

# MICHIGAN FARMER

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50 CENTS A YEAR  
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## Why Every Farmer Should Grow Alfalfa.

**G**ROW alfalfa! This is the cry that has been sounded for some time from the center to the farthest corners of the state. The alfalfa appeal has been heard, and in many cases, heeded. So far, the success attained has increased the sentiment in favor of growing this valuable crop, and a great many agencies have joined forces to further disseminate knowledge in regard to the value of the crop and its proper methods of culture.

There are two principal reasons why nearly every farmer in the state of Michigan should try to grow alfalfa. The first, and perhaps the most

important reason, is that alfalfa gives a large yield per acre of a food rich in protein, which is relished by all the common farm animals. The second reason is that it is a crop with a large root system; and on these roots are organisms, called bacteria, which transfer nitrogen from the air within the soil to their bodies, which eventually form part of the soil itself, and this nitrogen may be used by the alfalfa and other crops.

Applying Lime as a Preparation for Alfalfa is Necessary on Many Farms.

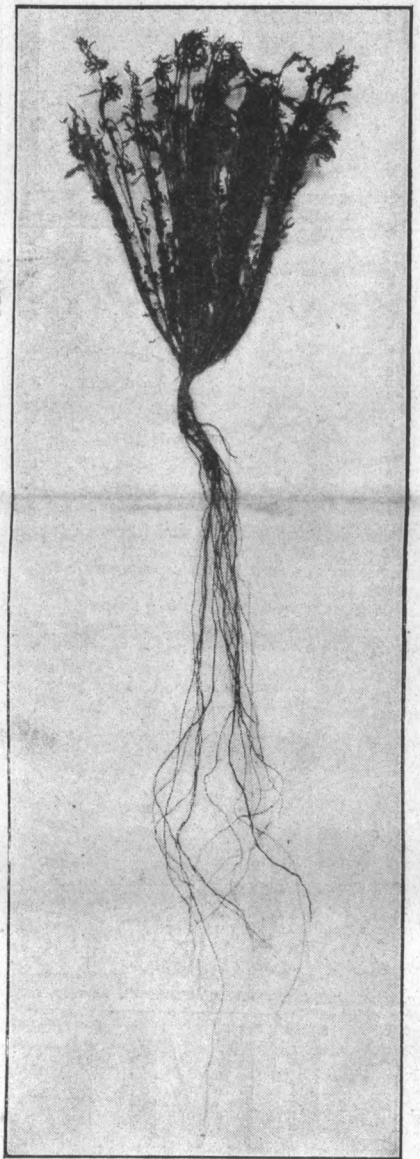
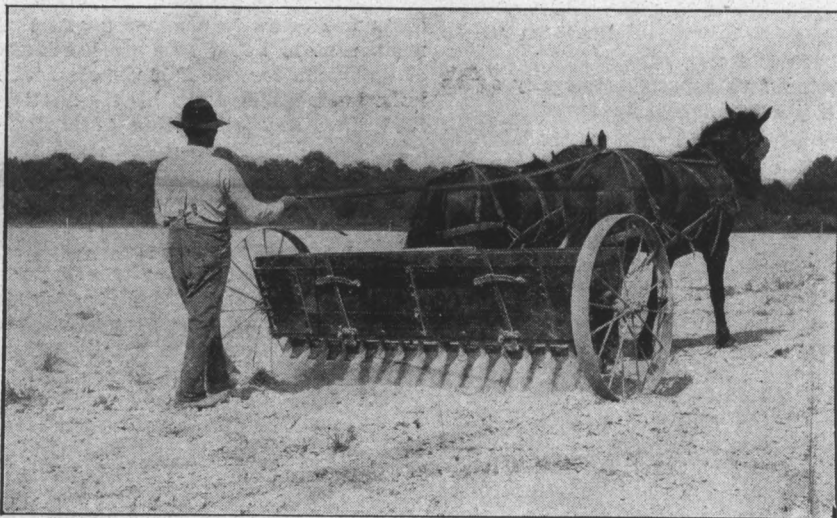
The large root system, and the nitrogen gathering properties of the alfalfa plant make this crop valuable in a good system of soil management. It may be used effectively to build up a run-down soil or to maintain the fertility of a relatively good one. A deep-rooted crop will loosen up a heavy soil better than a sub-soil plow. Nearly every farmer who works a heavy soil knows that sub-soiling, when properly done, increases the yield of crops. A sub-soil plow must be used just at the proper time in a heavy soil. When the surface of such a soil is in the proper condition for plowing, the sub-soil is often too wet, and sub-soiling at this time will greatly injure the texture of the sub-soil by causing it to puddle whereby the air is excluded and the movements of soil water hindered, just the

them, a fact often overlooked. The beneficial effects extend to the depth to which the roots penetrate.

Growing a deep-rooted crop is an easily applied method by which the farmer may get the air into or the excess of water out of the soil. This refers particularly to heavy soils. In the illustration is shown a year-old alfalfa plant with roots over five feet long. These roots distribute themselves through the soil and when they die and decay many small passages are left in the soil through which the air and water can readily move. When the air and water can move freely through the soil many helpful factors are introduced. Seeds germinate and grow better where there is a sufficient supply of air, while they die and decay when the air supply is insufficient. It is necessary at all times to have a good supply of air around the roots of the common grain and fodder crops. An excess of water in the soil keeps it cold and the growth is retarded by the low temperature. This is noticed more in the spring when drainage is slow and it is important to have a strong, healthy growth in the plants. Of course, we can not drain a wet soil by growing alfalfa, but we can give a soil better drainage through the passages left by the decaying roots. We would have fewer poor strips and spots in our crops and fields due to poor plowing and wet, cold, poorly aerated soil, if we grew more deep-rooted crops and grew them oftener.

Beneficial organic matter is introduced into the soil when these roots die and begin to decay. While the added organic matter is often needed on heavy soils, the sandy soils are most in need of such treatment. The sandy soil to which organic matter has been applied by growing a deep-rooted, leguminous crop will be found to retain more water, contain more nitrogen as well as other plant foods, be in a better condition of texture, etc., all of which tend to produce a better crop. We can not state just how much nitrogen is fixed in the soil by an alfalfa crop. The amount of nitrogen so gained will depend upon several conditions, such as kind of

soil, fertility of the soil, inoculation, and others; but that a large quantity is gained by the soil is well known. This nitrogen is taken from the soil and air and, at present, is free to all.



Year Old Plant, Roots Five Feet Long.

The only thing necessary to get it into the soil is to grow a leguminous crop under the proper conditions of culture. A good crop to use is alfalfa. Ingham Co. C. H. SPURWAY.



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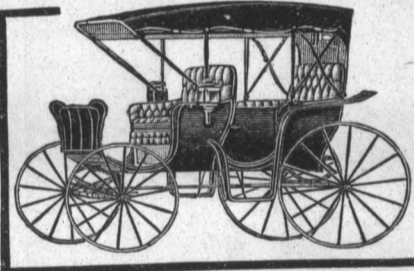
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# The True Cost of a Crop.

VERY much has been written and is constantly being written, relative to the cost of various crops, and yet when one takes the time to analyze the items of crop cost inserted in cost tables, he finds them to say the least, very unsatisfactory. No question is of greater importance than this to the farmer, and yet I am sure I am safe in saying that no question in farm economics is more foggy or uncertain in the minds of a majority of farmers than this one of cost production. What I mean when I say farmers do not know what it costs to produce an acre of any crop they grow is, that there is a broad margin of uncertainty and doubt in their minds, and they are unable to assert positively as to whether they are producing at a profit or at a loss. They do not know the value, in time, feed and housing, of the hog they haul to the butcher. And very seldom can they tell you whether the check they receive for a load of potatoes is greater or less than the various cost items entering into its production, and never can they tell you specifically, how much greater or less. We do not need to look for the cause of this condition. The farmer keeps no account of his own, or his family's or team's time, or his own or his family's or team's expenses, and not knowing how much time or labor he gives to a crop he cannot tell what the true cost is. Besides, he sells his products for what the market offers. He takes what he can get for what he produces. It really makes no difference what the cost may be so long as he has no part in fixing the selling price, and is helpless to demand a price large enough to cover cost, to say nothing of a profit.

The Agricultural Colleges and departments have given us nothing in this line that is really dependable and trustworthy. Several tables of cost of producing potatoes have been put out by the Agricultural Department at Washington, but in most cases they are merely "wild stabs" on the subject. I find cost tables of \$15 per acre and \$60 per acre, and several between these extremes—all issued by the same authority. In most tables of this character several very important items of cost are not considered in the calculation at all, and it would seem that there exists a desire on the part of agricultural writers to make the cost of production appear really less than it is.

H. K. Branch, in the Michigan Farmer of April 4, tells us he produced 130 bushels from one acre, sold them for 10 cents per bushel and lost \$10. Another year this acre yielded 40 bushels, which sold for 70 cents and he made a "net profit" of \$5 or \$6. He evidently figures the cost in both cases at \$23 per acre.

Now, I would like to have some good potato grower—one who produces under average conditions in Michigan—tell me what is wrong with my figures. I can't produce potatoes for \$15 or \$23 per acre, and charge anything against the crop for my labor, and I have been wondering if I am exceptional in this regard, or whether my experience is that of the average potato grower.

Here is how I figure the cost of growing an acre of potatoes:

|  |         |
|--|---------|
| 1. Plowing .....   | \$ 2.00 |
| 2. Fitting ground, discing, harrowing, working, where planted in squares ..... | 2.25    |
| 3. Selecting seed, 10 hours .....  | .75     |
| 4. Ten bushels selected seed .....   | 10.00   |
| 5. Treating for seed and material .....  | .75     |
| 6. Cutting seed .....  | .75     |
| 7. Planting .....  | 2.00    |
| 8. Spraying and spray materials .....  | 3.25    |
| 9. Cultivating .....   | 3.25    |
| 0. Digging .....   | 6.00    |
| 11. Storing .....  | 4.00    |

|  |       |
|--|-------|
| 12. Sorting and hauling to market .....  | 8.00  |
| 13. Plant food .....                     | 15.00 |
| 14. Tools, use of .....                  | 2.00  |
| 15. Rent or interest on investment ..... | 7.00  |

Total .....

Now, I want to see the color of the man's hair, who can cut these cost items down to \$15 or \$25, or even to \$45.

Item 1. A man and team today costs \$4 per day, and they plow more often less than more than two acres per day, so \$2 for plowing is not unreasonable.

Item 2. Fitting, by two discings, and at least three harrowings, and if marked, that added means better than half a day, man and team, so this item must be voted sane.

Item 3 depends on how this work is done. I know men who select with a scoop shovel and the cost is nothing. It costs me much more than charged. On an average 75 cents is not out of the way.

Item 4. This charge is for selected seed and is just half what good selected seed is worth. Seed should be charged at its real value, not at market price. I know many men who could not afford to sell their selected seed for \$2 per bushel. Others could afford to sell for less than market price, for their seed is culls. But an average of \$1 for seed is not far from the point.

Items 5 and 6 are seldom considered, yet all will admit them to be legitimate items of cost.

Items 7 to 9 pretty generally agree with published cost tables.

Item 10 varies with method. Last fall it cost many farmers near me more than \$6 for digging and crating 100 bushels, which is the average yield in Michigan. So a 200-bushel yield would cost \$12 per acre. When dug by machinery the cost might fall a little below \$6 per acre.

Item 11 is another item never considered by cost table makers.

Item 12 is another item usually left out of the cost calculation. I have figured on a 100-bushel yield, and four miles to market, 50 bushel loads, one load per day. If the yield is more the sorting and hauling would be proportionately higher. Of course, some of this work is done in the winter when labor is cheaper.

Item 13. It is easy to figure this item when commercial fertilizer is purchased and applied to the soil. We know what it costs even if we are somewhat foggy as to its value. Eight hundred pounds of high-grade goods would cost about \$14 per acre. If barnyard manure is used a more complicated problem confronts us. A farmer applies eight tons per acre. What should he charge against the crop? We are told that we can safely estimate a ton as containing 10 pounds each of nitrogen and potash and six and two-thirds pounds of phosphoric acid. At present prices for these elements at the farm these amounts of plant food are worth \$3.12 per ton, or \$24.96 for the eight tons. But in case no manure or commercial fertilizer is applied, what then? We are also told that a 200-bushel crop of potatoes removes from an acre the following amounts of plant food elements: Nitrogen 46 pounds; phosphoric acid, 21 pounds, and potash 74 pounds, worth, at present prices, \$15.64. Now so far as I know, this item has never been charged against the cost of a crop. But why should it not be so charged? The grower is poorer by the value of the plant food elements removed by the crop. He has lost that amount of soil fertility. It has been taken from him by the crop, then why should not the crop be charged with it? Show me why it is not proper to charge a crop

with this item, whether the plant food is applied or removed from the soil? It is true that the writers of (nearly) 600 farmers' bulletins do not figure this way. The Agricultural Colleges, so far as I know, have never hinted to the farmer that he should make this charge against a crop. The college graduates (who are supposed to be practical farmers), sent out to conduct farmers' institutes and tell farmers how to do things, never touch upon this point. And yet I insist that the "abandoned farms" all over the country stand as monuments to the fact that this item of plant food is a legitimate item of cost and should be charged against all crops.

Items 14 and 15 are self-explanatory and no serious objection will be made to them.

In addition to the foregoing cost items, each crop should be charged with its just proportion of the household expenses; the wife's labor and the labor of the other members of the family.

The average yield of potatoes in Michigan is about 100 bushels per acre, which at 50 cents per bushel, brings \$50 per acre, which, deducted from \$67, shows a "net loss" of \$17 per acre.

Now, I am not "from Missouri," but I want someone to show me what is wrong with my figures. If my figures are adjudged all right, then the farmers are donating 10 to 50 cents per bushel on every bushel of potatoes they sell. I don't know as this is any more surprising than Dr. Robison's statement in a recent issue, that it costs five cents to produce a quart of milk, that is being sold by hundreds of dairymen for one-half the cost. The milk business is more highly specialized than any other line of agriculture, and if, as Dr. Robison says, "No one knows what it costs to produce a quart of milk," why may not the same statement be true as to the production of a bushel of potatoes? And if milk is sold at a loss, why not potatoes? A Grand Rapids paper of April 6 contains a statement of potato growing in Antrim county where the cost per acre was \$80.88, which would indicate that my conclusion (\$67) is within the bounds of reason, at least.

Montcalm Co. C. W. CRUM.

### IMPROVING A WORN SOIL.

I wish to say for the benefit of farmers who have land that is run and who are bothered for early pasture I have a piece containing eight acres which was sown to rye when I came into possession of my farm I used it for pasture last season; turned in April 1 and pastured until it became tough, then I turned the cows on grass which by that time had a good start, letting what rye remained mature. Then I took a 60-tooth harrow to knock down the straw, disked the same both ways and had a thick stand of rye which made pasture late last fall. I shall pasture the same this spring and the season of 1915 will plant to corn, fill silo with the corn, sow to wheat in corn stubble, top-dress with manure and sow clover in spring. I consider this a good way to improve fertility of the soil and at the same time the land will bring me an income.

Montcalm Co. E. A. STOREY.

