—There are more young pigs this year than last spring. The acreage of wheat and rye is about the same as last year; more oats are sown, and about 10 per cent more corn has been planted, some of the latter being eight inches high. Some rye is heading out, and there are prospects for a good yield. The recent light frosts in the lowlands apparently did no damage to fruit, which promises a fine crop. There is not much spraying done. The price of eggs is 22c.

**Phelps Co.**—Wheat, rye, meadows and pastures are looking fine and this year promises to be one of the largest crops ever known in this section of Missouri. Oats are all sown and are up and looking nice. A large number of the farmers have already planted their corn. There is a great number of pigs, lambs and goats coming on and it looks as though there is going to be a greater number of this stock in Phelps county this year than for several years past. The farmers are all taking a greater pride in their stock and there is a great deal of registered stock coming into the county. The fruit prospects are extra good, not hurt much by frost. More spraying done this year than ever before. Not many new orchards have been put out. Eggs 15c; butter 25c; roosters 7c; spring chickens 23c; turkeys 13c; clear wool 20c.

### Kansas.

**Trego Co.**—Weather cool and wet; wheat doing fine. According to the assessor's returns this county has 118,000 acres in wheat. About 18,000 acres was lost by freezing and blowing out, leaving 100,000 acres of wheat in this county that is the best I ever saw grow here, and is good, (with favorable conditions), to make an average yield of 25 bushels per acre. A large acreage of corn is being planted. The first planting is about ready for cultivation. Pastures are the best they have been for several years and stock is doing well. Corn is high in price, selling at 80@85c per bu; eggs 15c; cream 24c.



## Farmers' Clubs

### CLUB DISCUSSIONS.

Timely Tips on "Meals for Threshers."—"Homewood" was the place of meeting for the Napoleon Farmers' Club on Saturday, May 16, and Mr. and Mrs. Lud Hastings welcomed 40 members and visitors to their pleasant home. Owing to illness, the president and vice-president were absent and L. G. Palmer was called to the chair. The usual opening exercises and business session were held, after which the program was taken up. The first number was roll call, the response being Longfellow quotations. Mrs. Grace Merriman read an excellent paper on "Meals for Threshers." She said she found this a difficult subject to write upon just in the midst of house cleaning; that she thought when the plan of each thresher furnishing his own gang of men was instituted, that the work would be easier, but instead found it harder, for the whole gang were on hand for breakfast, the hardest meal to get. "The telephone in the house is a great help, for we can usually find out just when they will arrive, and are generally prepared, but there are times when their stay is prolonged by breakdowns, rains, etc., when we hardly know how to manage. A good garden is almost indispensable in the preparation of meals for a lot of men; such a variety of vegetables may be had just at threshing time. Of course, there is nothing better than pork and beans. The meat question is the hardest to solve. It used to be the custom at our place to kill a sheep, and the threshers always expected mutton for meals. There are so many ways of preparing left-over meat that with a very small amount one may prepare a good meal. For dessert, pies are more easily served, although there are numerous puddings which may be made early in the morning and are liked by all. Prepare potatoes and other vegetables early, be sure and put them on to cook in good season so that you may not feel hurried when the whistle blows for noon." She then read an article from a paper which contained some helpful hints on the subject. The discussion was opened by Mrs. L. G. Palmer after the program was closed, after which all enjoyed the delicious supper provided by the hostess. Club adjourned to meet at "Oak Grove" with Mr. and Mrs. L. C. Palmer on Saturday afternoon, June 20.

Discuss Community Problems.—The Odessa Farmers' Club met at the home of Mrs. Lottie M. Durkee, Saturday afternoon, May 10. President Foght called the meeting to order, a song by the Club being the first number. Roll call was answered by "Men in the Public Eye." "Is Poverty and Crime Incurable?" This topic was assigned to Rev. Laity. He gave a short talk which was good, and with the discussion following went to prove that these things are curable. "Why are rural communities so indifferent toward the church, and what can be done to make the religious life more of a reality?" Mrs. Brown opened this subject very nicely with some good thoughts, and a discussion followed, which we were all better for having heard. Supper was served to 45 members. Adjourned to meet with Mr. and Mrs. David in June. This will be the last meeting before vacation and the August picnic.—Reporter.

Organize Corn Contest.—The April meeting of the Salem Farmers' Club was entertained at the town hall by Mr. and Mrs. Isaac Maxwell and son. A very enjoyable meeting was held, although the roads were muddy and the day stormy.

The May meeting of the Club was a large and enthusiastic gathering at the town hall. Dinner was served to 185 guests, 115 of them being children. The meeting was largely devoted to the subject of our corn contest work, and was in charge of Robt. Ross, chairman of the contest committee. An interesting program was given by the children of the different schools, including recitations, an essay on corn, a corn song and a very pretty flag drill. This was followed by an address by Prof. Essery, County School Commissioner. He told the children he wanted both boys and girls to enter into this contest work. It would be a useful lesson to them during their whole life; would help them to be business men and business farmers. They would always find competition in the world—and this would make them more able to compete with men—when they grew older. A collection of \$10.75 was taken for the contest work. Next meeting of the Club to be at the home of President.—G. H. Thompson, Reporter.

## Grange.

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

### JUNE MEETINGS.

State Lecturer's Suggestions for First Meeting.

Song, "Joy Bells," in School Knapsack.  
Recitations by two children.  
My favorite butterfly, a short paper.  
Memories of childhood, two five-minute talks by grown-ups.  
My favorite bird, a short paper.  
"A fresh bouquet for Flora," an exercise by children.  
Song, "Whistle and Hoe," in Knapsack, with whistling accompaniment.  
Some pets I have owned, a short paper by a boy.  
"A Daisy Exercise," by children.  
Closing song, "Onward Christian Soldiers."  
Refreshments in charge of Woman's Work Committee.  
Flora assists lecturer in this program.