### GOOD SEED CORN.

Farmers who are in want of good high test Northern Grown Seed Corn should write us for samples and prices. We absolutely refuse to handle or send out any Seed Corn but Northern Grown suitable to all kinds of soil in the Lower Peninsula of Michigan. Our tests show 92 to 98 per cent. Ask for corn circular giving varieties and days of maturity. Address Alfred J. Brown Seed Company, Grand Rapids, Mich.—Adv.

## WORK OF THE FARM MANAGEMENT DEPT. OF M. A. C.

(Continued from last week).

In the beginning of this article it was mentioned that one division of the work of this department is to learn of the successful farmer the causes of his success. It is a well known fact that many farmers have a strong body and are able to work early and late, six and sometimes seven, days in the week, 52 weeks in the year. A farmer of this class, by continuous hard work and extreme frugality often acquires a comfortable competence for old age, but quite often he kills himself by overwork and is unable to enjoy the rewards of his labor. This man's neighbor may not possess either the physical ability or the disposition to make a slave of himself in this way. He may so conduct his farm that everything seems to turn into money and he is able to live better, to provide more of the comforts of life for his family and still have a competence for old age. He may take time to enjoy some of the things that go to make life worth living. A third man in the same neighborhood may have the same ideals as the second man, and attempt to do much the same, but things never come out right and he struggles along his whole life and is unable to acquire more than a mere pittance for his old age. We say the first man succeeded because of his hard work and rigid economy; the second man succeeded because he is a good manager, and the third failed because he is a poor manager. The questions now arise, what constitutes good farm management? What constitutes poor farm management? Sometimes, of course, the third class mentioned are incompetent and a hopeless case anyway, but often it is because of some fault in the organization and management of his farm business, not necessarily in the buying and selling end of his business, but in the business of conducting the operations on the farm. Some farmers so arrange the business of their farms in such a way that they actually "stack the cards" against themselves. Sometimes they see their mistake, but often their whole life is so embittered by the uphill fight to pay off the mortgage that they never know they have unwittingly fixed the odds against themselves. Every farmer is entitled to pay for his own work and interest on his investment. Some farmers make much more, but others get nothing for this work, and scarcely get interest on their investment. Some of these would do better to buy or rent more land; others would do better to rent or sell part of their land; others would do better by making smaller payments on the mortgage in order to properly equip the farm with live stock, tools, fences, buildings, tile drainage system; others would do better to sell out, put their money at interest and work for wages. Many farmers under these conditions, write to the College or the Department of Agriculture and ask for advice. It is difficult to give satisfactory answers to these questions. Every experienced farmer has a few ideas along these lines, but he never knows absolutely what is best. Successful farmers have very different ideas. Every farmer, under such conditions, is bound to do something. He will succeed in some degree, or fail. It is the purpose of the Field Studies in Farm Management to collect as many experiences of this kind as possible in order to give advice, based upon the experiences of real farmers in the state.

This work has not received much newspaper publicity, but it has been explained at numerous farmers' institutes at greater length than can be done in this article, and in every case it has met with the approval of the

audience. The following circular has been prepared and is being used to explain the nature of the work in communities where this work is being done:

East Lansing, Mich., March, 1914.

The Michigan Agricultural College and the United States Department of Agriculture receive many inquiries from farmers, asking: "What crops are most profitable? What systems of farming pay the best in a given locality? What returns may be expected from a given investment in farming operations in different parts of the state?" Every farmer wishes to get the best possible returns for his investment in land, labor, and in equipment. No one knows what the average farmer gets for his year's work.

In order that the College and the Department of Agriculture may know actual conditions on farms in Michigan, and be prepared to answer these questions, a systematic study is now being made in typical farm areas of Michigan. The men employed in this work will make a farm-to-farm canvass in your neighborhood, asking questions that will enable them to make a complete record of the business done on your farm for the past year. They will endeavor to secure an itemized list of all receipts and expenses of the farm, total crops produced, amount of stock kept, etc.

As soon as enough records of this kind can be collected each farmer who is kind enough to give correct figures for his farm will receive a statement that will show a comprehensive summary of his individual farm, compared with the average in his section and also with some of the most successful in the region.

Information collected in this way will be considered confidential and will be used only in making summaries and averages necessary for a comprehensive report to be published in bulletin form. No names will be used without the consent of the owner. This work has nothing whatever to do with taxation and actual cash values can be given without fear of the assessor. These figures will be used only for an agricultural study that real working conditions on Michigan farms may be known.

It is believed that this work is of sufficient importance to recommend itself to all farmers so that they will be glad to give figures and any other assistance possible.

(Signed) EBEN MUMFORD,

State Leader for Michigan Agricultural College and U. S. Department of Agriculture.

Approved:

R. S. SHAW,

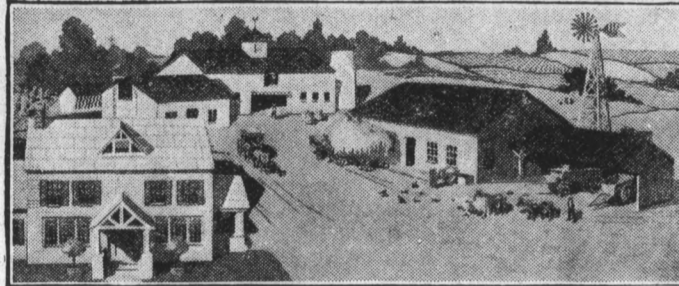
Dean and Director.

It will be readily seen that this line of work requires a very intimate knowledge of the details of operating a farm, and is especially difficult in Michigan because of the varied conditions found in different parts of the state. On account of the difficulties to be overcome in this work, it is desired that the farmers of the state lend their fullest support to this work; first, by giving freely all the information at hand; second, by writing to the Farm Management Department and making use of the information already collected, in the operation of your own farms. The work is still very new in this state and all farmers are invited to feel very free to write to this department any questions they may have relative to the business side of operating or leasing their farms. In case your problems cannot be satisfactorily answered at the present time, your inquiry will be very helpful in informing this department what lines of investigation are most needed by the farmers of the state.

C. P. REED,

Assistant in Farm Management Field Studies, U. S. D. A. and M. A. C.

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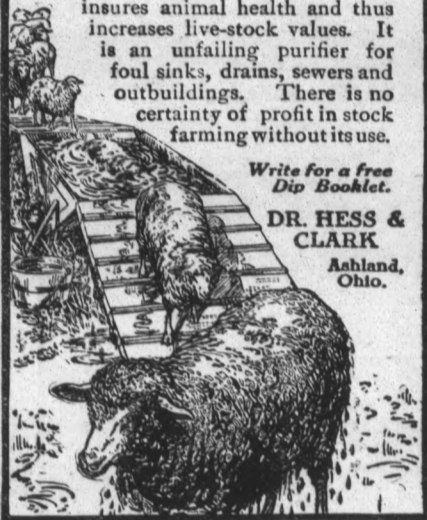
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SOME fine young registered Clydesdale Stallions for sale from 1 to 4 years old. In the spring some will make ton horses with lots of quality and good action. Must be sold before the first of April. F. A. PETZ, Capac, Michigan.

REGISTERED PERCHERONS—FOR SALE. Two two year old Stallions. Also Some mares, all ages at farmers prices. Visitors always welcome. F. L. King & Son, Charlotte, Mich.

PERCHERON—With size, style, bone and action. State and International winners, included. Also a Blue Roan Belgian. No better in the state. Come and see them. John Schipper, Filmore Center, Mich.

# Live Stock.

## GOING INTO HORSE BREEDING.

We are going to try to raise some colts at Lillie Farmstead. This project is a new departure. I haven't raised any colts for a number of years. Away back in the nineties I started in to raise quite a lot of horses and I got into the game just as the bottom went out of the market. While I can't say that I lost very much money I certainly never could make myself believe that I made very much money in attempting to grow horses at that time. From that time on we have figured on keeping horses simply to work, and let the other fellow grow the colts. I figured that where you had to hire men, that you could not afford to give a man a pair of mares that were heavy with foal or a pair of mares that were raising colts to work in the field, because you don't expect to do a big day's work with this sort of a team but you have to pay the hired man, especially in late years, good wages for all the time. Then, too, we put considerable stress upon the dairy cows and upon poultry, and later upon hogs, and finally a year or two ago added sheep.

You know the old saying is, that if you have too many irons in the fire some of them are sure to get burnt, and I think the saying is true. If one has such a combination of business on a farm once in a while he can allow some of the irons to get overheated just a little bit and still make more money or a bigger income than he could if he only had one iron in the fire. There are certainly a good many things to think about on this proposition. Diversified farming is safer than specialized farming. Where one specializes on one or two crops and there comes a bad season, it leaves one "flat on his back," while in general farming if one crop fails, most always the other crops will not. While you do not make as much in a single year, taking everything into consideration, it is safer and surer. My farming is all done by hired men and they must have their checks. If I specialized on one particular thing and we had a failure of that conditions would be serious. Then, where one has more than one kind of live stock he has a greater variety of resources, and it is seldom that all of them are poor.

But this line of argument is not what has made me decide to raise colts again. To be frank, it is the traction engine which has decided me to raise colts. I thought when I purchased the traction engine that I could get along with a considerable less number of horses on the farm, but I have found out from actual experience that such is not the case. I would not like to get rid of the traction engine, but I have got to have just about as many horses as I had before I purchased the engine, or else we cannot do the work. The traction engine will do the heavy tillage and relieve the horses of a great deal of hard work, but when the plowing and tillage is done the traction engine can't help us out. We have still got to have a full gang of horses to cultivate, through haying, and also to take care of the crops through haying and harvesting, and marketing the crops, and all that. Since I purchased the traction engine I have tried to get along with fewer teams of horses on the farm. We couldn't do our cultivating and attend to the haying and harvesting as we should do. Of course, the tractor helps us wonderfully and in one respect enables us to keep more land under the plow. We can do a bigger business

with the traction engine and the horses than we could with the horses alone, yet if we didn't have the traction engine we wouldn't need any more horses.

Now this being the case that, with the traction engine we need also the horses, we find that the horses don't have to work so hard as they did before. We find that we cannot use them quite as profitably, and yet we cannot get along without them. Therefore, instead of having simply work horses, it appears to me that it would be advantageous to have brood mares and besides doing the work on the farm, what the traction engine cannot do, have them produce a colt to help pay expenses. And while heretofore I have kept geldings largely because they were always ready to work, I have changed my policy now and intend to keep brood mares instead of geldings.

I have lately purchased two pairs of brood mares. They are not just exactly my ideal and yet they are a pretty good start. They are all high-grade Percherons. One pair are pure-bred Percherons, yet they cannot be registered because the record is lost. On can tell by the looks, if he knows anything about Percheron horses, that they are high-grade Percherons. Two of them are with foal and my intention is to breed the four of them this year and to continue breeding them and gradually get rid of the geldings, until all of my work horses are brood mares. Under the present system of farming it takes four or five pairs of horses to do the work as it ought to be done, even with the assistance of the traction engine.

If I should finally keep five pairs of brood mares we will get into the horse business quite extensively, still I realize that this is an important branch of the farm operation, one that will represent quite an investment of capital and one that must be looked after carefully and systematically, and, of course, we propose to do it. A farmer can look after a bunch of eight or ten brood mares and the growing colts just as well as he can look after a bunch of 20 or 25 brood sows, or 40 or 50 dairy cows. He can't do it alone; he can't do much alone anyway; he must have a system, and we have a division of labor or try to have a division of labor on Lillie Farmstead, one man looking after the cows, another man looking after the hogs and the hens, and another man looking after the horses, in this way I believe I can manage this diversity of live stock and make it all a profitable investment.

I know from experience that it is a mighty nice thing to have a pair of colts ready to take the place of some horses that have passed their usefulness and must be gotten rid of. It takes a nice little bunch of money now, to go out and buy a pair of work horses. I have found this out in the last few years a number of times, and I believe that any farmer can well afford to raise horses enough to take the place of those that he wears out on the farm; in other words, to supply him with his own work teams. With the present price of horses I can't see but what it would be just as profitable, perhaps more profitable, than some other lines of live stock, to grow horses to sell. Dr. Schuh, of the Grand Rapids Veterinary College, advises me earnestly and I think conscientiously, to breed these mares to a jack and raise mules instead of colts. We know that good mules sell for almost exorbitant prices, but I don't believe that I shall ever be persuaded to raise mules. I

seem to have a sort of prejudice against this hybrid which I do not believe my best friend, by any kind of argument, can overcome.

COLON C. LILLIE.

## TANKAGE AS A FOOD FOR HOGS.

Do you know anything about the feeding value of tankage for hogs, and how to feed it?

Allegan Co.

L. A. T.

Tankage is a valuable concentrate to use with corn in balancing up the ration for hogs, being very high in its content of protein, and probably as cheap a source of this element of nutrition as is available for the hog grower. For greatest economy in its use, it should be used in combination with corn, using not more than 10 per cent of tankage in the ration.

## LIVE STOCK NEWS.

Cattle sell at prices much above former years, a year ago excepted, despite the bad markets in recent weeks and lower values than those paid several weeks ago. This is a time of the year when lessened consumption of beef is usual, and at present the failure of retailers to lower the price of beef in accordance with the decline in prices for cattle on the hoof tends to check its consumption. Furthermore, many men are out of work throughout the country, and this materially lessens the amounts of beef sold. Recent receipts of cattle cannot be called large, yet fewer could have been offered without advancing prices. Argentine importations of beef are used by the packers as a bear argument, and undoubtedly these have some influence in weakening the market for the less attractive cattle. The bulk of the beef steers marketed last week sold at \$7.75@8.85, with a much smaller showing of the best beeves than a few weeks ago, although these have declined in values along with other kinds. Choice to extra steers of heavy weight sold at \$8.85@9.45, while a good class of steers brought \$8.35@8.80. Medium class steers brought \$8@8.30, and inferior to fair steers of light weight \$6.85@7.95. Ordinary to prime yearlings brought \$8@9.40, few selling near the top figures. Butchering cows and heifers had a free outlet at \$5.10@8.85 for fair to fancy lots, while cutters went at \$4.55@5, canners at \$3.40@4.50 and bulls at \$5@7.60. Demand usually runs more strongly on medium-priced butcher stock and good steers that are not too high in price, and butcher stuff is usually the last to show weakness. Fair animation prevailed in stockers and feeders at \$5.75@7.90, with little yearling stockers going at top values and a sale of a carload of prime 1200-lb. feeders at \$7.90. Stock calves sold at \$7.75@8.25 and stock and feeding cows and heifers at \$5.25@7. The calf market was active and much higher at \$5.25@10.50, and milch cows brought \$5@85 each.

Sheep and lambs sold at high prices last week, with a good local and shipping demand, and because of their scarcity, sheep developed especial firmness. The shipping demand was usually active, and there was real competition between buyers to secure the best offerings, causing sales to be made at the best prices seen in a long period. Reactions were natural after such a boom in prices, and some sharp reductions in prices followed the high Monday values, a slump in the Buffalo market having a marked effect here, and tending to lessen the shipping demand. Colorado lambs and fed western lambs and sheep comprised the bulk of the offerings, with large increases in clipped stock and less discount in prices from woolled stock than a short time ago. The sheep and lamb receipts last week were smaller in volume than a week earlier, and woolled lambs advanced to \$6.50@8.50 for culls to prime, while feeding lambs brought \$6.40@7.25. Woolled yearlings sold at \$6.75@7.50, wethers at \$6.25@7.10, ewes at \$4.50@6 and bucks at \$5@6. Clipped lambs sold at \$5.25@7.25.

Mammoth stags are selling at prices that bring handsome profits to their owners. Recently a stag that tipped the scales at 1,000 lbs. was sold on the Chicago market for \$8.25 per 100 lbs. to a local packing concern, and after being docked the usual 80 lbs. because of being a stag, the proceeds from the sale amounted to close to \$76. Another stag that weighed 980 lbs. brought the owner \$72.

# Practical Science.

## LABORATORY REPORT.

### Apply Lime and Acid Phosphate Separately.

I have a piece of land on which I want to use some lime this spring. I am also going to apply some home-mixed fertilizer on it at a separate time, composed of nitrate of soda, acid phosphate and muriate of potash. Will the lime have any bad effect on the availability of the acid phosphate? Will it cause any escape of ammonia from the nitrate of soda? Clinton Co. O. R.

Regarding the query submitted above, we will say that it is advisable to apply lime and acid phosphate separately. It is better that the reversion of the phosphoric acid from the soluble state to the but slightly soluble condition, should take place in the soil rather than by mixing it with some foreign material outside of the soil. The reason for this is that by putting the acid phosphate by itself in the soil, it becomes distributed through a greater soil area and at the same time more evenly distributed, and when it actually does revert, as it will, it becomes precipitated in an exceedingly fine condition, thereby exposing a great quantity of surface of the acid phosphate to the activity of the various agents in the soil. Therefore if lime is to be used, let the application be either previous to, or subsequent to, the application of acid phosphate, it will not matter which. But in applying acid phosphate it would be well to have it thoroughly impregnated in the soil, rather than by a top-dressing.

### No Nitrogen in Wood Ashes.

In reading what D. W. Glask, of Barry county, asked about wood ashes, I noticed in your reply that you stated there was one per cent phosphoric acid, five per cent potash and 32 per cent lime. Is not there some available nitrogen in the ashes? As I understand it, there is nitrogen in every decayed thing. Now what has become of the nitrogen? Branch Co. J. W. H.

Replying to J. W. H., Branch county, with reference to nitrogen in wood ashes, would say that there is no nitrogen present in wood ashes. Nitrogen, it will be understood, is one of the substances present in organic matter, and except there be some nitrates present, as in salt petre, all of the nitrogen would be present in organic matter; therefore, as there is no organic matter in ashes there would, of a consequence, be no nitrogen.

### Using the Babcock Test.

Please describe the exact method of testing milk or cream for butter-fat. Berrien Co. SUBSCRIBER.

The method of testing milk for determination of milk fat commonly used is the Babcock test, and it should be conducted in the main as follows:

Into the small Babcock milk test bottles introduce a quantity of milk weighing 18 grams. A pipette which will hold exactly 17.6 cc. is usually used for this purpose and is satisfactory. Strong sulphuric acid, Sp. Gr. 1.83, is now used, the same amount being put in as of the milk. The bottle and contents are then carefully shaken with a slight rotating motion, with the hand, until the acid and the milk are thoroughly mixed and the mixture has become a rich brown from the chemical action which has taken place. The bottles are now put in the Babcock testing machine and rotated for about four minutes. They are then removed and hot water added until the bottle is full up to the neck. They are then shaken again and rotated in the testing machine for a minute or two longer. Hot wa-

ter is again added and the fat content brought well up into the neck of the bottle. They are then rotated in the tester for one to two minutes and the length of the fat column can then be readily ascertained by reading on the graduations on the neck of the bottle.

### Manurial Value of Rock Phosphate.

What is the manurial value of rock phosphate? When and in what quantity should it be applied? What is the difference between rock phosphate and acid phosphate? Ottawa Co. J. L.

The manurial value of rock phosphate when properly applied, is quite high. Of course, the rock itself contains upwards of 30 per cent natural phosphoric acid, and if the same is in a very fine state of division, this product generally becomes available slowly when applied in the soil. We have usually advocated mixing it with the natural manures so that the reduction of the organic matter in the soil would give CO<sub>2</sub>, or carbon dioxide, ready to render the phosphoric acid in the raw rock soluble.

It should be remembered that raw rock phosphate is not nearly so readily available as is the phosphoric acid in acid phosphate. Acid phosphate, of course, has undergone a treatment by sulphuric acid whereby the phosphoric acid has been rendered more soluble and consequently more quickly and readily available to plants.

The following comparison between the feeding value of alfalfa and oats is made by a North Dakota Agricultural College authority: One ton of alfalfa hay has the same feeding value as 60 bushels of oats. Alfalfa can be expected to average at least two tons per acre. This is the equivalent of 120 bushels of oats. There is no land that will average 120 bushels of oats—in fact, it takes good land and good handling to average 60 bushels of oats per acre. The alfalfa requires less work and less expense to handle than a grain crop. And the alfalfa will improve the soil while the oat crop will reduce its productive power. To get this value from alfalfa it must be fed on the farm. It needs to be kept in mind that the alfalfa is a roughage.

## CATALOG NOTICE.

The Elkhart Carriage & Harness Mfg. Co., Elkhart, Ind., send circular matter describing a new combination top buggy for good and bad weather which may be completely enclosed or used as an ordinary top carriage with quickly accomplished changes. Write for this circular describing this new specialty, mentioning the Michigan Farmer.

"Everything for the Lawn and Golf Course," is the caption on the cover of a new 1914 catalog issued by Peter Henderson & Son, 35-37 Cortlandt street, New York. This is a 36-page booklet listing lawn seeds, fertilizers, implements, sprinklers, and ornamental furnishings of all kinds. Mention the Michigan Farmer when writing for this catalog.

The Vermont Farm Machine Co., Bellows Falls, Vt., manufacturers of the United States Cream Separator, send literature upon request, describing a new sanitary feature of the U. S. Cream Separator, which consists of a non-rusting sanitary liner for the bowl chamber of the machine. Write for this literature, mentioning the Michigan Farmer.

The Eureka Mower Co., Utica, N. Y., have just issued their Catalog I, which is a well illustrated booklet of 40 pages, describing the Eureka line of goods, including potato planters and cutters, corn planters, weeders and harrows, mowers, cultivators, etc. This is a well printed catalog with clear illustrations, and is indexed for handy reference. Mention the Michigan Farmer when writing for a copy.

# Unseen Forces Behind Your Telephone

THE telephone instrument is a common sight, but it affords no idea of the magnitude of the mechanical equipment by which it is made effective.

To give you some conception of the great number of persons and the enormous quantity of materials required to maintain an always-efficient service, various comparisons are here presented.

The cost of these materials unassembled is only 45% of the cost of constructing the telephone plant.



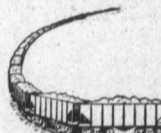
## Poles

enough to build a stockade around California—12,480,000 of them, worth in the lumber yard about \$40,000,000.



## Wire

to coil around the earth 621 times—15,460,000 miles of it, worth about \$100,000,000, including 260,000 tons of copper, worth \$88,000,000.



## Lead and Tin

to load 6,600 coal cars—being 659,960,000 pounds, worth more than \$37,000,000.



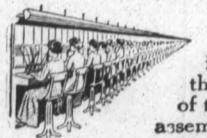
## Conduits

to go five times through the earth from pole to pole—225,778,000 feet, worth in the warehouse \$9,000,000.



## Telephones

enough to string around Lake Erie—8,000,000 of them, 5,000,000 Bell-owned, which, with equipment, cost at the factory \$45,000,000.



## Switchboards

in a line would extend thirty-six miles—55,000 of them, which cost, unassembled, \$90,000,000.



## Buildings

sufficient to house a city of 150,000—more than a thousand buildings, which, unfurnished, and without land, cost \$44,000,000.



## People

equal in numbers to the entire population of Wyoming—150,000 Bell System employees, not including those of connecting companies.

The poles are set all over this country, and strung with wires and cables; the conduits are buried under the great cities; the telephones are installed in separate homes and offices; the switchboards housed, connected and supplemented with other machinery, and the whole Bell System kept in running order so that each subscriber may talk at any time, anywhere.

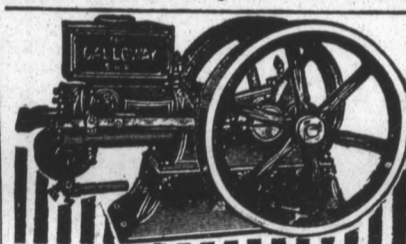


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## Dairy.

CONDUCTED BY COLON C. LILLIE.

### The Dairy Type.

I HAVE been looking over a book on "Cow Demonstration," by a man who some of the time writes "Professor" before his name. He does not name the particular science which he professes to teach, but we are left to infer that it is "cowology," or the art of judging of the capabilities of a cow by external indications as shown by the development of the different parts of the animal. In some cases the statements are empirical, depending on the popular say-so, instead of being founded on facts proved by scientific investigators.

#### Indications of a Good Feeder.

One of the statements noticed is that a "large mouth indicates a good feeder." That seems like a queer statement, for the reason that a large mouth may be found with cows that vary greatly in general make-up, and consequently in general character. We might as well say that a large ear indicates a great hearer, when we know that the size of that organ is not a measure of the hearing capabilities of the individual animal carrying it. A large mouth is often found on an animal that is lax, or loosely built, and is not a good feeder in a true sense of the term; for to be a good feeder an animal must not only have an appetite for food, but must have good capabilities of digestion and assimilation, which means that the vital machinery of the whole system must be well developed and working harmoniously, one part with another. If the professor had said that a good broad, strong underjaw, which goes with large vital organs that constitute the working machinery of the animal, indicates a good feeder we could say, "You are right."

As far as the appetite is concerned which is the first thing to be considered with a feeding animal, it depends on the development of the gustatory or appetite center in the brain of the animal. The appetite center is in the temporal lobe of the brain. If the animal is well developed in the temporal region, the head is wide between the eyes and at the point between the ears, and there is a corresponding width in the rear part of the jaw, a large cerebellum, a large heart, stomach and lungs, it will be a good feeder. In other words, the life forces and the machinery of the system are correspondingly developed. A cow with a great appetite, which has but a small stomach, lungs and heart, would be frequently over-eating and be in trouble with her digestive apparatus so much that she would be practically worthless.

#### Good Vitality Necessary.

I feel fully justified in advising those who wish to be judges of good feeders when selecting cows, to look farther than merely a large mouth; the whole animal's system is concerned in the matter. There are the sensory nerves that see and smell the food, the longing for something to satisfy the hunger that may come from an empty stomach, or the demand of the system made known through the appetite for something to supply its needs, have to do with making a good feeder. Then there must be a large stomach capable of digesting the food, a large pair of lungs to take in the air and oxygenize the blood, a large heart and arterial system to distribute the nutritive elements taken from the foods, and an active capillary system to assimilate and make use of the elements of nutrition carried by the feed. The whole animal system, mechanical and chem-

ical, must be well balanced and working harmoniously to make a good feeder.

#### The Nervous Temperament.

The author mentioned falls into a common error of placing too much emphasis on the importance of the nervous system in making up a dairy cow. He says: "The term nervous temperament used in referring to the disposition of the cow means the inherent propensity to work, to eat food, digest it and convert every available ounce of it not required for maintenance into milk products."

It is a matter of surprise that one who professes to know, and volunteers to teach, should get so terribly mixed on the functions of the different organs of the animal's body. There are systems of organs, which, if working together, make up what we call the nutritive system, that handles the food through the eight different processes, from prehension, mastication, salivation, deglutition, etc., to the act of expulsion, and the professor ought to have known long before he wrote his book, that digestion itself consists in the chemical action of the different secretions along the alimentary canal, on the food, and taking from it by chemical processes the nutritive elements which can be made soluble so as to be taken up by the lacteals and distributed through the circulatory system to different parts of the body. The nerves do not carry on the work of digestion; they carry the life forces from the medulla oblongata, we usually say the brain, to the different organs of the body and each and every organ performs its own function.

#### The Various Temperaments.

The term temperament is often misused. The word temperament, when properly used, describes or names a state or condition which exists with the animal under consideration. There are seven different systems involved which are considered in describing the character of the animal; the bony, muscular, nervous, respiratory, alimentary, circulatory and lymphatic systems. The term temperament, with its accompanying adjectives, tells which of these systems, or group of systems, have a dominating influence on the animal. If the bony and muscular systems are in the lead we say that such an animal is of the motive temperament. If the vital organs, the stomach, lungs and heart, are large, we say the animal is of the vital temperament. If the nerves are in the lead, we say the animal is of the nervous temperament. If the lymphatic glands are in the lead, then we say the animal is of the lymphatic temperament.

Let us see how erroneous it is to emphasize the merits of the nervous temperament. If the nervous is the dominating system then all the other systems of the body would be subordinate or subject to it. We would have a small frame, small muscles, small stomach, small heart and lungs, a thin skin covered with a fine coat of hair, a dainty feeder, and a poor assimilator, an animal sensitive to changes and watchful as to what is going on around or near, restless, uneasy, will hold up her milk on a slight provocation, and at best, yields a small mess of milk. In fact, we would have directly the opposite of what is desirable in a dairy cow.

#### A Well Balanced Temperament Best.

It is the cows with well-balanced temperament that meet the needs of the dairyman. They are tractable and agreeable to handle, have constitutional vigor sufficient to enable them to do a large amount of work and hold up under it for a long period of time. There is but little, if any, friction with them and they are ready for service for a long term of years. Such cows are a credit to the looks of the herd and a source of profit to the owners.

Wayne Co.

N. A. CLAPP.



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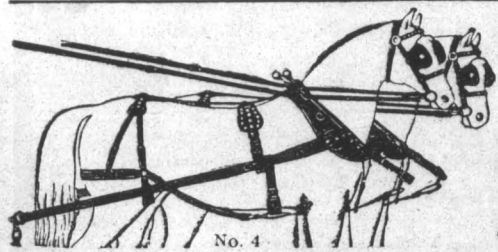
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COW FAILS TO BREED—WHAT  
CAN BE DONE?

I have a young cow that had her second calf last September but since then I have not been able to breed her again. There does not seem to be anything the matter with her, except that she is thin, although her appetite is good. Now, is there anything I could do or give her, so that she will get with calf again? I do not like to sell her, as she is a good cow.

Monroe Co. C. F. S.

Cows fail to breed from a great number of causes. Sometimes it may be due to external injuries, the closing of the mouth of the womb, or because they cows are infected with the germ of contagious abortion. There are many other causes, and one can tell nothing about it without knowing the history of the case and perhaps without making a personal examination. I would talk with the local veterinarian about this, giving him the history of the case, and then if he thinks he can help her, let him try. If he makes a personal examination and finds the neck of the womb closed perhaps he can open it so that the cow will become pregnant again. At any rate, he is the best person I know of for a case like this, because an examination must be made.

I can say nothing for nor against the breeding powders that are advertised on the market today. I never used them and I do not know their value, yet I have heard some who ought to be able to judge such things, criticize their value.

I am frank to say that I have had some experience in cases like this and I am also frank to say that I never got out of it very nicely. If a cow, from one cause or another, fails to breed, I have come to the opinion that about the only thing to do is to milk her as long as you can milk her, and then get rid of her for beef, although I know of many cases where this difficulty has been overcome. My judgment is that it is a case for the local veterinarian. If he can't help you I do not know who can.

HOW TO HAVE YOUR TESTING  
DONE.