### AMONG THE LIVE GRANGES.

Ingham County Pomona Grange met with Fitchburg Grange, Saturday, April 25. In spite of the inclement weather, a large crowd of enthusiastic Grangers were present. After doing justice to a most splendid dinner, prepared by the entertaining Grange, the following program was very much enjoyed: Song, Grange Melodies; paper, "What can the rural people do to make themselves better and uplift the Community?" Mrs. S. Proctor; recitation, Iva Mackinder; address, "Attitude of people toward farmers' organizations," E. A. Holden; music, Fitchburg Grange; paper, "Marriage a question of cash," Mrs. Stephen Behm; recitation, Mrs. A. Lawrence; recitation, Miss Lavonda Smith; piano solo, Miss Myrtle Lawrence; reading, "My Eightieth Birthday," Mrs. A. Lawrence. Following this reading, Elmer Shotwell, in behalf of Fitchburg Grange, presented Mr. and Mrs. A. Lawrence with a beautiful rug as a token of respect and esteem to commemorate their sixty-second wedding anniversary and her eightieth birthday. Both responded in a feeling manner. Both of these people were certainly an inspiration to us all, by their pleasant personality and active part in discussions and entire program. All of four generations of this family are members of Grange, but one, and she is a Junior. Next followed a spirited, impromptu debate: Resolved, that education is a greater factor in making a successful farmer than energy." Rev. F. Corbett and J. T. Barr upheld the affirmative side, while E. A. Holden and H. M. Young discussed the negative. By decision of the judges, the negative was declared the winning side. Meeting closed with a vocal duet from Fitchburg Grange.—Grace Fisher, Lecturer.

Sparta Grange did not celebrate Mother's Day or Father's Day, but Parents' Day, at their regular meeting, Saturday, May 16. At this meeting two candidates also received the first and second degrees. The following program was much enjoyed: Music, Mrs. Thos. Chapman; "A Philosopher Farmer," Hine M. Smith; "Where's Mother?" Mrs. R. S. Coleman; "That Thy Days May be Long," Mrs. Thos. Chapman; "Only One," Mrs. D. A. Filkins; "Nobody Knows but Father," Mrs. S. H. Taylor; "My Boys," Mrs. H. E. Walcott. Roll call, "Some Memory of Father or Mother," "Being Fussy at Meals," Mrs. J. L. Crowley; "How to Clean Feathers in Pillows," "Making Coffee as the French Do."

Travel Talk.—About 100 attended the last regular Grange meeting at Berrien Center, and were entertained by an excellent program. Music was furnished by an orchestra consisting of the following players: Arthur Miars, violin; Kenneth Miars, piano; Chet Daugherty, clarinet. Roy Clark, of Pipestone, was a guest of the order and gave a very interesting description of his experiences during his recent orinetal trip. He exhibited many curios from the Philippines, Japan and China and his talk was thoroughly enjoyed by all.

### COMING EVENTS.

Wayne County Pomona will meet with Flat Rock Grange, on Saturday, June 6. Chas. Pike, of Wyandotte, will address the meeting.

Ingham County Pomona Grange will meet with Locke, Saturday, June 13.

## DEADLY SCOURS

Scientific, Tested, Safe and SURE CURE FOR 75 CENTS

we will send prepaid bottle to last a year. Money refunded if it fails. ROUGEMONT FARM REMEDIES, Detroit, Mich.

## WHOLESALE FEED

Save your money. Ask for price list. Everything in feed. THE BARTLETT CO., 100 Mill St., Jackson, Mich.

S. L. WYANDOTTE EGGS—From great laying strain of Blue Ribbon Birds. Satisfaction guaranteed. F. E. Cowdrey, Ithaca, Mich.

## BREEDERS' DIRECTORY.

### CATTLE.

## Aberdeen Angus Cattle

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

## GEO. B. SMITH

Addison and Somerset, Mich.

## ABERDEEN-ANGUS

HERD FOUNDED IN 1900.

Strains represented consist of Trojan Eras, Blackbirds and Prides, only. Black Quality It, a bull of rare individuality and merit, heads the herd. WOODCOTE STOCK FARM, Ionia, Mich.

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

GUERNSEY BULL CALF, nicely marked, 3 weeks old, great grandson of Gov. Chene, \$50 takes him. AVONDALE STOCK FARM, Wayne, Michigan.

HEREFORD BULLS 2 six months old 1 18 months old ALLEN BROS., Paw Paw, Michigan.

HOLSTEIN BULLS AT FARMERS PRICES Sired by one of the best bulls of America. LONG BEACH FARM, Augusta, Kalamazoo Co., Mich.

HOLSTEIN FRIESIAN CATTLE BREEDERS of high record cows. Young bulls at farmers prices. JONES & LUTZ, Oak Grove, Michigan.

## ESPANORE FARM, LANSING, MICH.

## Register'd Holsteins

Bull Calves \$50 to \$200.

An absolute guarantee with each purchase. CHASE S. OSBORN, L. M. HATCH, ADAM E. FERGUSON, Owners, Supt.

225 Buys a registered heifer 8 mo. old and reg. istered bull 7 mo. old, both 1/4 white, not not akin. B. B. REAVEY, Akron, Michigan.

Upside and Herd—Offer bull calves, choice A. R. O. breeding, \$100 and up. COLE BROTHERS COMPANY, Ypsilanti, Michigan.

HOLSTEIN REGISTERED HEIFERS—6 mo. old, priced to sell. Write for pedigrees and prices. NETHAWAY BROS., Burton, Michigan.

Holsteins—11 High Grade Holstein heifers from Heavy Milkers. Also Registered Bull. Price for the bunch \$100. F. O. B. J. C. BARNEY, Coldwater, Mich.

## BIGELOW'S HOLSTEIN FARMS

Breedersville, Michigan.

Breeder of high class

Registered Holsteins.

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

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

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

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

Registered Holstein Bull—27 lb. dam, 31-lb. granddam. His 5 nearest dams have butter records that average 25 lbs. in 7 days, 2 years old. Write for pedigree. Robert W. Fay, Mason, Mich.

Holstein Friesian Cattle—Herd Headed by Albina Bonte Butter Boy No. 93124. Average for dam and sire's dam A. R. O. at 4 yrs. butter 7 days 28.37 lbs. No stock for sale. W. B. Reader, Howell, Mich.

"Top-Notch" Holsteins. Choice bull calves from 1 to 7 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices. McPHERSON FARMS CO., Howell, Michigan.

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

JERSEYS—Bull calves nearly ready for service. Sired by Jacob's Fairy Emano 107111. SMITH & PARKER, Howell, Michigan.

MAPLE Lane Register of Merit Jersey Herd—Tuberculin tested by U.S. Government. Bull calves from cows in R. of M. test. Heifer calves whose dams, grand-dams, and great grand-dams are in the Register of Merit. IRVIN FOX, Allegan, Michigan.

Jerseys For Profit AMERICAN JERSEY CATTLE CLUB, 324 W. 23d St., New York

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

Jersey Bulls Yearling and two-year-old. Eligible to register. Splendid breeding. Price right. Address LEWIS RILEY, Metamora, Mich.

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

## BUTTER BRED JERSEY BULLS FOR SALE

CRYSTAL SPRING STOCK FARM, Silver Creek, Allegan County, Michigan.