The dairy farmer is in a position to keep a better account of his cows and with his creameryman, if he has positive knowledge of the quantity of butter-fat in the milk each cow gives and in the milk or cream that he sells. Now it is to provide the readers of this paper with this positive knowledge that the testing of milk and cream was inaugurated by this journal last fall. And the service is winning many additional friends every day.

That our new readers may understand how to avail themselves of this milk and cream testing service, we repeat the directions: Pour milk or cream from one vessel to another three or four times to thoroughly mix the cream and the skim-milk. Immediately take a sample sufficient to fill a wide-mouthed four-ounce bottle. Cork and place the bottle in a mailing case and send by parcel post to the Michigan Farmer Laboratories, 674 Woodward avenue, Detroit, Mich., where the milk or cream will be tested and a report made to the sender.

A suitable bottle and mailing case can be had, postpaid, by requesting same of the Michigan Farmer offices, Detroit, enclosing ten cents in stamps for each set.

I frequently see inquiries in the farm papers for information as to how to remove lumps from cows' teats. To all such inquiries I desire to say that I have removed such lumps by application of Gombault's Caustic Balsam around the teat over the lump, not oftener than once each week until lump disappears. Be careful and do not use too much of the Balsam as it has a powerful action, to others as it has proved to be to I hope this may be found as valuable me.—R. W., Chippewa County.

## Here is Super-Strength

## Reo the Fifth

is designed by a man who believes in super-strength. He has learned this need through 27 years of car building.

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For years we have kept test chassis on the road. Relays of drivers have run them at high speed night and day. After 10,000 miles of this reckless driving we take the car apart and inspect it.

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fourth less by just skimping the hidden parts. Under normal conditions it might for a time serve you as well as this. But it could not stay new. And it might cost you hundreds of extra dollars in troubles, repairs and upkeep.

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We are building for the future—for what men will say five years after buying the car.

It also pays owners to buy such a car, when they buy a car to keep.

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Go see this car. See the handsome streamline body, the perfect

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Then go below all that. Get the details of this costly chassis. Find out why each car is six weeks in the building.

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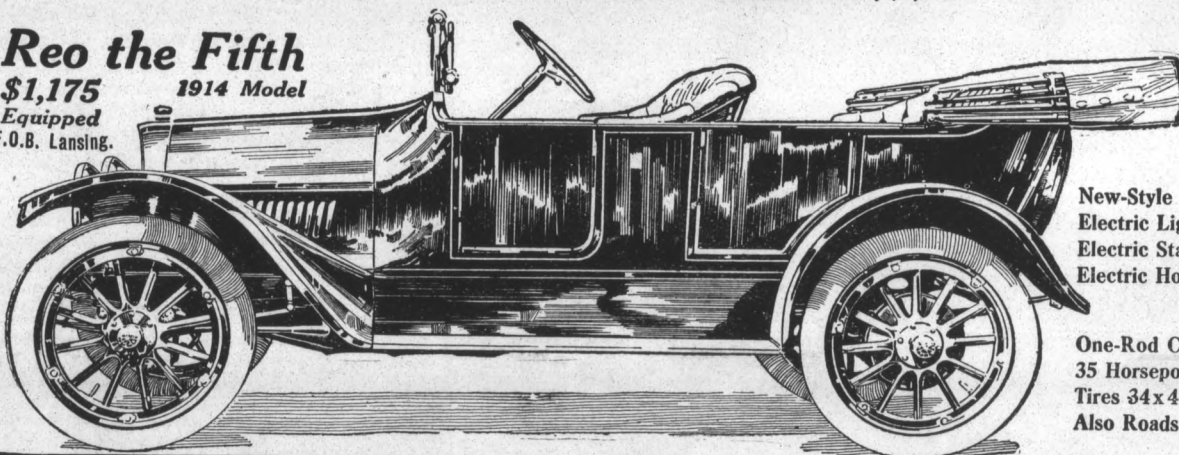
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40 cents per line age type measurement, or \$5.00 per inch (14 space lines per inch) each insertion. No ad't inserted for less than \$1.20 per insertion. No objectionable advertisements inserted at any price. Entered as second class matter at the Detroit, Michigan, postoffice.

DETROIT, APRIL 25, 1914.

## LEGAL QUESTIONS ANSWERED.

For the accommodation of our subscribers, we have arranged with Mr. Allan Campbell, a competent attorney, to answer legal inquiries for our subscribers. For this service a fee of 25 cents for each question will be charged to insure that only questions of importance will be asked. This will bring a personal letter of advice from the attorney, to whom the questions are referred. Address Legal Department, Michigan Farmer, Detroit, Mich.

## CURRENT COMMENT.

**The Cost of a Crop.** In another column of this issue, under the heading, "The True Cost of a Crop," a prominent Michigan farmer discusses this problem in its relation to one of Michigan's most important cash crops. His cost table is apparently made up of estimates which are the result of years of experience in the growing of this crop. In the analysis of items which follows the cost table, he gives his reasons for the several charges entered in same. The conclusion which he reaches is that the cost of the average potato crop is very much more than the average potato grower considers it, if not greater than the income derived from the crop under normal conditions. Without, as we understand it, assuming that the figures given are actual cost figures based upon the production of the crop of any given year, this writer challenges successful contradiction of any or all of the carefully estimated items of cost which are included in his statement.

As previously noted in commenting upon this phase of agricultural practice, carefully kept cost accounts are a rare exception instead of the general rule upon Michigan farms. It is possible, however, that among the large family of Michigan Farmer readers there may be many farmers who have kept such records, and who can give actual cost figures relating to their potato crop of last season. If so, we trust that some of them may volunteer to prepare a summary of such records for publication in the Michigan Farmer, to the end that the most accurate information upon this point of the cost of growing potatoes under average Michigan conditions may be made available to the potato growers of the state.

We trust, also, that right now, at the beginning of the season's campaign, a large number of Michigan potato growers may become interested in this problem, and keep during

the coming season a complete account of the items of cost which enter into the production of their 1914 crop. We urge this with reference to the potato crop particularly, not alone for the reason that it is one of the most important cash crops grown on the farms of the state, but as well because it is a crop the cost of growing which is of particular interest to the farmers of the state at this time. As is well known, under the tariff law now in force, potatoes are on the free list. Fortunately for domestic growers, however, foreign potatoes do not find free entrance into our ports at the present time, owing to the quarantine which it has been necessary to impose on this product in order to prevent the introduction of serious potato diseases which are prevalent in many foreign countries. How long this condition may last, however, is a matter of uncertainty, and when the time shall come, as it seems probable that it may come, that our farmers must produce potatoes in competition with a product more cheaply grown under foreign labor conditions, it is very essential that they should know how cheaply they can produce them at a profit.

It is also important, of course, that they know how much it costs to produce other crops, and a cost record of other crops would be most valuable to any farmer. We believe, however, that once interested in this proposition as applied to a single crop, the keeping of such records will be rapidly extended all along the line, which is but another reason for specifically urging the keeping of accurate cost records as related to the production of potatoes on Michigan farms during the present year.

**Farmers' Schools.** The records of attendance at the one-week "farmers' schools" held in Michigan during the past season, show that this form of agricultural extension work is becoming popular in the state. These records show that over 2,500 farmers and their wives attended the 31 one-week "farmers' schools" held during the present fiscal year. The method of conducting these schools, which are classified as extension work under the Department of Agricultural Education at M. A. C., is to send two instructors from the Agricultural College who are qualified to lecture on the two special phases of agriculture which may be selected by the "students." Morning and afternoon sessions are held for five days, during which time the two subjects chosen may be thoroughly discussed from a practical as well as a scientific standpoint. In some cases lectures of interest to the women were also given. These schools were first held in Michigan last year, when less than half the number above noted were held. It is expected that this form of agricultural extension work will become increasingly popular in Michigan as it has in Ohio and other states where the idea has been developed.

**Where Opportunity Knocks.** Not long ago a prosperous Illinois farmer, after expressing

the opinion that the farm lands of his state would continue to rise in price, was asked his reason for that view, and in reply said, "Why, you know they're not making any more good land now." This opinion was based upon his knowledge of conditions in Illinois and other states of the so-called corn belt, but as a matter of fact, many farmers of his own and adjacent states have learned that there is much good land lying idle in Michigan which requires only the improving hand of man to make it into very good farm land indeed. Some recently collected statistics show that Michigan has a total of nearly 18,000,000 acres of unimproved land. In fact, less than 50 per cent of the total land

area of the state is now included in farms. Some of this vast area is still covered with standing timber, while much of it is good cut-over hardwood land, some a very good quality of pine land, and a very considerable area is swamp land capable of reclamation at a cost well within its value.

When the possibilities of this vast unimproved area are considered, the Illinois farmer's statement will hardly apply to Michigan, nor can it be truthfully said that under these conditions there is any lack of opportunity for Michigan young men to secure farms of their own. Oftentimes, however, opportunity knocks right at our door without being recognized, which is perhaps the reason that many young men from other states are seeing and improving the opportunities for profitable investment in unimproved Michigan lands, while many Michigan young men who might profit by the same opportunities are allowing them to pass unimproved, if not unappreciated.

## Records at the City Boys Study Agriculture.

Michigan Agricultural College show that of the 569 students who have entered the agricultural course during the past three years, 293 were reared in the city and 276 on the farm. In addition to the fact that over one-half of the students entering the agricultural course were city bred, the records also disclose the fact that 62 per cent of these students gave their present home as in the city. That these city young men study agriculture for the purpose of following it as a profession, is indicated by the fact that for the past four years, 40 per cent of the graduates from this division have gone directly to the farm, while 45 per cent have engaged in agricultural teaching or experimental work, and six per cent have entered other callings closely relating to agriculture. The fact that so many city young men are attracted to agriculture as a calling should cause the young man who is anxious to get away from the farm and enter some city occupation, to think very carefully before he makes such a move. In ignorance of how "the other half" live is the cause of the making of a great many mistakes in the selection of a profession or occupation.

## THE BEST MERCHANT IS THE ADVERTISER.

You have probably observed, in your local market, that the best and liveliest merchants, as a rule, are the ones who advertise. They are the enterprising men of the community, good merchants and good fellows, handling well known and reliable merchandise.

So it is in a national way. The live manufacturers, who make exceedingly good products, who are proud of them and want everyone to know it, are quite often the ones who put a trademark or a name on their merchandise and advertise it in the newspapers.

As a rule, it is safer to buy advertised goods.

## SOIL BUILDING SEEDS.

If you cannot secure our soil building seeds, such as Alfalfa, Cowpeas, Soy Beans, Sweet Clover, Winter Vetch, etc., of your local dealer, ask us for prices. We handle nothing but high-grade seeds which have been thoroughly analyzed and tested as to purity and germination. Address Alfred J. Brown Seed Company, Grand Rapids, Mich.—Adv.

## Sold \$525 Worth of Hogs.

From the three-line ad I run in your paper 13 weeks, I sold \$525 worth of mule-foot hogs that went to nearly all parts of the state of Michigan.—S. F. Bacon, Milan, Mich.

## HAPPENINGS OF THE WEEK.

## National.

Incidents point to a probable war between United States and Mexico. A fortnight ago United States marines in a launch carrying the stars and stripes were captured at Tampico by Mexican troops. President Huerta was called upon to salute the United States flag to amend for this insult. At first he, according to reports, agreed to do this unconditionally, but later such conditions were attached as to make the apology of no account, when the government at Washington gave the dictator until six o'clock Sunday night to meet the demands of this government. This he refused to do, which act will probably precipitate war. Last week war vessels were ordered to the Mexican ports to be in readiness to occupy them should war be declared. Plans have been made by the War Department for raising a volunteer army of 250,000 men. Michigan's quota will number 8,738 men. The proposal has also been made of doubling the income tax as a means of raising a \$500,000,000 war fund.

The quadrennial general conference of the Methodist Episcopal church will be held at Saratoga, N. Y., in 1916, according to a recent announcement.

A statute of Michigan's war senator, Zachariah Chandler, was dedicated in Statuary Hall at Washington, D. C., Sunday. Many states joined to do honor to this distinguished statesman.

Five persons were killed and a score injured when a street car jumped a switch at Saginaw, Sunday night. The car was thrown on its side and crushed against an iron pole.

The United States Senate is continuing its hearings on the repeal of tolls for coastwise boats through the Panama Canal. Commercial opposition to the repeal will occupy a greater portion of the remainder of the hearing, which will close April 24.

Anti-Trust legislation will be given the attention of both the Senate and the House of Representatives this week. A federal employers' compensation bill will also be debated. This latter bill provides for the payment of two-thirds of the monthly wage of an employee disabled in the government service and in case of death, for the payment of 35 per cent to the widow or widower of the employee, with an additional payment of 10 per cent to each dependent child. Two bills dealing with the conservation of water power sites will be taken up by the House committees during the week.

Nine persons were killed and four injured when fire swept a five-story tenement in New York City last Thursday night.

From April 1 to April 16, 515 accidents were reported to the Industrial Accident Board at Lansing; ten of these were fatal.

The Wayne County Board of Supervisors over-ruled a veto by the Governor of a recent measure increasing the salary for attaches of the Wayne County Prosecutor's office.

A municipal survey of the city of Grand Rapids is to be made, with a view of equalizing taxation among different property owners. Charges have been made that there has been discrimination in the matter of taxing corporations and individuals.

Five employees of the government connected with the Internal Revenue Department for the district of Michigan, have been discharged.

During the past four years investigations by the United States Senate have cost \$163,514. The largest sum expended on one inquiry was \$58,166 for the second Lorimer investigation. Among the other items were inquiry into the situation in Mexico, \$8,000; investigation of the high cost of living, \$8,709; first Lorimer investigation, \$10,141; trusts, \$2,992; Senator Stephenson's primary, \$12,988; campaign contributions, \$8,068; lobbying, \$10,157; the Titanic disaster, \$8,314; banking and currency, \$4,337; West Virginia coal strike, \$7,97; the "third degree," \$9,006.

## Foreign.

Officials are active at Kieve, Russia, in an endeavor to frustrate what is supposed to be a revolutionary propaganda. One day last week 100 arrests were made, which included professional men, students, shopkeepers and artisans.

The International Council of Women holds a session in Rome next month. The organization has a membership of about 6,500,000 in 21 countries, and was founded by Susan B. Anthony and other American women in 1888.

The "Vaterland," the largest steamship afloat, being 950 feet long and 100 feet wide, and having a tonnage of 58,000, will cross the Atlantic from Hamburg to New York City in June.

# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

**MICHIGAN FARMER**  
AND LIVE STOCK JOURNAL  
PUBLISHED WEEKLY  
ESTABLISHED 1843.

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

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

## What a Farmer Saw in Northeastern France.

By PROF. ALFRED VIVIAN.

**P**ROBABLY no country in the world has a more varied agriculture than France. Within its borders are found soil and climate suited to semi-tropical plants as well as to those which thrive best in the temperate zone. Our observations on the present tour are confined to the northeastern corner of the country; to the section in the vicinity of Chartres, the great grain growing center of France; and to the Percheron country in the neighborhood of Nogent-le-Rotrou.

The visit to Chartres was one of the most profitable and interesting up to date, for this remarkable country is famous the world over for its grain production. The country is level, although not so absolutely flat as Saxony. Standing on top of a slight rise of ground a view is commanded for miles in all directions and before the observer lies an agricultural panorama which "it is good to behold," for all signs indicate that the land has been maintained in a high state of fertility.

The soil lies over a chalky limestone which is mixed with flint, and in many cases the fields are full of the flinty pieces left from the disintegration of the original limestone. The farmers believe so thoroughly in the value of chalk that in some cases large quantities of this soft limestone are dug

feed during the winter on the roots and hay raised on the farm so as to produce manure to increase the money crops. Many of them seem to figure that if they only come out even on feeding the stock it has been worth while on account of the great value of the manure produced. We asked some of them whether they thought it would pay to dispense with the live stock altogether, and plow under the straw and clover crop in order to maintain the organic matter in the soil. The answer in every case was emphatically in the negative.

The more intelligent of these farmers appreciate the great value of organic matter in keeping up the fertility of the soil, but they say that it can be supplied in sufficient quantity in the stable manure. "We can not afford," one farmer said, "to lose the use of the ground for a whole year when we can feed the crops to live stock, and after realizing the value of the crops in gain of weight of the stock, have the manure left to return

moistening the pile is especially necessary.

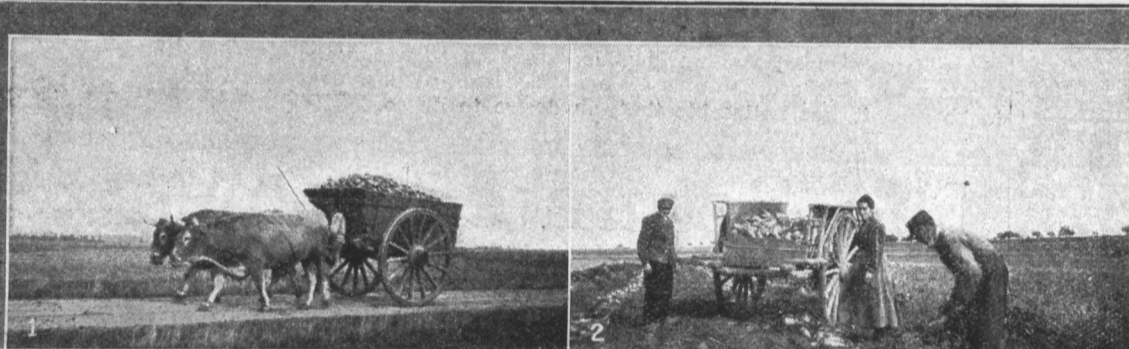
The tops of the beets and some of the grass is fed to sheep on the ground under the watchful eye of the shepherd. At night the sheep are enclosed in small hurdles which are moved daily so that the field will be more evenly manured; nor is this the only precaution observed, for the sheep are moved from one hurdle to another during the night, as there are not nights enough to cover the whole field unless this practice is followed. The shepherd has a small hut on wheels in which he sleeps so that he may always be near the sheep, and even in this thickly populated land he leads a life of comparative isolation with very little company other than the dogs and his flock.

The farmers appreciate the root crop not merely for its value in feeding cattle or sheep, but because they realize what it means to have a crop in the rotation that can be so thoroughly cultivated as this one. In their rotation the mangel gives the

used are sulfate of ammonia, acid phosphate and muriate of potash. A few men were found who also bought nitrate of soda, and applied about half of the nitrogen in the sulfate of ammonia in the fall, and the remainder as nitrate of soda in the spring. The unanimity of opinion over this whole district as to the proper quantities of fertilizer to apply was interesting and remarkable. Commercials are used on the grain crops only, most of the stable manure being applied on the root crops so that its "rankness" is overcome before the appearance of the grain crop.

Not much difference is made in the fertilization for wheat and oats. The average application seems to be about as follows: 320 pounds of sulfate of ammonia, and 120 pounds each of acid phosphate and muriate of potash to the acre. It will be seen that this fertilizer resembles that used in England and Scotland, in being much higher in nitrogen than is usually considered advisable in America. Such a fertilizer would analyze approximately 11.5 per cent nitrogen, 3½ per cent phosphoric acid, and 10 per cent potash—a strange proportion of ingredients to American farmers.

The soil and climate seem especially adapted to the production of oats. According to the best data obtainable, a good average crop of oats will



1. Hauling Mangels. 2. Topping and Loading Mangels. 3. Flock of Sheep near Chartres. 4. A French Farm Village. 5. Shepherd's Hut.

from below and scattered over the fields.

This section is distinctly a grain growing country, and apparently cattle are raised only because they are considered absolutely necessary to the maintenance of the fertility of the soil. The crops raised are for the most part wheat, oats, hay and mangels; in a four-year rotation. On most of the farms the roots, hay and straw are all used at home, and only part of the grain and the fattened animals are sold. Sheep are fed extensively, and we here saw more of them than in any place since leaving England.

The farms in this locality vary from small holdings of ten acres or less, to estates of a thousand acres and over. Many of the large farmers raise practically no stock themselves, but buy young cattle or lambs to

to the land." This feeling seems to be strongly implanted in the minds of even those men who find no pleasure in handling animals and who would gladly omit the feeding if they thought it possible to farm profitably without live stock.

The grass crop is not especially emphasized here, so little liquid manure is used. The usual method of preserving the manure is in large open pits which are cemented to make them water-tight. In the center or near one end of the pit is a small depression or cistern into which the liquid drains. A pump is placed over this cistern so that the liquid can be pumped up and sprinkled over the manure to prevent heating and to induce more even fermentation. As most of the manure is from sheep, and large quantities of straw are used in bedding them, this process of

same opportunity for the destruction of weeds as the American farmer has with his corn crop. You will be reminded of the Scotch farmer who said, "I can grow any crop if I give it plant food and keep down the weeds, but I can't keep down the weeds without roots or some hoed crop." The mangels, after being topped are stacked in long piles in the field, and covered first with straw, and then with earth, to protect them for winter freezing.

Large quantities of commercial fertilizers are used on the farms in the vicinity of Chartres. Over twenty farmers were interviewed and not one was found who purchased mixed fertilizers. A few of them mixed the different ingredients before applying them to the field, but in most cases the materials were applied separately. The substances most commonly

thresh 3,600 pounds, or about 112 bushels to the acre, allowing 32 lbs. to the bushel. As a matter of fact, the oats here are much heavier than American oats, and will weigh nearly 40 pounds to the bushel. On the same farms wheat produces in the neighborhood of 45 bushels per acre, calculating at 60 pounds to the bushel.

The smaller French farms present a strange appearance as the ground is divided into long, narrow strips. On one farm visited a number of these strips were paced off and found to run from 18 to 24 feet in width, and were several rods long. On the whole, these farms give the impression of not being quite so cleanly cultivated as were the small farms in Germany.

The owners of the smaller farms all live in farm villages, so the land-



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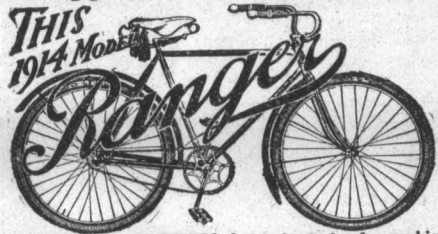
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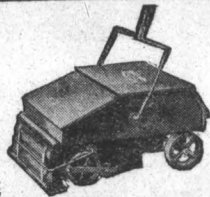
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scape here shows the same absence of isolated farm houses which was noted in the letter from Germany, and these villages are even less attractive than those before described. Most of them are built of a sort of concrete made by mixing the flinty gravel of this locality with mortar. The houses and barns are built around an open court; windows are none too abundant, and a general air of untidiness is much in evidence. The roofs of the houses are thatched in most cases, and even the walls enclosing the yards have their thatch covering for the compound used in building them quickly disintegrates if exposed to the rains. On the larger farms the conditions are better, but even here there is an indifference to odors which is hard to understand.

We visited one farm of 800 acres which is managed by a progressive young man who has installed an electric plant which lights the house and barns and furnishes power to run the threshing and other farm machinery. Yet the kitchen and dining-room were rather too strongly impregnated with the odor of the stable. No one believes more thoroughly in the value of stable manure than the writer, nor can anyone surpass him in imagining this substance converted into nutritious grain, or its odor reorganized into the scent of the rose—but he does not wish to be compelled to work his imagination too strenuously at meal time.

This district lies on the edge of the great Percheron country which has its center at Nogent-le-Rotrou a little to the west, and where many of these beautiful horses may be seen. Most of the horses are raised by small farmers who own from one or two to half a dozen mares. The stallions are owned either by the government or are so supervised that only animals of high merit can be used. This far seeing policy of the government has resulted in the perfection of a breed of horses whose fame has become world wide. While many of these fine animals are to be seen it was noticeable that, on

most of the large farms at least, oxen are still used for the plowing and much of the other work of the farm which does not call for a quicker stepping animal. The favorite oxen come from Brittany and are very heavy and of great strength.

The four-wheeled wagon seems to be almost unknown in France, and nearly all the hauling is done in carts with two high wheels. Tremendous loads will be piled on these carts, and the building of the load is an art in itself, for it must be nicely balanced. One seldom sees two horses hitched side by side, for no matter how many are used they are strung out in a line tandem fashion. We saw in the most crowded streets of Paris carts being pulled by five horses in a row—the most awkward outfit that could be imagined for such a place, to say nothing of the large loss of power incident to this kind of a hitch. On the country roads were seen occasionally as many as seven horses to one cart all fastened in this awkward and absurd fashion.

Another hitch sometimes seen consisted of one horse between the shafts of the cart, two abreast immediately ahead and then from two to four strung out single file in front. Perhaps horses are so plentiful that they can afford to waste their power for in Paris are to be found hundreds of butcher shops where horse meat is the regular article of commerce. These shops are known by the sign consisting of a horses' head carved from wood. Whether those with the beautifully gilded heads furnish a better quality of meat than those with the plainly painted head we were unable to ascertain. At any rate the sign is more effective in letting the customer know the kind of product on sale, than is the usual oleomargarine sign found in American stores. We wonder if the French horse meat dealers raise the cry that the poor dear public should be allowed to purchase horse meat under the delusion that they are getting cow meat if they desire to do so.

of the Guadalupe mountains from the New Mexico line to away south of Fort Davis, a distance of more than a hundred miles. This wild leader had with him over forty mares, many of them the property of the ranchers of the prairie. He had enticed them away, and now the mares were as wary as the black leader himself. The cattle men with their excellent mounts never came within roping distance of any of the bunch except stragglers, for when closely pursued this wonderful black horse that rarely broke his natural gait to gallop, would lead his family into the cedar breaks where nothing less sure footed than a mountain sheep could safely venture. He seemed to have a map of his range in his head, and in spite of all efforts to pen him in the canyons he invariably found a pass unknown to his pursuers, and escaped to the mountains.

Thus this herd, doubtless descendants of the horses liberated by De Soto's band on the bank of the Mississippi, three hundred years before, multiplied and became more wary as man encroached upon their feeding grounds. Hard winters and wolves, drouth and famine, reduced the increase at times to pitiful numbers; and the few weaker ones that were caught by the ranchers and Mexicans further reduced the herd to a score of the fleetest and fittest. And doubtless from this herd sprang Comet.

The colt was a year old when we first discovered pacing to be her natural gait. She would streak across the prairie with the other horses, not deigning to gallop, but easily keeping the lead. The fact that the flaxen mane filly had so early developed the gait of the pacer strengthened the belief that she was one of Don Porfirio's numerous progeny, and likely a colt of one of the thoroughbreds gone wild from the Englishmans ranch on Toyah creek, as Ben Fairbanks had suggested.

When the filly was two years old she ceased to be an object of ridicule for anybody. She had by that time grown to her long head and butter-milk barrel, and when she felt the bit in her mouth developed more perfectly the easy and rapid stride of the pacer. She was no trouble to break, and took to the saddle even better than the colts from the gentle mares at home. She showed good breeding by having confidence in her master, something we never looked for in our range ponies.

Always sure footed and safe, the little pacing filly carried her rider through the canyons and breaks in search of strays. Any path that could be followed by cattle was none too steep for Comet.

The spring she was three years old, Elmer rode the mare to El Paso, a hundred and five mile, between sun-up and sundown. The surveyors were locating the railroad through the Sierra Blanca range, and were then camped at our spring. The chief engineer had offered twenty-five dollars to anybody that would take a message through to the nearest telegraph office so that it would reach its destination before eight o'clock in the evening. The trip was made with half an hour to spare, and after that the fame of the pacing mare with flaxen mane and tail was known from the Pecos to the Rio Grande.

It was a month after this proof of endurance as well as speed that Don Porfirio with a herd of twenty-three mares came to the hills a few miles west of our ranch, where the grass always started up earlier than on the prairie. It was three weeks before the spring roundup, and Elmer and I had been scouting in the edge of the cedar breaks looking for cows that had brought early calves. Mountain lions had been bolder than usual, and many of the early calves had disappeared. Later in the spring, when the cattle drifted out to the open

(Continued on page 476).

## The Return of Comet.

By HUGH F. GRINSTEAD.

IT was just after the spring roundup that Ben Fairbanks, foreman of the Bar-V outfit, rode up to the corral where father and I were branding some early calves. The cowboy was mounted on a buckskin pony followed by a wabbling-legged, long-barreled colt with mane and tail white as cotton. The sight of a "cow puncher" riding a mare with suckling colt was marvelous enough to cause us to drop the branding iron and gaze in wonder as he approached across the prairie, since none but the despised "nestor" ever used mares for other than breeding purposes; but when Ben got near enough for us to see that his buckskin mount was a gelding and the colt a motherless waif, we hurried over to the gate where he was dismounting.

"Run across an unbranded bay mare with a broken leg over on Cedar Canyon," Fairbanks explained, in answer to our look of amazement. "Just to show that I was white I sent a forty-four ball through her head to put her out of her misery. This pesky colt, seein' it had no mammy any more just took up with me an' Buckskin an' here we are. Now I don't want the thing follerin' me to the ranch; the boys'll take me fer a nestor. If one o' you boys want it, you are more than welcome."

"The old mare was a daisy," continued Fairbanks, evidently afraid we would not accept his gift. "She had legs like a race horse. Wouldn't be surprised if she was one of the thoroughbred fillies that the English outfit let get away with old Don Porfirio

two years ago. Dan Pearson saw two fellers from Fort Stockton after the wild bunch day before yesterday, an' from the looks of things this mare had jumped off a bluff twenty feet high, an' landed on a big rock."

Elmer being the younger of us, the waif that had so unexpectedly come into our possession naturally fell to him. It was a scrawny little filly, not much taller than a sheep, with legs so crooked that its joints knocked together. Mother and Annie laughed at Elmer about his race horse, for they had heard what Ben said about the mare. Regardless of their gibes, my brother was proud of the colt. With the postoffice twenty miles away and the nearest neighbor half that distance, the legs of a good horse were worth almost as much as one's own, and for a twelve-year-old boy a horse was considered as necessary as a pocket-knife.

Comet, we called the little orphan from her white and shining tail. For six months she developed nothing but an enormous appetite for buttermilk. It would stand and drink like a pig, and till it was two years old had a belly like a skim-milk calf.

In the early 'seventies there were several bands of wild horses in western Texas between the Pecos and Rio Grande, but of all none was so widely known as that led by the magnificent pacing black stallion, named by the stockmen in honor of the Mexican revolutionary, Diaz, who had just been proclaimed ruler of the republic across the Rio Grande.

Don Porfirio ranged in the foothills

## The Explosion.

BY FRANK H. SWEET.