FOR SALE—14 Polled Durham & Shorthorn Bulls from 4 to 24 months old. C. CARLSON, LeRoy, Mich.

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

DAIRY BRED SHORTHORNS of best Bates strains, all sold. J. B. HUMMEL, Mason, Michigan.

FOR SALE—One Registered Shorthorn bull 13 mos. old. Write for pedigree. WM. D. McMULLEN, 67 Madison St., Adrian, Michigan.

## SHORTHORN CATTLE

W. W. KNAPP, Howell, Michigan.

### SHEEP.

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

### HOGS.

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

BERKSHIRES Choice spring boars and gilts priced to move quick. Farmer's stock. ELMHURST STOCK FARM, Almont, Mich.

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

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

CHESTER WHITES—The long type, prolific kind. A nice lot of spring pigs. MEADOW VIEW STOCK FARM, Holland, Michigan.

O. I. C's—Spring pigs, get my price before you buy elsewhere. CLOVER LEAF STOCK FARM, R. No. 1, Monroe, Michigan.

O. I. C's—Few choice, thrifty, March-April boar pigs. \$10.00, \$12.00, as to age, crated. No sows left. B. G. HILLS, Fennville, Mich.

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

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

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

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

O. I. C.—gilts bred for June and July farrow. Also spring pigs. Serviceable boars all sold. I pay express. G. F. ANDREWS, Danville, Mich.

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

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

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

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

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

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

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

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

FOR SALE DUROC JERSEYS—College Boy 138557 farrowed Sept. 7, 1911. Spring pigs after June 1, 1914. J. B. BANGHART, Lansing, Michigan

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

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

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

DUROC JERSEYS—Spring pigs either sex at STAHLMAN, Cherry Lawn Farm, R. 2, Shepherd, Mich.

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

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

LARGE TYPE P. C.—Largest in Mich. Fall pigs all sold. Order a spring pig sired by the largest boar in the U. S., weight 90 lbs., 24 months old. Come and see. Expenses paid if not as represented. W. E. LIVINGSTON, Parma, Mich.

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

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

Continued on page 579



# Markets.

## GRAINS AND SEEDS.

May 26, 1914.

**Wheat.**—In spite of the confirmation of the earlier reports that considerable damage is being done to the wheat crop by the Hessian fly, the trend of the market has been downward this past week. The cash demand is not quite so active and the liberal primary receipts and shipments to foreign countries favor the bears, but the chief factor in the decline was the favorable reports coming from Oklahoma and Kansas where harvesting has begun under favorable conditions, describing the ripened grain to be of good quality and liberal yields. This territory, however, is to the south of the belt most seriously damaged by the fly. One year ago the price for No. 2 red wheat was \$1.10 per bu. Quotations for the past week are:

	No. 2 Red.	No. 1 White.	July.
Wednesday .....	99½	99	90
Thursday .....	98½	98	89½
Friday .....	98	97½	88¾
Saturday .....	98	97½	88¾
Monday .....	97½	97	88½
Tuesday .....	97½	97	88½

Chicago, (May 26).—No. 2 red 98½c; May 97½c; July 87½c per bu.

**Corn.**—Quotations have been maintained at the highest figures recorded a week ago, notwithstanding the decline in wheat. The stock of corn on hand is reported to be unusually small and the demand is more urgent than for some time. This feeling has been modified a little by further reports from Argentina that additional shipments are forthcoming from that country. One year ago the price for No. 2 corn was 59½c per bushel. Quotations for the past week are:

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

Chicago, (May 26).—No. 2 corn, 71½c; July 67½c per bushel.

**Oats.**—This market is firm to higher. The weather during the week past has been a little too dry for the best development of the grain, while the old stock is being called upon by the usual demand. One year ago the price for standard oats was 42½c per bushel. Quotations for the past week are:

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

Chicago, (May 26).—No. 2 white oats 42¼@42½c; May 42¼c; July 39½c per bushel.

**Beans.**—Demand has eased off a little. The local board of trade quotes immediate and prompt shipment at \$2.07; June \$2.12 per bu. Chicago reports steady prices. Pea beans, hand-picked, choice, are steady at \$2.20@2.25; common \$2@2.15; red kidneys, choice \$3.25@3.35.

**Rye.**—This cereal is steady. No. 2 is quoted at 65c per bu.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows. Best patent \$5.30; second \$5; straight \$4.75; spring patent \$5.10; rye flour \$4.40 per bbl.

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

**Hay.**—Good hay scarce, with prices steady. Carlots on track at Detroit are: No. 1 timothy \$16.50@17; standard \$15.50@16; No. 2, \$14@15; light mixed \$15.50@16; No. 1 mixed \$13.50@15; No. 1 clover \$13@13.50.

**New York.**—Prices steady. No. 1 timothy \$22.50; No. 3 to standard \$17.50@20.50.

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

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

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Market is firm at unchanged prices. Conditions on the market

are good. Extra creamery 25c per lb; firsts 24c; dairy 17c; packing stock 15c.

Chicago.—The demand is moderately good and the supply ample. Prices are ¼c higher than last week. Extra creamery 25¼c; extra firsts 24½c; creamery 25¼c; extra firsts 24¼c; firsts 21½@23c; seconds 19c; packing stock 16c.

Elgin.—Market is firm at 25¼c per lb., which is ¼c higher than last week.

New York.—The market is steady and unchanged. Creamery extras 25½@26c; firsts 24@25c; seconds 22@23c; packing stock 17@17½c.

Eggs.—Market is active at prices 1c lower than last week. Current receipts of fresh stock quoted at 18½c.

Chicago.—Market is steady, although the trading is rather slow. The supply is ample and northern eggs are preferred. Miscellaneous lots, cases included 16@18c; ordinary firsts 17@17½c; firsts 18c.

New York.—Heavy receipts caused an accumulation on market and brought price down nearly 1c. The highest grade is in demand. Fresh gathered extras 22@23c; storage packed firsts 20¼@21½c; firsts 19@20c per dozen.

Poultry.—Market is easy with offerings ample for demand. Prices are about ½c lower than last week. Live—Springs 18@18½c; hens 18@18½c; geese 14@15c; ducks 17@18c.

Chicago.—The market is quiet and prices are unchanged. Fowls in the greatest demand. The trade was mainly to supply home wants. Quotations on live are: Fowls, choice 15½c; old roosters 10½c; broilers 1½@2 lbs. weight 26@28c; 1@1½ lbs. weight 23@25c; geese 10c; ducks 13c; spring ducks 22@25c.