THE Monterey foundry was new, its outfit new, even many of the men were new, for foundrymen were not so plentiful that a new concern could fully supply itself with experienced men at the start.

Bud Ellis, however, in spite of the fact that he was the youngest and held the most subordinate position in the foundry, was not new. His father had been killed in an explosion, and soon after he had commenced to add the pittance of his own labor to the family income. Later, he had been allowed to help with the sand beds and with the polishing of the completed work. But through all the five years of his foundry experience he had had a horror of everything connected with the casting molds, for it was in the explosion of a too-wet mold that his father had been killed. Whenever he approached a mold in which the liquid iron was hissing, his face whitened, and he shivered as though with a strong impulse to turn and flee; and when he was obliged to remain near the workers, to hand them things, so near that the glare of the hot iron burned his face and hands, it required all his fortitude and determination to stand his ground, with white face and clinched teeth.

He had fought the weakness, stubbornly, fiercely, and in a measure had overcome it—was overcoming it still. The first time he had approached a casting after his father's death, he had experienced a faintness and nausea which had obliged him to rush into the open air. Now he could remain steady and quiet, helping the workmen, and only from the look in his eyes and the tremor in his voice when he spoke, could it be known that the terror was still upon him. But it had taken five years of constant and determined self-watching to accomplish it.

As he grew older, another terror had taken possession of him, the terror of proving a coward, of turning and rushing away, ignominiously, at some critical moment. There had been no accident in the foundry since his father's death, but he was always thinking of one, watching for one, expecting it; and he was afraid that should he come upon signs of an accident, of an explosion, unexpectedly, his terror would control him before his reason.

This dread made him extra careful and vigilant—so much so that it became noticeable, and he was given oversight of the molds that were being made ready for the castings. The danger of explosion came from excessive moisture of the clay into which the hot iron was run, and too much care could not be exercised in watching this almost only source of danger.

In making the molds, the models of the iron to be cast are pressed into moist clay, making perfect impressions of one-half the model; then the two impressions which form the whole are clamped firmly together in a strong frame, with a small opening through which the liquid iron is to be poured. It is necessary for the clay to be slightly moist, but if it is too wet the hot iron creates a sudden steam which has no means of escape. This may cause a terrific explosion, with disastrous consequences, especially if the casting is a large one.

But Ellis had been watching for and dreading another of these explosions for five years; and then, as often happens, during a momentary relaxing of vigilance it came. Bud, however, was not to blame.

He had examined the molds carefully that morning as usual, placing those that were ready upon a hand truck and wheeling them to a convenient distance from the furnace.

Only one was left, a mold for a threshing machine shaft weighing perhaps seventy or eighty pounds. The clay of this was very wet, through some carelessness of the molder; and Bud left it for further drying. It would not be ready under one, and perhaps two, days. Soon after, Bud was sent by the foreman on an errand to another part of the works.

But it so happened that this morning a rush order was sent in for the shaft casting; and another workman, after a hurried search among the molds near the furnace, went to the room where they were made. Finding this all clamped and apparently ready, and supposing that Bud had overlooked it, he lifted it upon a hand truck and hurried it to a very front place among the molds, for immediate use.

When Bud returned, the traveling crane had just swung a great kettle of hissing metal directly above this mold, and a workman was in the act of dipping the kettle to run in the iron. At first Bud did not notice, and it was only when the fiery stream shot down and his gaze followed it, that he understood.

As he realized the catastrophe that was coming, his limbs trembled so he had to grasp an upright for support. For an instant his face grew white and his gaze swept involuntarily toward the entrance, but only for an instant. Then the impending danger of the workmen around the shaft mold seemed to drive everything else from his mind, and with a wild cry and a tremendous bound that carried him half the intervening distance he threw himself forward upon the mold, grasping it with extended arms and tense muscles.

Already the metal was hissing down

into the mold, and a few drops of it threshing machine shaft weighing perhaps seventy or eighty pounds. The clay of this was very wet, through some carelessness of the molder; and Bud left it for further drying. It would not be ready under one, and perhaps two, days. Soon after, Bud was sent by the foreman on an errand to another part of the works.

He was a strong boy; but ordinarily he could not have lifted the weight in that shape, with the addition of the metal already in, and with the hot, scorching glare blistering his face. But now he raised it swiftly to his knees, to his shoulders, above his head; and then with one fierce, tremendous exertion of his strength he hurled it through a window a few feet away, breaking glass and sash as it shot out and down into the yard below.

By this time the workmen understood, and the kettle was swung back, checking the flow of metal. A second, and then came a tremendous explosion outside, which tore a long, ragged hole in the side of the building, hurling splinters in every direction and injuring several of the workmen, but none seriously.

Bud was lying down on the earth floor now, gasping and trembling, faint from the horror and weak from the exertion. Several of the workmen lifted him and carried him out into the open air. He tried to raise his hand in expostulation, but was too weak.

As he lay, however, a sudden comprehending, joyous light flashed into his eyes, and he smiled happily. But it was not on account of the admiration in the faces of those around him, or the words of congratulation and praise that were coming from their lips. No, it was of far, far more significance than that. He had not proved a coward. No longer need he have dread of the future.

### OBSERVATIONS ON FISHING.

BY W. TRUE.

There is only one thing about fishing that I cannot understand. You will hear men brag by the hour of their successful fishing experiences, and all the while they will be declaring, "That was great luck." Now what reason has a man for bragging about luck? The "Good Book" tells us that God sends the rain on the just and the unjust. So no fishing enthusiast can maintain that, because on a certain occasion he caught more and larger fish of a rare kind than any other person he had yet heard of, he has been especially favored by providence as an upright man. My way of looking at it is, that a person should rather be humble under such circumstances.

Many an evening have my father and neighbors sat tilted back in their chairs rehearsing for the hundredth time wonderful stories about fishing expeditions. From the growth these stories have had since I first heard them, the events they are meant to describe must have been small indeed. I have recalled to their minds former descriptions of the same incidents and tried to make matters consistent, but these peaceful attempts put me in wrong, and brought out stern utterances that I knew nothing about fishing, and would usually end in the suggestion

that I must be sleepy and had better go to bed. All the time I was certainly more awake than they.

But from the conflicting requirements they would make, one was inclined to believe that the men who could fish were few. Nevertheless, their rebuke that I knew nothing about fishing, set me to wishing for



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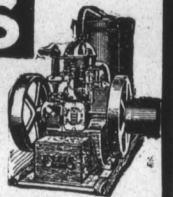
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the chance to see if providence would not suffer a little of the "luck" with which their lives seemed but overflowing, to fall in my path. Hence one fine spring day I set out, toggled in father's river boots and an old sweater, and provided with bait and

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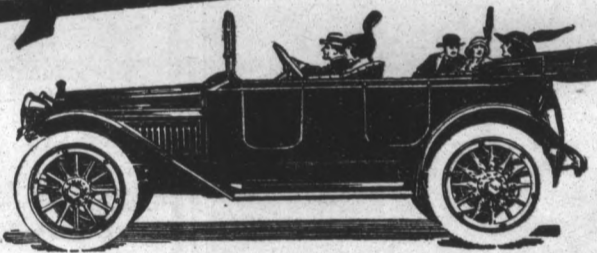
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such tackle as I could find about the house. Fortunately, there was a liberal amount of fisherman's "Luck" in my cup, and the string I brought home was the admiration of the neighborhood, including the oldest and most versatile of the anglers.

It is sufficient to say that henceforth I was accorded an honorable place in the evening circle and when newcomers brought fresh stories to the ears of the natives, I was looked upon to render positive assistance in teaching the late arrivals a lesson of humility, by relating in language set with adjectives of the superlative degree, the success of my first fishing trip.

My sister asked me the other day, after I had told the story, if I remembered exactly just how many fish I had caught.

### THE RETURN OF COMET.

(Continued from page 474).

prairie they were not molested by these marauders.

We had ridden from behind a cedar-covered mound, and were headed down the canyon, when across the flat and less than a half mile away we saw a band of horses feeding on the short mesquite grass. Quick as had been our vision of the wild herd, for such it proved to be, the black leader had sensed our approach, and had already given the alarm. As the herd raced away up the narrow side canyon, the sagacious old leader remained in the rear, stopping at intervals to look back at us.

"Let's give 'em a run," shouted Elmer, who was several yards ahead of me, mounted on Comet. I rode one of the best cow horses on the ranch, from whose back had been roped more than one of the wild herd.

I had no hopes of coming up with the wild bunch, but instantly let out for a short chase. We gained on them for half a mile, then Don Porfirio, seeing that it was a run in earnest, took the lead and they swept up the valley like the wind. When we reached the rough trail at the head of the canyon, I reined in my horse to a slow gallop; then I noticed for the first time that Comet had taken the matter of the chase into her own hands, so to speak. She had always been so docile and easy to control that it seemed unlike her to bolt, and continue in pursuit in spite of Elmer's tug on the reins. The mare ran thus up the rough gully for a quarter of a mile before the wild horses disappeared behind a clump of screw-bean trees and she was brought to a stop.

As we rode home, she appeared nervous, glancing about apprehensively, and jumping every time a jack rabbit broke cover. She became restive when held down to a walk, and was in a lather of sweat when we reached the ranch.

Elmer told father about running the wild horses, and of the strange behavior of Comet. He was displeased.

"You should never chase wild horses with Comet," he cautioned Elmer. "She has the blood of her wild ancestors in her veins, and may join the wild herd at the first opportunity."

We had heard nothing more of the wild bunch when a week later we started out, ten of us, to work the range cattle down from the hills across Cedar Canyon so as to get everything out to the smooth country before the final roundup. There were three men from the Bar-V outfit, two from Wilkin's ranch, three of the Englishman's hands, and Elmer and I. We had two mounts each and were out to stay a week.

It was the third night from home when, just before daylight, we heard a commotion among the horses that had been hobbled in the flat a quarter of a mile from camp. Such fighting and squealing as I had never heard

among the placid cow ponies. Two of the horses had been picketed near camp. Ben Fairbanks was the first man to reach one of these, which he quickly saddled and galloped off in the direction of the fighting horses. The other picketed horse had broken loose, so the rest of us followed Ben on foot.

In the dark we could see nothing, but could still hear squealing, fighting, and the thud of hoofs. Fairbanks soon came up with some of the horses, then we all heard a snort off to the left and the clatter of running horses.

By this time day was breaking, and we soon had all the horses rounded up except one; and that one was Comet! When it got a little lighter we saw that one of the Bar-V horses had been bitten and kicked until he would be unfit to use for a month. Then we struck the trail leading off toward the west, of not one horse, but two! There was Comet's little hoof print, and a larger one. In the soft, sandy soil the deep toe impression showed that they were both pacing.

"Don Porfirio's work," exclaimed Chapman, from the Toyah outfit, pointing to the tracks, and picking up a strand of the broken hobble that the pacing filly had worn. We all accepted this as the solution, when a little farther on the tracks of the two was lost among a score of others, all headed toward the cedar hills.

When a horse that has felt the restraint of man again breathes the breath of freedom, they are more cunning and wary than their ancestors that have never tasted the bit, and we knew that the recapture of Comet was all but hopeless.

We heard no more of the mare till late in the summer, when a Mexican from Fort Davis stopped at the ranch with a story of a white-tailed pacer that had been seen with Don Porfirio's bunch. Horses were becoming more valuable, and a cattleman from the Barillos Spring range had offered a hundred dollars for the black stallion alive, or fifty for his hide. Once the black stallion were out of the way, it would be possible to trap the mares and colts. A hundred dollars was a big reward, and according to our informant, a party had been organized to hunt the old black horse in the southern end of his range.

The unwritten law of the range gave to the captors all outlaw stock, and we determined to make an effort to get Comet before she fell into the hands of the Fort Davis party. But it was not till November that the old veteran slipped away from his pursuers to the south, and again visited our end of his range.

Two of the Bar-V boys rode with us, and for three days we chased the wild bank in a futile endeavor to tire them. By relays we drove them across the breaks and into the canyon, and when they tried to escape toward the south we turned them again toward the cedars. Always the mare with the flaxen mane and tail was neck and neck with the leader.

Once, when we approached within hearing, Elmer gave the shrill whistle by which he had called the mare to her feed when she was a colt. She raised her head as if she recognized the call, then with a vicious kick took up her place just behind the leader. Henry Chapman said she could taste the hateful bit in her mouth, right then.

Our chase ended like all the rest; Old Don Porfirio slipped out in the night, and was fifty miles to the south before we could start on his trail.

Once during the winter we heard of the wild pacers, and at the spring round up a herder from Barrillos told us that he had seen the mare early in March, followed by a colt.

From this time on the cattlemen had plenty of trouble on their hands and the wily old stallion and his nu-

merous family was forgotten. This was the year of the unusual drouth. We always expected dry weather in summer for a few months, but for eight months there had been neither rain nor snow, and all but a few of the water holes dried up before July. The dry hides and bleaching bones of cattle marked the trail for two hundred miles in either direction. For two years the range had been overstocked with cattle from the central part of the state where the big ranches were being cut up into farms. By the thousands cattle drifted toward the salt lakes of the Diablos, and perished on the way, or after drinking of the poisonous water.

Then in September the rain came. It came in torrents, every few days for a month, unlike anything we had ever seen in this dry region. The short grass in the valleys, where some growth had been made in spite of the drouth, cured up like hay; but the continuous rain caused it to rot till it contained no more nutriment than so much sawdust. Stock that had survived the disastrous drouth now succumbed from starvation. Herds that were able to travel were driven farther north to the plains where the season had been more favorable. The prairies were dotted with carcasses, around which fought snarling wolves. Never before nor afterwards did we see so many wolves, drawn to the range by the great abundance of food.

Father had determined to keep the cattle and horses on the home range through the winter, since half of them would fall on the trail before they could reach better pastures. The Bar-V men, ten miles to the south of us, were already singeing cactus, and as soon as the rain was over Elmer and I took the wagon and camp outfit to the long ridge two miles north of the ranch, where the tuna, or prickly pear cactus, grew thick and rank. For a week we worked early and late, cutting the big bunches with long-handled brush hooks and dragging them to the mesquite-root fire where he held them over the flame with pitchforks till the spines were singed so that the cattle could eat the thick, succulent leaves. Then the cattle were driven to the long rick we had made, and stood there gorging themselves.

Every week till grass came in the spring we spent at least two days singeing cactus for the cattle. For the horses we had saved some millet and sorghum hay from the little irrigated field at the ranch.

In spite of the cactus feed, we lost heavily in cattle, as well as three horses. The northerners swept across the prairie, the biting blast chilling the half-starved animals. The wire fences about ranch houses were strung with hides of fallen cattle.

Many cattle that had held up through the first winter months fell before the norther that raged three days, ending the tenth of February. It was not cold like the northern blizzard, but the gripping wind chilled to the marrow, though the temperature fell a very little below freezing.

On the eleventh the sun rose bright and warm, and it seemed that there would be only a few more weeks of cactus feeding for the cattle. We were just starting to the cactus thicket when Elmer called my attention to some object coming across the prairie from the west.

"Look, Joe," he exclaimed. "Did you ever see anything stagger like that and still be able to walk? Looks like a cow and calf—no, one's a horse."

"And the other's a colt," I replied, as they came nearer.

Then we saw the flaxen mane of the larger, and both of us shouted, "Comet!"