## FRUITS AND VEGETABLES.

**Green Vegetables.**—Michigan asparagus, 1-3 bu. box 40@60c; green onions ½ dozen small bunches 5@6c; watercress, small bbls. Michigan \$2.

**Potatoes.**—Quoted firm, with prices advanced from 2@5c. Quotations 68@70c per bu in sacks. At Chicago the market ruled strong and prices advanced 5c. Buyers are anxious and fancy stock was in demand. Receipts are light. Good Michigan round white sold for 70@80c.

## GRAND RAPIDS.

Dairy butter is firm and higher, with 23c offered for No. 1. The egg market opens weak, with quotations at 17½@18c. Shipped-in strawberries are taking the lead in fruits, with berries from Illinois this week and southern Michigans will follow soon. The outlook now is for a big crop of berries in Michigan. First home-grown tomatoes raised under glass were offered Saturday, bringing 35c per lb. Grain prices are unchanged. Dressed hogs are bringing 10½@11c. Timothy hay is worth \$16@18.

## DETROIT EASTERN MARKET.

Although the variety of products offered Tuesday morning was small, there were many farmers present considering the season. Lettuce was offered freely, prices ranging from 75c @ \$1.25 per basket. Asparagus was selling generally at 5c per bunch; onions 25@30c for three large bunches. Potatoes were offered sparingly at 90c per bushel; radishes two dozen small bunches for 25c. No hay is coming in, and the nominal quotation is \$15 @18 per ton.

## WOOL.

An optimistic feeling continues in the wool market, and prices are ruling higher now than for some years past, and it is expected that quotations will advance with the season. There are no accumulations of wool and manufacturers must buy in order to fill current orders, and since dealers have depleted their stocks, buyers are required to go into the field and purchase of producers. In the fleece states business is now becoming more active with sales ranging from 22@26c, according to quality and grade. The sales in Boston since January 1 are nearly three times as great as for the same period of 1913.

## THE LIVE STOCK MARKETS.

### Buffalo.

May 25, 1914.

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

Receipts of stock here today as follows: Cattle 110 cars; hogs 105 d. d.; sheep and lambs 47 d. d.; calves 1600 head.

With 21,000 cattle reported in Chicago today and only 110 cars on our market, the cattle all sold strong, and especially the good weight cattle, quality considered. All the cattle

weighing over 1200 sold fully 25c per cwt. higher than last week. The butcher cattle, weighing 1100 lbs. and under, sold strong to about 15c per cwt. higher. The greatest advance was on the heavy cattle of good finish. In fact, we think we sold some cattle today, quality considered, more than 25c above last Monday's prices. The market was active from start to finish and by noon practically everything was well cleaned up and prospects steady for the balance of the week.

We had an active but lower hog trade here today. With 105 loads on sale and 56,000 reported in Chicago, the bulk of sales reached about a dime lower than Saturday, with light weights strong to 15c lower. Trading was active and a good clearance was made. Everything sold at \$8.65 outside of roughs and stags. Best roughs quotable at \$7.25@7.50 and stags at \$5.50@6.75, as to quality.

The market was active today on handy lambs and sheep. Prices 10c higher than the close of last week on lambs; sheep steady. Choice handy clip lambs selling mostly at \$8.25@8.35. We look for steady to shade higher prices last of week with moderate receipts.

We quote: Choice clip lambs \$8.15 @8.40; heavy do \$7@7.25; cull to fair do \$6.50@8; yearlings \$6.50@7.25; bucks \$3.50@4.50; handy ewes \$5.75 @6; heavy ewes \$5@5.25; wethers \$6.25@6.50; cull sheep \$3.50@4.50; veals, choice to extra \$10@10.25; fair to good \$8.50@9.75; heavy calves \$5.50 @7.

### Chicago.

May 25, 1914.

Cattle. Hogs. Sheep.  
Receipts today..21,000 56,000 21,000  
Same day 1913.23,016 35,098 23,998  
Last week ...41,716 107,953 88,050  
Same wk 1913..40,119 133,900 84,246

With a good Monday cattle supply for these times and a limited general demand, there was an early fair trade in fat butcher stock at steady prices, but at a late hour very few steers were sold, with prospects for a rather general decline of about a dime at least. Some fat heaves at \$9 looked unchanged. Hogs were in such exceptionally big supply that prices declined 15c at once, with sales at \$8@8.35. Hogs marketed last week averaged 238 lbs., or four lbs. more than a week earlier. The sheep and lamb market was 15@25c lower, with a poor demand from all classes of buyers and choice clipped lambs bringing \$8. Swift & Co. received about 3,000 Texas sheep consigned to them direct.

Cattle prices declined on Monday last week before the day was over largely 10@15c, with receipts of 21,200 head and a restricted general demand, the heavy heaves catching it the worst, for warm weather has caused these to be discriminated against, buyers favoring fat light steers, especially yearlings. Good cattle firm, up by the middle of the week, with a run of only 13,508 on Wednesday, and a meager supply for Thursday caused a small advance. On warm days the cattle drank water freely, and this was usually taken into account by buyers in making bids. The bulk of the beef steers sold during the week at \$8@9, with choice to prime heavy steers taken at \$8.90@9.30, good lots going at \$8.60 and upward, medium grade lots at \$8.30 and over and common to fair steers of light weights at \$7.40@8.25. Common to good yearlings brought \$7.85@8.55 and good to choice yearlings \$8.60@9.25, while a few head of agricultural college fed yearlings topped the market at \$9.50. Butcher lots of cows and heifers had a good sale on the basis of \$5.30@8.85 for ordinary cows to fancy yearling heifers, with sales of cutters at \$4.70@5.25, canners at \$3.50@4.65 and bulls at \$5.50@7.75. Although the rank and file of the stockers and feeders declined in value 25c because of the refusal of most buyers to follow up the late boom in prices, the choicest lots of these cattle advanced further, making the highest figures on record. Sales were made all the way from \$6.75@7.25 for the less desirable offerings up to \$8@8.85 for the better class, with sales embracing a carload of fancy little stock steer calves that averaged 551 lbs. at \$8.85, 40 feeders averaging 969 lbs. at \$8.65 and 40 feeders averaging 1098 lbs. at \$8.60. The cause of the much higher prices for common beef steers than a few weeks ago was the feeder outlet. Calves were active at \$6@10.75 per 100 lbs. for rough heavy to prime light vealers, a few selling at \$11. Milch cows were in good demand at \$60@90 each.

Hogs had some moderate advances in prices last week on account of the smaller receipts, but the marked falling off in the eastern shipping demand after Monday was an obstacle to maintaining the market on a much higher basis. Judging from the way hogs came in from the region around

Chicago, the supply in our home territory has become decidedly short, and prospects look good for high prices this summer, despite the bearish attitude taken by the packers. Hogs have been coming in good average quality, with a recent rise in average weight to 237 lbs., comparing with 245 lbs. a year ago. Choice light weights continued the best sellers, with prime heavy hogs selling about 5c below these. There is much talk regarding the future receipts, and it is regarded as a significant fact that combined receipts in all the markets for 1914 have been the smallest since 1910. Fresh pork is having a large sale, and provisions are active, considering their dearthness. The five leading western packing points held on the first of the month aggregate stocks of 229,226,000 lbs., comparing with 249,094,000 lbs. a month earlier, but stocks were 2,200,000 lbs. greater than a year earlier. Hogs sold up to \$8.62½ on the high day of the week, with sales Saturday at \$8@8.50 as an extreme range for rough heavy packers to prime light shipping grades, and prime heavy lots selling close to the top. Pigs brought \$7.50@8.30. Hogs closed about 5c lower than a week earlier.

Sheep and lambs started off last week with a moderate supply and a further advance in prices that carried prime Colorado woolled lambs to \$9.50 per 100 lbs., the highest price recorded since May, 1912. At the same time prime Colorado shorn lambs sold up to \$8.60, and everything in the live mutton line sold correspondingly high. By Wednesday killers were unwilling to operate at so high a level, and lower prices prevailed for everything offered, although values were still extremely high as compared with a few weeks ago, when supplies were much larger. Lambs have led the advances as a rule, as well as the declines, and the few spring lambs offered sold extremely well. The packers received considerable numbers of southern spring lambs consigned to them direct from Louisville. At the week's close woolled lambs brought \$9.30 for the best down to \$7.50 for common lots,

## ADDITIONAL CROP AND MARKET NOTES.

### Michigan.

**Northern Isabella and Southern Clare Co.'s.**—Oat seeding is done and fields begin to look green. Quite a large acreage sown. Corn planting is in full blast. Cattle and sheep are out on pasture and meadows looking pretty good. Quite a large acreage of corn and beans will be planted, but not many sugar beets will be raised, as hired help is so scarce. Red wheat 88c; white wheat 88c; rye 56c; oats 35c; beans \$1.90; wool 17@21c; cream 25c; eggs 17c; butter 17c; potatoes 55c per bushel.

### Indiana.

**Daviess Co.**—Dry weather prevails. Ground is hard to plow; corn late, big crop and about half planted; wheat prospects not so good as two weeks ago; small crop of oats, not at all promising. Pastures short and meadows weedy, but prospects yet good for big crop of hay. The pig crop larger than usual; fewer sheep and lambs. Fruit prospects good; plenty of apples; peaches partly killed only in a few places a good crop left; plenty of small fruits. Nearly everybody has sprayed trees this year and set out more fruit trees. Eggs 18c; butter 20c; chickens 12c; corn 70c; wheat \$1; hay \$20; hogs 8c; cattle 7c; lambs 76c; wool 20c.

### North Dakota.

**Foster Co.**—We have had a very cold wet spring, but the weather is more favorable now. Wheat seeding is finished, but the acreage was decreased so as to get it sown in time. Early grains are up, and the stand is good, and pastures are getting green. There have been many losses of pigs. Several large groves were planted, and nearly everyone put in a few trees. Cattle prices are good at \$7.50 @8; hogs \$6.50; eggs 15c; butter 20c; wool 16@18c per lb.

### South Dakota.

**Deuel Co.**—The pig and lamb crops are fair. Wheat, rye, meadows and pastures are fine. Fruit prospects are good, and there was no damage done to trees by mice. No spraying done. Eggs 18c; hogs \$7.70; barley 45c; potatoes 60c; oats 30c.

### Washington.

**Kllicitat Co.**—The acreage of spring grains will be larger than last year. Wheat, rye, meadows and pastures look good. Fruit prospects are fine, except for peaches, and many are digging up their peach orchards, as there has been a poor crop for several years. All orchards are sprayed as soon as they come into bearing, and many new orchards are being set. Pigs are plentiful but high, a six-weeks-old pig bringing \$4. Cows \$70@100; hens, live 18@20c; ducks 17@18c; turkeys 22@28c; pork, dressed 15@20c; mutton 12@15c; veal 17@20c; butter 30 @35c; eggs 18@20c.



## THIS IS THE FIRST EDITION.

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

## DETROIT LIVE STOCK MARKETS.

Thursday's Market.  
May 21, 1914.

## Cattle.

Receipts 1368. Bulls dull; other grades 10@20c lower than last week; milch cows \$5@10 lower.

Best heavy steers \$8.75@9.10; best handy weight butcher steers \$8.25@8.50; mixed steers and heifers \$7.75@8.25; handy light butchers \$7.50@8; light butchers \$7@7.50; best cows \$6.75@7; butcher cows \$6@6.50; common cows \$5@5.50; canners \$3@4.25; best heavy bulls \$7@7.25; bologna bulls \$6.50@6.85; stock bulls \$6.50@6.75; feeders \$7.25@7.50; stockers \$6.75@7.50; milkers and springers \$45@75.

Roe Com. Co. sold Beach 8 feeders av 795 at \$7.65; to Mich. B. Co. 2 cows av 1070 at \$6.75, 1 do wgh 950 at \$5, 3 do av 1090 at \$6.75, 1 do wgh 1100 at \$6, 1 do wgh 1100 at \$5.25, 23 steers av 990 at \$8.25; to Kamman B. Co. 7 do av 967 at \$8.10, 5 do av 930 at \$8, 2 cows av 1200 at \$6.75, 5 do av 1040 at \$7; to Bresnahan 7 heifers av 480 at \$7; to Kamman B. Co. 2 bulls av 900 at \$6.75; to Sullivan P. Co. 21 steers av 982 at \$8.25; to Ogden 3 cows av 1040 at \$5.50; to Thompson Bros 1 do wgh 920 at \$4; to Kamman B. Co. 4 do av 960 at \$6.75; to Rattkowsky 3 cows av 980 at \$6.25, 1 do wgh 840 at \$5.