We met them out a few rods from the corral. The mare gave a weak little whinny as we approached, and staggered eagerly through the open gate, the colt following dazedly.

Their gaunt forms and lustreless hair told a tale of starvation and a hard winter. Comet's hip bones protruded, and her hair was off in patches. The expressionless eyes indicated that the call for food and shelter for herself and offspring, had been louder than the voice of freedom.

The mare and colt had evidently subsisted on cactus till the spines had literally filled their lips and worked through the jaws. They were a pitiful sight, and were unable to either chew or swallow the food we gave them.

Annie made a kettle full of gruel of meal and water. This they could swallow a little at a time, and thus we nursed them back to strength. It was a month before the sores caused by the piercing cactus spines healed.

For almost two years the mare had enjoyed the freedom of her ancestors, but now she was content to again come under the restraint of man.

The hard winter had begun the work, and in a few weeks the wild herd was scattered and broken, the hide of Don Porfirio himself bringing fifty dollars to the Mexican who shot him. Without a leader, the stock of the settlers no longer broke the restraint of their owners in answer to the call of freedom.

#### HOME.

BY J. A. KAISER.

It matters not whether stately halls  
Of a rich man's mansion mark the spot;  
'Tis home as well as though the crumbling walls  
Of a poor man's dwelling be its lot;  
'Tis home as well if true hearts are there,  
Be it lowly hut or palace fair.

It matters not though it be a tent  
Or a rocky cave by ocean's shore;  
'Tis home as well if true hearts are blent  
In the forge of fate for evermore;  
'Tis home as well, and the glad hearts sing;  
For 'tis always home where Love is king.

#### PLOWING TIME.

BY CHAS. H. MEIERS.

'Tis plowing time, and as the fertile soil  
Is turned, the farmer dreams of bumper yields;  
And dreaming thus, he does not mind the toil  
Required to claim the profits from his fields.

The fresh, moist earth gives promise of reward  
For honest toil, and in the soft spring air,  
He feels the kindly spirit of the Lord,  
Which brings him peace and wafts away his care.

'Tis spring again, and new life seems to fill  
The farmer's body, and his faith's sublime;  
He knows not what his toil may bring, but still  
His heart is filled with trust—in plowing time.

#### A FEW SMILES.

Paying in Kind.

He came and laid down some suspicious looking bills, with a genuine dollar bill on top.

"I want to pay for that barrel of potatoes I got."

"Can't take this money," said the dealer.

"Why not?"

"Most of it isn't good."

"The top layer is good, is it not?"

"Yes."

"That's the way it was with the potatoes."

#### Efficiency.

A Northerner driving through the West Virginia mountains came up with a mountaineer leisurely driving a herd of pigs.

"Where are you driving the pigs to?" asked the rider.

"Out to pasture 'em a bit."

"What for?"

"To fatten 'em."

"Isn't it pretty slow work to fatten them on grass? Up where I come from we pen them up and feed them on corn. It saves a lot of time."

"Yaas, I s'pose so," drawled the mountaineer. "But, what's time to a hawg?"

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One reason why No. 5130 Clothcraft Blue Serge Special is one of the most successful suits for men is because it is so well designed.

The time and money devoted to designing the patterns are well spent, for they result in a comfortable, easy fit. The suit keeps its shape and every detail of collar, sleeves, pockets, armholes and so on, is just right.

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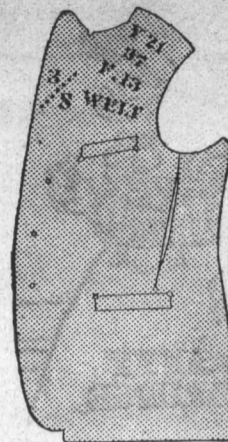
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WE will send this fine Rocker and 25 boxes of our Big Bargain seven (7) Bar Box of Assorted Toilet Soap to any responsible person, on thirty days' credit. Don't send any money unless you want to—just fill out the Coupon below—give names of two reliable business men of your town as references, and we will ship Soap and Rocker at once.

You sell this Soap at 50c a box, send us \$12.50 when it is sold, and you have the Rocker as your reward.

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Anyone can quickly sell twenty-five boxes of this high grade Toilet Soap. Boys and girls can easily earn this Rocker by selling Soap after school. Friends and neighbors will be glad to buy because of the big value.

Everybody knows that Crofts & Reed's Products are of high quality. We have been making GOOD goods for twenty-six years. People everywhere want Crofts & Reed's Soap. You will be surprised how easy you can earn this handsome Rocker. Remember, you take no risk—we take everything back at our expense if you are not perfectly satisfied.

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Dept. A-315 CHICAGO

**IF CASH COMPANIES ORDER**  
we will send you a 70c box of chocolates as a Present for Cash.

**Description of Rocker No. 90174**  
Frame of solid Oak, Golden Oak finish; front posts and arms 4 inches wide; 8 3/4 inch square fillers under arms; seat measures 21x20 inches; spring construction. Rocker upholstered in best black imitation leather; back 27 inches high from seat.



Solid Oak Frame, High Back, Heavy Upholstering.

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Please ship to my address 25 Boxes Assorted Soap and Rocker No. 90174. I agree to sell the Soap and send you \$12.50 within 30 days.

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**Mrs. Youngwise**—"I'm afraid John's mother's offended. She came over to help with my washing, and it was nearly done. She said I hadn't done it right because I didn't boil my clothes like she and her mother always had, and I said she didn't spin and weave any more like people used to, and then she left in a huff."

**Anty Drudge**—"She'll get over it when I talk to her and tell her about Fels-Naptha Soap. I'll tell her to blame me because I advised you to use it."

Every year there is some new way to lighten women's work—but never a better nor more sensible one than the Fels-Naptha way.

Fels-Naptha Soap in cool or lukewarm water will do anything that soap and water can do, in half the time it used to take with less than half the bother.

It will get your washing on the line so much earlier, and the clothes will be sweeter, cleaner and whiter than ever before. You don't have to boil them either.

Better buy it by the box or carton. For all kinds of work every day in the year follow the directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.



## Woman and Her Needs At Home and Elsewhere



### Home Was Made for the Family.

IT is in Locksley Hall that Tennyson chants that famous couplet which is quoted more frequently than many a better thing he sang: "In the spring a young man's fancy lightly turns to thoughts of love." But probably we quote it so frequently because it is so essentially human and true. From Easter to June the marriage license clerks and the society editors have their busy season and blushing brides and gallant bridegrooms are the order of the day. With the issuing of the license and the choniching of the wedding, the incident is considered closed so far as the public is concerned, but to the participants life is really but a beginning.

Each wedding is but the beginning of a new home and what that home is to be in 99 cases out of every 100 depends upon the woman. Occasionally one finds a home where the husband rules, but as a general proposition the American husband is content to earn the living and leave the finer art of home-making to his wife. It is up to her to decide whether the home is to be a comfortable place in which to dwell, or a place to be shunned for the greater ease of the village post office, the saloon or the city club.

Knowing this, it always seems queer to me that so many wives make the mistake of considering their home a place to take care of and worry about, rather than a place to live in and enjoy. Instead of considering the home as a place where one can relax and feel free to sit down in any chair in any preferred spot, so many women go about with a crease between their eyes, madly intent on keeping each article of furniture in the exact spot, marked out with mathematical precision, in which the furniture dealer put it down when he delivered it. The table must stand exactly so, the Morris chair must be in that corner, the large rocker right here, and the straight-backed chair squarely in front of the desk. There must be no papers lying about, no books out of plumb, no ravellings on the carpet, no dust anywhere, and horror of horrors, no tobacco, old pipes or burnt matches within the sacred precincts of the spot called home.

Home! What a misnomer for such a rigidly ruled domicile. Prison is a better term. A prison where the jailer is a thin-lipped, nerve-frazzled woman who honestly believes she is doing her whole duty by her family because she keeps her house spotless and in order. If she is, how far short I come of doing my duty. As I write, two small boys are busy cutting up paper. They are making astonishing looking horses and cows, flags enough to furnish the whole United States Army, and airships to supply the whole aviation corps. A paper train extends from one end of the living-room to the farther end of the dining-room, and more coaches and cabooses are being piled up to add to it so it will go clear through into the kitchen and lap over. Paste-pot and brushes are at hand, and everything is in the working order so dear to the childish heart.

I need not tell the perfect housewife that the house is a sight! If anyone should call they would think the rag-pickers' association was holding its annual meeting here. But the boys are happy, and they are at

home. I'd like to have the house always tidy, it really does get on my nerves to have things kicking about. But I want more to have my boys think home is the place to be happy in, rather than a place to get out of as quickly as possible each morning and shun until bedtime, so I put up with the disorder.

My husband's favorite after-supper stunt is to pull the shabbiest looking chair out of a corner where I've had it hidden behind something else all day, place it exactly in the center of the room near the table, let himself down into it with a satisfied grunt, and elevate his feet to the edge of the reading table. At the same time he elevates a pipe to an angle of 45 degrees in one corner of his mouth, picks up the evening paper and gravely judges the doings of the whole world for the day just passed.

I wish he wouldn't put his feet on the table. The front edge is worn off clear across from nine years' rubbing by his heels. The table doesn't look new and shiny and polished like the ones I see in the homes of my friends. But if that is my husband's idea of a good time, isn't it better to let him enjoy himself that way than to nag him out of the house? I certainly would rather he would be rubbing the edge of his own library table with his heels than polishing a bar with his elbow, or out seeking that consoler of so many American husbands, an affinity.

In a word, to me home is the place where we are all to do as we like, providing we are not doing someone else an injustice or deliberately destroying property. If the house gets mussed up in the process of being comfortable, the one who musses it up has the job of picking up again, and even the youngest boy sees the justice in that.

To the many, many spring brides this little screed is meant as a word of helpfulness. As you start out to make that new home, remember that you are not the only one to be considered. Your husband has some rights there other than furnishing the money to run the menage, and if he wants to upset your orderly arrangements and is happy in doing it, leave him alone. And when the children arrive don't relegate them to second place and give the housework precedence. You can keep the house neat after they are grown up and gone, but you can only give them one chance in all their lives to enjoy you and their home. Let your motto be, "Home was made for the family, not the family for the home."

DEBORAH.

#### ENDIVE.

BY CHARLOTTE BIRD.

By some, endive is known as the German salad or lettuce. Considering its excellence, it is long in coming into its deserved general American favor. This is probably because its culture and use are so little understood in this country.

It may be eaten in the summer, when it is green and tough and bitter. But it is not really desirable till October or November. And when endive is blanched, it is as tender and delicious as celery and as a salad it is unsurpassed by anything. For the table it is treated much like lettuce, to whose family it belongs.

Endive has the advantages of keeping perfectly for months in a cool cellar and of being at its best and within easy reach, when lettuce grows nowhere but in a greenhouse.

One may sow endive as early as April, but the best sowings are made in June and July. When the plants are large enough, they should be transplanted a foot apart each way and then be kept clear of weeds. They require no special soil.

When the plants have attained their full size, unless they are of a self-blanching variety, and even then, they should be blanched. To blanch endive gather up the leaves into a cone shape and tie their tips with strings so that the air and light may be excluded. According to the temperature the blanching process will require from three to six weeks. It is very difficult to blanch endive in the hot months because it is so liable to rot or to grow up into spikes.

Endive is delicious dressed with olive oil. And its flavor is improved by just a suggestion of garlic, about what would be imparted by rubbing a piece of bread with a cut kernel and dressing.

#### DRIED FRUITS ARE ECONOMICAL AND VALUABLE.

Fresh fruits are divided into two classes, "flavor fruits" and "food fruits," according as they are valued for their flavor or as a food, according to the Office of Nutrition Investigations for the United States Department of Agriculture. Those that are 80 per cent or more water fall under the first classification, such as apples, pears, peaches, and most of our common fruits, while those containing less than 80 per cent are "food fruits," bananas, grapes, and figs. The food value of a pound of dried fruit is, of course, much greater than that of a pound of fresh fruit, as a pound of the latter will yield an average of about six ounces dried. The main change which takes place during drying is the loss of water, but very often the right degree of heat produces changes not unlike those which occur during natural ripening on the plant. Much of the starch is changed to some form of sugar. The change in flavor is due partly to the proportionate increase of sugar from loss of water and to absolute increase from chemical changes.

Grapes commonly cost less a pound than raisins, but a given sum spent for grapes will buy a smaller amount of nutritive material, since the proportion of water is much higher than in the raisins. On the other hand, low-priced fresh fruit is sometimes as economical as a somewhat cheaper dried fruit, since the latter would require sugar and fuel to make it ready for the table.

#### LETTER BOX.

A Word from Mrs. Ella E. Rockwood.

Mrs. Ella E. Rockwood, formerly editor of this department, has been spending the winter in California. Her many friends will be glad to get this word from her, from far-off San Diego:

"I like it here in San Diego very much, in fact, better than in Los Angeles. The beautiful bay is an ever-present beauty spot, with historic Point Loma just beyond on one side and Coronado on the other. The climate seems to be ideal. Old residents here declare they like the summer

## THE GARDEN FIEND.

BY IRMA T. SOPER.

My brain is in a tumult,  
My mind is in a whirl,  
I've looked at scores of catalogs,  
And each one is a "pearl."

The "garden bug" has got me.  
(It gets me every spring).  
I want to plant some "garden sass,"  
Some melons—everything.

I want to plant some onions.  
(Here's hoping they will grow).  
Some nice, round, red, tomatoes,  
The best there are, you know.

Some radishes and lettuce,  
A dozen different kinds.  
Some large and luscious melons,  
With thin and crispy rinds.

Some squashes and some pumpkins,  
Some climbing beans and peas.  
Then there are many others,  
I'd like, besides all these.

I'd like to try some eggplant,  
Some kohlrabi and such.  
And a dandy kind of cabbage,  
That's known as "Late Flat Dutch."

But it is all perplexing.  
Each catalog I see  
Says, just as plain as can be:  
"Just order seeds from me."

I find a choice tomato  
In Growem's catalog.  
But Gardner's kind quite beats it  
And leaves it in the fog.

I quite decide on radish—  
'Tis Raisen's "Ruby King."  
When comes another booklet—  
"Red Globe" is "just the thing."

The seeds that Brown will send you  
Are guaranteed to grow,  
If only you will get them,  
Prepare the soil, and sow.

The melon seeds they tell of,  
Grow melons juicy, sweet.  
But Plantem's boast is patent:  
"Our melons can't be beat."

Each one holds forth its virtues  
And tells, in magazines,  
How you can get free packets,  
And shows some garden scenes.

I guess there's lots in hoeing,  
Last year I planted seeds,  
And, oh, the way my back ached,  
A-keeping down the weeds.

It's somewhat in the muscle  
That brings the garden-sass;  
And Growem's seeds, and Plantem's  
Are all much of a class.

But still my brain is whirling  
With seed-books here galore.  
I'm not quite sure of what I want  
To order, any more.

My wife, she has her troubles,  
The "flower-bug" is near,  
And "roses, pinks, and pansies,"  
The one refrain I hear.

Through catalogs, she's looking  
Till there appears a frown,  
"I can't tell where to order,  
From Corianth or Brown!"

The more we look and ponder,  
The more perplexed we get,  
Though we've debated six weeks  
straight,  
We've not decided yet!

better than the winter. Since it is  
world-famed as a winter resort this is  
saying a good deal.