Bishop, B. & H. sold Sullivan P. Co. 20 steers av 1040 at \$7.60, 26 do av 909 at \$7.75, 20 do av 892 at \$8.10, 10 do av 845 at \$8, 2 bulls av 1410 at \$6.85, 1 steer wgh 750 at \$7, 2 bulls av 1150 at \$6.75, 4 cows av 1082 at \$6.75; to Hammond, S. & Co. 1 bull wgh 1280 at \$7, 2 steers av 1060 at \$8.50, 12 do av 1088 at \$8.70, 1 cow wgh 1290 at \$7, 2 steers av 1245 at \$6.75, 2 cows av 1260 at \$6.75, 1 bull wgh 1360 at \$6.75, 5 cows av 1140 at \$6.50, 23 steers av 1050 at \$8.25, 3 cows av 947 at \$6, 13 steers av 990 at \$8.25; to Mason B. Co. 9 do av 861 at \$8, 1 cow wgh 930 at \$7, 2 cow and bull av 1130 at \$6.25; to Bresnahan 8 steers av 785 at \$7.40, 3 heifers av 503 at \$6.50; to Breitenbeck 3 cows av 960 at \$5, 14 do av 1034 at \$6.50; to Kamman B. Co. 15 butchers av 908 at \$7.90; to Parker, W. & Co. 2 canners av 810 at \$4, 2 do av 685 at \$4; to Mich. B. Co. 2 cows av 985 at \$5.25, 2 cows av 910 at \$6.65, 10 do av 998 at \$6, 18 steers av 1240 at \$8.25; to Ratner 1 bull wgh 1400 at \$7.25; to Parker, W. & Co. 21 steers av 1065 at \$8.25; to Mich. B. Co. 8 do av 940 at \$7, 11 do av 960 at \$8, 5 do av 800 at \$7.75, 1 do wgh 1540 at \$8.50.

## Veal Calves.

Receipts 1144. Market steady. Best \$10@10.50; others \$7@9.50.

Roe Com. Co. sold Newton B. Co. 1 wgh 130 at \$8, 10 av 149 at \$10.50, 4 av 185 at \$8, 6 av 155 at \$10.50.

## Sheep and Lambs.

Receipts 1575. Market steady. Best lambs \$8@8.25; fair do \$7@7.50; light to common lambs \$5.50@6; yearlings \$6.50@7.25; fair to good sheep \$5.50@6; culls and common \$3@4; spring lambs \$10@11.

## Hogs.

Receipts, 7755. Heavy \$8.55; pigs and lights \$8.70; bulk of sales \$8.60.

Bishop, B. & H. sold Hammond, S. & Co. 4300 av 190 at \$8.60.

Same sold Miller & Co. 1012 av 200 at \$8.70.

Roe Com. Co. sold Sullivan P. Co. 617 av 190 at \$8.60.

Friday's Market.  
May 22, 1914.

## Cattle.

Receipts this week 1510; last week 1564; cow stuff 25@30c lower than last week; butchers 10@20c lower; bulls steady. Best heavy steers \$8.75@9; best handy weight butcher steers \$8.25@8.50; mixed steers and heifers \$7.75@8.25; handy light butchers \$7.50@8; light butchers \$7@7.50; best cows \$6.75@7; butcher cows \$5.75@6.25; common cows \$5@5.50; canners \$3@4.25; best heavy bulls \$7@7.25; bologna bulls \$6.50@6.85; stock bulls \$6.50@6.75; feeders \$7.25@7.50; stockers \$6.75@7.50; milkers and springers \$45@75.

## Veal Calves.

Receipts this week 1369; last week 1124; market dull and 50c lower than Thursday's opening. Best \$9.50@10; others \$7@9.

## Sheep and Lambs.

Receipts this week 2036; last week 2028; market dull and 10@15c lower. Best lambs \$8; fair do \$7.50@7.75; light to common lambs \$5.75@6.50; yearlings \$6.50@7.15; fair to good sheep \$5@5.75; culls and common \$3.50@4.

## Hogs.

Receipts this week 9955; last week 9487; market 5@10c lower; all grades \$8.50@8.55.

## Veterinary.

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

Exostosis.—I have a mare that has a bunch on pastern midway between coronet and fetlock. This enlargement is much the shape of an egg and is very hard. Our local Vet. is somewhat puzzled to know what it is. T. M. W., Crosswell, Mich.—The bunch is some composition of splint, spavin and ringbone; therefore it will be difficult to reduce or remove it. Apply one part red iodide mercury, one part iodine and eight parts fresh lard every five or six days.

Imperfect Udder.—One of my cows came fresh yesterday, second calf. She milked well last year and is in good condition, but since she came fresh I am unable to get milk from only one teat. Local Vet. attempted to draw milk with tube and other instruments, but the teats seem to be clogged and he stated nothing could be done to restore udder. The calf is living on milk taken from one teat. C. V. J., Merrill, Mich.—Your cow is not worth considering for dairy purposes. She might raise her calf, then fatten her.

Luxation of Stifle.—The stifle of my two-year-old filly seems to slip out of place and when she moves, especially on a turn, it gets back into position, then she walks all right. F. W., Rapid City, Mich.—Clip hair off stifle and apply one part cantharides and eight parts fresh lard every week or ten days and she will be all right.

Congested Udder.—My 10-year-old cow freshened last March, caught cold, udder became congested; I foisted same with hot water several times a day until inflammation subsided, then applied bag-balm, but udder is not yet clear. Is the milk fit for use? I. M. W., Clayton, Mich.—Milk drawn from diseased udders should not be used in the home. Apply one part iodine and 20 parts fresh lard to diseased portion of udder once or twice a day and give her a tablespoonful of powdered nitrate of potash and a dessertspoonful of fluid extract phytolacca at a dose two or three times a day. Are you sure that she does not bruise udder?

Splint.—Will you publish in your paper a cure for splint on fore leg of horse? S. A. R., Townley, Mich.—Splint is usually the result of concussion or a blow; therefore, you may be able to ascertain cause and remove it. Apply one part red iodide mercury and eight parts lard once a week also give the horse rest and he will soon get well.

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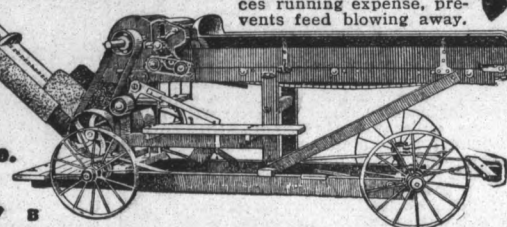
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All parts of the Provinces of Manitoba, Saskatchewan and Alberta, have produced wonderful yields of Wheat, Oats, Barley and Flax. Wheat graded from Contract to No. 1 Hard, weighed heavy and yielded from 20 to 45 bushels per acre; 22 bushels was about the total average. Mixed Farming may be considered fully as profitable an industry as grain raising. The excellent grasses full of nutrition, are the only food required either for beef or dairy purposes. In 1912, at Chicago, Western Canada carried off the Championship for beef steer. Good schools, markets convenient, climate excellent. For the homesteader, the man who wishes to farm extensively, or the investor, Canada offers the biggest opportunity of any place on the continent. Apply for descriptive literature and reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

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BROILERS,  
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Let us handle your poultry, fruits, farm products. Our 25 years in the same store assures your satisfactory results.  
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HAY  
Ship your Hay to Pittsburgh and to  
Daniel McGaffrey Sons Company  
Pittsburgh, Pa.  
Ref.—any bank or Mercantile Agency

FARMERS—We are paying good premium above the Official Detroit Market for new-laid eggs shipped direct to us by express. Write us for information. It will pay you. American Butter & Cheese Co. 31-33 Griswold St., Detroit, Mich.

Griggs, Fuller & Co., Detroit. Want your apples, potatoes, poultry and rabbits. Quick returns.

## Farms and Farm Lands For Sale

WANTED to hear of good farm or unimproved land for sale. Send description and prices. Northwestern Business Agency, Minneapolis, Minn.

FARMS, GOOD, CHEAP, PROFITABLE. UNUSUAL OPPORTUNITIES NOW. State Board of Agriculture, Dover, Delaware.

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

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

## Full 7 Jeweled

Genuine seven Jeweled Railroad watch worth \$15 to anyone who requires an absolutely reliable timekeeper and a watch that will last a lifetime. Locomotive on dial, stamped and guaranteed seven jewels, bequest halppring, patent regulator, quick train. Fitted in heavy or medium weight solid case—silver, gold, or steel. Both case and works absolutely guaranteed for 20 years. To advertise our business, make new friends and introduce our great catalogue of Elgin watches we will send this elegant watch to any address by mail postpaid for ONLY \$2.95. Send this advertisement with \$2.95 and watch will be sent to you by return mail post paid. Satisfaction guaranteed or money refunded. Send \$2.95 today. Address R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

## MICHIGAN FARMING LANDS

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

80. MICH. DAIRY FARM—160 acres best dairy and farming section 80. Mich. near milk condensery, good school, all tiled, woven wire fence, fine buildings, owner retiring, a bargain, address quick. F. A. KINNEY, Seneca, Lenawee Co., Mich.

For Sale—Farm 130 acres, Stark Co., Ohio, 10 miles from Canton and one from Lima. Locomotive on dial, stamped and guaranteed seven jewels, bequest halppring, patent regulator, quick train. Fitted in heavy or medium weight solid case—silver, gold, or steel. Both case and works absolutely guaranteed for 20 years. To advertise our business, make new friends and introduce our great catalogue of Elgin watches we will send this elegant watch to any address by mail postpaid for ONLY \$2.95. Send this advertisement with \$2.95 and watch will be sent to you by return mail post paid. Satisfaction guaranteed or money refunded. Send \$2.95 today. Address R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

SUMMER ALL THE TIME! THE FAMOUS CALIFORNIA LANDS. San Joaquin Valley irrigated. A fine grow alfalfa, walnuts, peaches, apricots, cherries, grapes, almost everything. Write for information. J. D. TOWAR, East Lansing, Michigan.

HONEST 125 ACRES FARM VALUES Stream-watered pasture, 52 feet thick floor in barn, 30 head tie-up, 4000 strawberry plants; one mile to railroad town, church, schools, etc. \$10,000; cheap at that. FARMERS' REALTY CO., QUAKERTOWN, PA.

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## BREEDERS' DIRECTORY.

(Continued from page 577.)

MY OH MY!  
What an Opportunity.

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

## POLAND CHINAS

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

HILLCREST FARM, KALAMAZOO, MICH.

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

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

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

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

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

Mule Foot Bred sows, bred gilts and boar pigs, not related, for sale. Satisfaction guaranteed. G. C. KREGLOW, Ada, Ohio

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

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

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

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

## YORKSHIRES

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

## Lillie Farmstead Yorkshires

Open gilts and gilts bred for September farrow. Spring pigs either sex, pairs and trios not akin. Satisfaction guaranteed.

COLON C. LILLIE, Coopersville, Michigan.



**Elis**  
The King  
Balers

—and  
**Top Notch  
Profit Maker**

Does high class baling with minimum expense for power and crew. Big capacity—low upkeep cost. Light draft—2 horses haul it easily. Weight as shown with engine 4250 lbs. With or without engine or engine platform. Suitable mounts for any standard engine.

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Get facts on Eli construction—18 models—belted motor, geared motor, belt power and horse power. Write today. Address  
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GALVANIZED ANTI-CORROSION  
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**SILOS**

**Stand the Test!**

Their practical construction stands for lasting service. Made of NO-CO-RO Metal—an exceptionally pure galvanized iron. Perfectly fitting doors make the "ZYRO" Silo **Absolutely Air-Tight**. It cannot crack, shrink or collapse—is practically trouble-proof. Many unique and exclusive features put the "ZYRO" Silo in a class of its own. Write today for **FREE Book of Metal Silo FACTS**. Tells all about "ZYRO" Silos and shows them "on duty" with many prominent farmers and dairymen. If you think of building a silo, study the "ZYRO" advantages. Write for helpful catalog today.  
The Canton Culvert Co., Box 120 Canton, Ohio

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Backed up by 64 years of experience.

The Ross is the only machine of this type that is equipped with steel cutting apparatus, steel blower disc, and steel truck. Other machines of this type are furnished with cast iron cutting apparatus, cast iron blower disc. The steel equipment makes the Ross indestructible, and the most reliable and durable silo filling machine on the market. Strong claims made for strength, capacity, durability and ease in feeding. Ask for large catalog The E. W. Ross Co., Box 114 Springfield, Ohio

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Fresh and Sweet**

You can keep ensilage as succulent and palatable as the day you cut the corn if you protect it from air, heat and moisture with a **Natco Imperishable Silo**. Built of vitrified clay hollow blocks—it lasts for generations without painting or repairs. No staves to warp or shrink—no hoops to tighten—first cost the last cost.

Weatherproof—Decayproof—Fireproof  
It will protect you against loss from storms and will be a permanent addition to your farm buildings. **FREE SILO BOOK**—Write today for free Catalog "A".  
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Lansing, Mich.

**BROWN** Direct from factory, freight prepaid. Over 150 styles for every purpose, all Double galvanized, 100 per rod up. New Bargain Catalog and Sample to test. **ALL FREE**—Mail postal NOW, to **THE BROWN FENCE & WIRE CO.** Dept. 49 Cleveland, Ohio

### THE CONSERVATION OF SOIL MOISTURE.

(Continued from page 566).  
**Surface Cultivation Should Speedily Follow a Rain.**

Following a very heavy rain, the soil becomes packed and in a very short time an intricate capillary system is started up in the surface soil. This draws the soil water to the surface and thus very rapidly causes the dissipation of the moisture by evaporation into the air. It becomes necessary, therefore, if this moisture is to be conserved for plant growth, that as speedily as possible this surface capillary condition should be destroyed. This is done by surface cultivation and is successful only in that soil in which previous to the planting of the seed a well prepared seed bed has been established.

#### Deep Cultivation vs. Shallow Cultivation.

Deep cultivation is not practiced during the growing season of the year and is not necessary if the soil has been properly prepared previous to the sowing of the seed. If so prepared it will not be sufficiently compact to make a penetration by means of the roots an uncertain feature.

Surface cultivation will accomplish both processes of conservation, namely, the conservation of soil moisture first, and second, the eradication of noxious weeds and the like, both procedures being necessary to reserve for the growing crop its full complement of soil moisture. In most instances the greatest damage done to a growing crop by weeds and the like is caused by their withdrawing from the soil of this soil water which we are so anxious to conserve. Consequently cultivation which aims at the conservation of soil moisture stops short of accomplishing its full purpose in this line when it does not remove the weeds and the like at the same time.

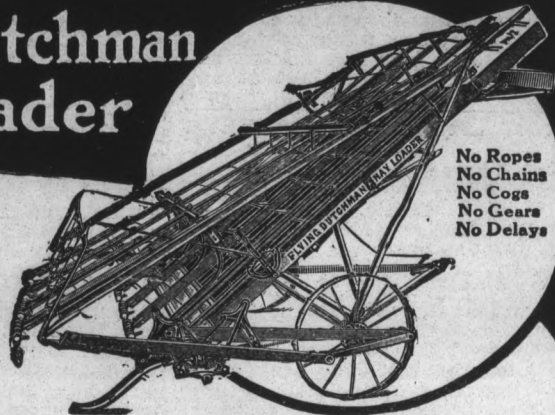
#### An Illustration of Nourishment Through Capillary Water.

The enormous influence of capillary water of soils was very strikingly presented to the writer on a trip over the high sand dunes of northern Michigan a few years ago. Over near Point Betsey, on the Lake Michigan shore, as we were crossing one of the high sand dunes for which this region is noted, on the very top of one of the highest dunes we found growing in the greatest of luxury a sand cherry plant probably extending over an area of 10 feet in diameter. There was no evidence of any possible external source of nourishment. Water there was none, but it was very evident to see that in this highest point the plant was deriving its nourishment through the capillary water of the soil which in this manner had risen a very great many feet through dry sand to the top of this sand dune. Not only was the plant growing in apparent luxury, but it was loaded with a crop of rich, luscious sand cherries.

It is this ability to conserve the soil moisture which has made the principle of dry farming so successful in the middle west, and at this period of the year and from now on during the period of greatest growth, it is this feature of cultivation that deserves the most careful attention on the part of the farmer.

## Flying Dutchman Hay Loader

### The One-Man Loader



No Ropes  
No Chains  
No Cogs  
No Gears  
No Delays

With this Loader, one man can put on a good, even load of hay, in practically the same time that it would take two men with other loaders. The Flying Dutchman loads hay, clover or alfalfa without "chewing it up" or threshing out the seed.

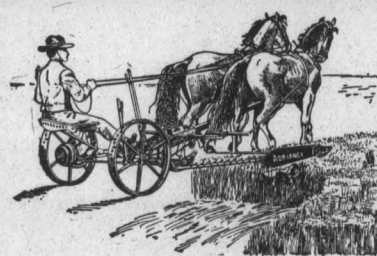
It operates with the long, easy, natural stroke of the hand rake, elevates carefully and loads it on the wagon in excellent condition.

Works on an entirely new principle that does away with all cams, drums, chains, sprockets, rope webs, gears and trouble.

**Light Draft and Long Life**—There's nothing to wear out or get out of order, and the extra long stroke does not pound the machine to pieces.

**No Clogging**—The yielding deck effectually prevents clogging. Heavy or light hay, swath or windrow can be handled without any adjustment.

**All-Steel Frame**—It cannot warp, sag, rot, nor get out of shape.



### Many ADRIANCE Mowers In Use 40 Years

Are giving excellent service today. No other Mower has such a record because none is so well built.

Adriance Mowers have nearly 60 years of the hardest kind of service back of them.

They are the best made—simplest in construction—lightest draft—most powerful—need fewest repairs, thousands of users will testify.

Adjustable carrying springs take weight from center bar and put it on the wheels, greatly reducing draft and increasing traction.

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Automatic spring draft prevents damage to machine, driver or team in case obstruction is struck.

Forward acting, natural position foot lever makes ideal foot brace in controlling fractious team.

Many other strong Adriance features explained in our **FREE BOOKLET**. Write for it today.

Your Flying Dutchman Dealer sells Adriance Mowers, Flying Dutchman Hay Loaders and complete line of Flying Dutchman Farming Implements. See him.

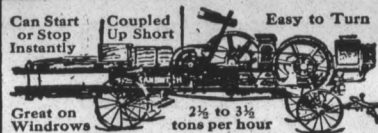
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**SANDWICH Money Maker MOTOR PRESS** has a hopper cooled gas engine mounted on same truck, 4, 6, 8 or 10 h. p., of more power than rated. Geared magneto. Full engine power delivered to Press by heavy steel roller chain. No power lost, no belts to slip or to delay. Simple self-feeder and the big feed opening just swallows the hay. Friction clutch right on press.



Can Start or Stop Instantly  
Coupled Up Short  
Easy to Turn  
Great on Windrows  
2 1/2 to 3 1/2 tons per hour

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Cost only one-third as much as ordinary iron, wire or gas pipe gates, but last twice as long. Neat in appearance—best and strongest gate made—light, easy to handle, opens both ways. Boards are double bolted between eight angle steel uprights and double truss braces, guaranteed never to sag.

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Can't-Sag Gates are furnished complete, ready to hang, or just the Gate Steels which include everything except the boards. Patent self-locking hinge feature—reinforced two piece malleable hinges. Six Triangular Truss Braces make gates extra strong.

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