"I've visited many points of inter-  
est. Spent a pleasant half-day at Old  
Town and 'Ramona's' marriage place,  
like every other tourist. To me it is  
all very charming and romantic. I  
shall soon be going to see the Old  
Mission, also. This is situated a few  
miles inland and not directly on the  
sight of the original one, marked now  
only by a huge cross on the hillside  
near the old adobe building, where,  
in the story, 'Ramona' was married  
to 'Allesandro.'

"As I write I hear the whirring en-  
gine of a hydroplane in practice  
flights from the government aviation  
field at North Island, just a short dis-  
tance away. It is very interesting to  
watch these huge machines as they  
dip and curve over the water, every  
now and then descending to the sur-  
face to scud around like any other  
motor boat, and then lift from the  
water and soar like a bird in the air.

There are also daily practices by the  
regular army in air ships.

"All night a mocking bird sang just  
outside my window. As he had been  
on the job the entire day, perched  
high on a telephone pole, it seemed to  
me he should have been tired enough  
to go to bed. He is singing now as if  
his little throat would burst."

## The Modern Girl is Fighting the Good Fight.

Household Editor:—Having seen  
the article in the issue of February  
28, I could not help but write a little.  
I am not an old woman, nor yet a  
school teacher. I thought the article  
was all right in more than one way.

I do not like to see anyone, young  
or old, be careless of their appear-  
ance, yet I do not think that women  
or young girls of the present day look  
graceful in the togs that are designed  
for them to wear, unless they wish to  
be looked upon as old-fashioned.

The girl of today looks as if she  
had no looking-glass in which to see  
her form. If she has a backbone,  
why, in Heaven's name, doesn't she  
use it? Moral backbone may be all  
right, but where is the old-fashioned  
one that used to hold a girl straight,  
with shoulders thrown back and head  
held high, instead of what we see  
now? Look at many of the young  
girls of the present day. In what a  
terrible, slouching way so many stand.  
Do their teachers allow them to stand  
so in school? It looks so, does it  
not?

Let the writer of the previous let-  
ter find one book on physiology that  
says to wear a bushel of false hair,  
and both paint and powder on their  
faces, until they look like Indians on  
the war path instead of girls, Amer-  
ican girls, and school girls at that.

When does the girl get a chance to  
do all of this decorating? Very likely  
while her mother was doing up her  
morning's work she was doing this.  
Why was she not in the kitchen do-  
ing her share of the work? Why don't  
these great educators say, "We will  
not teach girls who try to make  
themselves look like monkeys?"

This same young woman will find  
that settlement work is not all that  
goes for real life. I wonder if these  
young women could not help their  
mothers a very little before setting  
out to clean up a city, for it is not  
the big things that count in life, but  
the little ones.—Reader.

## CAN ANYONE TELL WHY?

WERE you ever caring for a  
sick person, and observed the  
conversation of the people  
who come in to see the patient? If it  
be a hurt, they hasten to tell them of  
someone who was hurt just the same,  
and they were lame for life, etc., etc.  
If a sickness, then they tell of some-  
one who died. If there has been an  
accident they never fail to give the  
patient all the harrowing details,  
which can not help having a depress-  
ing effect upon anyone who is ill.  
They must put on a long face or they  
do not sympathize.

I was sitting with a lady recently  
who had a severe illness, and was  
just beginning to sit up. A lady came  
to call. The first remark was, "My,  
but you are poor."

To which the patient replied, "Why,  
everyone says I am looking better."  
"Well, if you looked any poorer,  
you must have looked dreadful."

Needless to say, the patient did  
not care to have her friend come  
again. When we are ill we all look  
for the person who can smile and  
leave some cheer behind, but such  
are in the minority, I am sorry to say.  
—Charity.

S. V.—We have printed directions  
for insertion made with braid several  
times, and do not wish to use more  
at this time. Ask for either corona-  
tion braid or novelty braid.

**Works where Dirt lurks**

**"Old Dutch"**

reaches the hard-to-get at places and takes hold in a hurry. Quickly removes all the dirt and grime.

**Try it on hard things to clean**

**LARGE CAN 10c**



## The Price of a Cheap Shoe

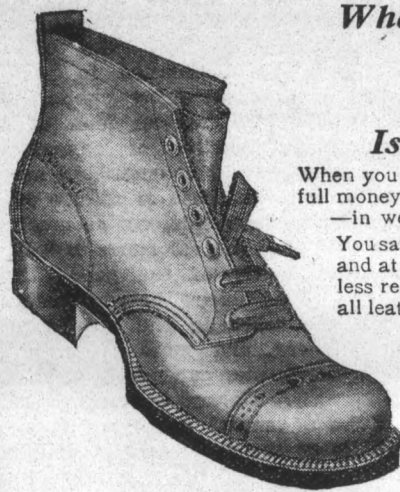
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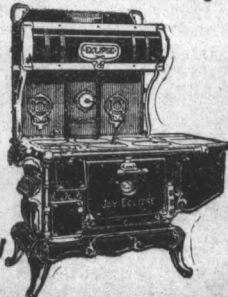
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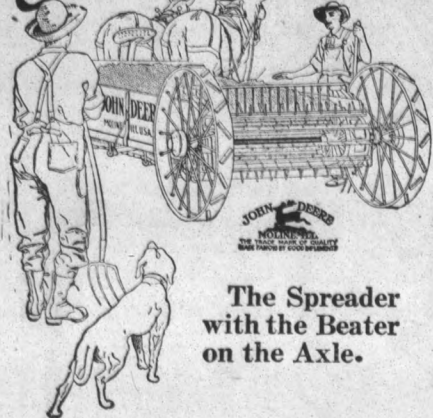
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## Farm Commerce.

### From the Distributors Point of View.

Note.—This communication from a commission man who is acquainted with Michigan farming conditions, is run because in it are suggestions which, if followed, will aid greatly in increasing market returns. Although a defense of the dealer, the article does not excuse the crooked trader any more than it does the farmer who packs dishonestly.—Eds.

**T**HERE is not a shipper, living or dead, but who has lost money on a consignment of produce. Every shipper is bound to meet with reverses of some sort sometimes or another. Some are seemingly more unfortunate than others, yet each one must, and does, bow to the fates sooner or later. And who gets the blame? Invariably it falls on the shoulders of the commission man, yet it is doubtful if there is one in a hundred farmers who could return a profit on the particular lots of goods in question. That statement stands regardless of the fact that there are dishonest commission men, which fact cannot be denied. But, eliminating that feature for the present, there are other reasons why the farmer would find himself "up a stump" when he came to sell his own goods at a profit.

#### Real Competition.

If one could be in the throngs that seethe and surge in and about the produce yards of any of the larger eastern markets, and had nothing to do but look and listen to the clamor and bustle that attends the morning sessions of these places, he would at least get an idea of the magnitude of the business transacted and the great quantities of produce that arrive daily from the producing areas of the world to be distributed in various ways to the consuming public. But he would also get an idea of the amount and quality of competition with which every consignment meets, and how the success or failure of the consignment depends, not so much on the ability of the salesman to sell, as on the quality of the goods themselves. This places the responsibility upon the railroads and the farmers, or shippers, and more often, nowadays, the former can prove an alibi.

#### A Market Center.

Take a general survey of the conditions in the third largest distributing center in this country—Pittsburgh. Here one finds the most ideal arrangement of all, for the produce section of the city is concentrated in one place, covering an area of approximately twelve city blocks of commission, wholesale and jobbing houses, besides the produce yards of the Pennsylvania Lines and the B. & O., which are adjacent and comprise together about six miles of tracks, which are open to free competition in buying and selling—and where annually more than 60,000 cars of produce, fruits and vegetables, are handled, aggregating considerably more than thirty millions of dollars in value. Here is the source from which the thousands of mouths in, and for hundreds of miles about Greater Pittsburgh, are fed. There is no other source. Ten millions of people are dependent upon this market for their three meals a day.

Here it is that the distributors, (hucksters, peddlers and grocers, as well as wholesalers and jobbers), vie with each other and with the sellers for the best prices and the best goods. Here you find, each morning, a seething, conglomerate, cosmopolitan mass of humanity in a nearly wild rush and mad endeavor to stretch a dollar around the biggest possible amount of produce, who know the

difference between "best" and "good," and who know they know. One could as easily convince one of them that white is black as to fool them on comparative values.

#### Classes of Buyers.

Every population is made up of three classes of people, namely: those who demand and will have nothing but the best, regardless of price; those who cannot afford to pay fancy prices, in fact, seek the lowest prices regardless of quality; and between the two extremes are the masses to whom quality and quantity are equally important, and who, because they keep constant tab on these two commercial factors, and because they comprise the vast majority, set the standard of comparative values and keep them at the minimum. To this class and to the well-to-do, is scientific agriculture indebted. To them is due the credit for the work done in improving crops and the growing of improved sorts because they demand and are willing to pay for the better quality goods and thereby make that type of farming practicable. Any type of farmer, anywhere, can raise the kind of produce the poorer classes can afford to buy, but it requires real farmer brains and enterprise to supply a market catering to a discriminating trade.

We find these types of farmers in all communities, and Michigan is no exception. And it is true that the honest and the reputable must suffer from the sins of the dishonest and the shortcomings of the ignorant. The latter cause buyers to be skeptical at all times. Men with optimistic tendencies are forced to question

and doubt when they find so many examples of dishonesty.

#### Difficulties Encountered.

To illustrate what the commission men must contend with, take potatoes. The ideal carload of potatoes would be composed of specimens of the medium size, about like a man's closed hand; of a bright yellow-brown color, not black nor dulled with adhering dirt or water stains. They would be ripe and sound and clean and run 60 pounds to the bushel. The last point can stand a lot of emphasis. Lastly, they should be loaded in cleaned cars having good floors for scooping. This would be a truly select shipment. I have seen cars that were loaded to, and approached very near, that standard, and from Michigan, but they are rare, very, very rare. Most often one will find "field-run" stock, little, good, bad, sound, rotten, clean, dirty, long, round, white, black, red, dirt, sticks and stones included—veritable junk.

What difference does it make? from five or six cents, or more, a bushel. Does that fact impress you? If not, bring a car of your "field-run" to market yourself, have it placed where you will in the yards, open its doors to the buyers, and prepare to get sick. You can stand for hours every day for a week, in all kinds of weather, vainly imploring someone to look at your stuff, once they know it is Michigan "field-run."

Good Michigan potatoes are in demand because of their culinary and keeping qualities and freedom from grubs and excess water; but people do not and will not pay good money for potatoes that are half hole (in the center), or half skin (the marbles), or half rotten, or frozen. Enough cars of good stock from Michigan are marketed to demonstrate the fact that she can produce the good goods. It is simply up to the farmers, themselves, to go after the additional five or more cents a bushel for their stock.

L. C. CAREY.

## Co-operation Progressing in Michigan.

**M**ICHIGAN farmers are certainly getting together. Co-operation is spreading throughout the state. It has been a long time coming. Back in 1865 Volinia township farmers, in Cass county, formed a club, and this was one of the pioneer organizations, if not the first club of the kind in the state. These Cass farmers discussed farm topics after the manner of our present-day institutes. Late in May they held a sheep-shearing festival, followed in July with a test of haying and harvesting implements, and in October a town fair was held.

Some idea of what Michigan is doing at the present time along co-operative lines may be gathered from these items. The Michigan State Potato Association has been formed, with C. W. Waid, of East Lansing, as secretary, the purpose being to raise more and better potatoes, fewer standard varieties for seed and table purposes, and to grade them better.

The Northern District Apple Association has been formed, with Perry F. Powers, of Cadillac, as secretary, the idea being to make Wexford and adjoining counties the center of a great apple producing section.

The American Growers' League, composed of growers of the Concord grape in Michigan and other states, was formed recently at St. Joseph, with Hale Tennant of that city as secretary. The organization will follow patterns set by citrus growers and others of the west in the grading, packing and marketing of fruit.

Branch county farmers met recently at Coldwater and formed an organization of 65 members to fight hog cholera.

Jackson county farmers have perfected a strong club, the purpose being "to develop the agricultural resources and to promote the best social, educational and industrial interests of the county, and to guarantee to every individual member of the club the same encouragement and protection as is now extended to the business interests of the city through its commercial organization." Clarence Reed, of Spring Arbor, is president and Dr. C. G. Parnall, of Blackman township, is secretary.

A farmers' co-operative elevator company has been formed at Caro, with Roscoe Black as secretary.

Manistee county farmers will co-operate in an agricultural campaign to be conducted there, with the aid of state agricultural college speakers, May 5-7. Similar campaigns will be conducted later in Mason, Wexford and other counties.

St. Clair county has an active potato growers' association and standard types of seed, an early and a late variety, have been selected for planting. St. Clair is well adapted for potatoes and by growing a large quantity of a standard type buyers will be attracted there. The association will adopt grading methods and inspection and a certificate of purity will go with each car placed on the market.

Houghton county has a live wire in Leo M. Geismar as head of its farm bureau. This association has 146 active members, while the county potato growers' association has 39 members.

The Wolverine Farmers' Co-operative Club has been formed in Cheboygan county and has been buying hay in large quantities at advantage.

eous prices for all of the members.

The South Haven Fruit Exchange is a year old, with debts paid and assets sufficient to make the stock worth 50 per cent more than the members paid in last year. New members have applied, which will swell the roll over one-third, or to the limit fixed by the by-laws. The Exchange has bought the packing house which was under lease last year, and will build an addition 40x100 feet. Operations are not confined to the marketing of fruit, but include carload purchases of fertilizers, spray stuff, etc. Otto Kelder is manager.

The Menominee River Potato Growers' Association has been formed, with 30 charter members, made up of farmers along both the Wisconsin and Michigan sides of the river. A. Cretten, of Niagara, Wis., is secretary and an effort will be made to improve the grade and to grow the same varieties so that joint shipments may be made to market centers.

Washtenaw farmers will co-operate in an alfalfa campaign to be conducted in that county June 9-13.

The Fremont Co-operative Produce Company has engaged M. D. VanBuskirk, a large grower of grapes at Paw Paw, as manager this year.

An alfalfa club has been formed in Hazelton township, Shiawassee county, with Thomas McGraw as secretary.

A co-operative association is being formed in Iron county to promote dairying and the feeding of beef cattle. In addition to the purchase of pure-bred dairy cows, beef cattle will be secured, to be pastured during the summer and butchered for the local markets in the fall.

Successful co-operative associations are at work at Northville, Fennville and many other places throughout the state, and we have said nothing of the splendid work of the federal farm management service through its field men and experts, which is co-operative work of the best type. The movement has great promise for the farmers and for all concerned.

## Crop and Market Notes.

### Michigan.

**Washtenaw Co.**—While the weather so far in April has been cold and backward, little damage has been done to wheat and meadows, and prospects for a full crop of grain and hay are very bright. The cold has kept the fruit buds back, and prospects are very good in that direction. The oat crop promises to be late in getting into the ground. As yet the sugar season has been a poor one, but usually the poorer the sugar year the better the crop year. Farmers are largely engaged in supplying the Detroit milk companies, and most of the crops are marketed through the cows. A cut of 50c per cwt, has been made in the price of milk. There is quite a demand for hay at \$11@12 per ton in the barn. Butter is 10c per pound lower than a year ago.

**Ottawa Co.**—April so far has been cold, and we have had several hard frosts, which seem to have affected the wheat. It is reported that fruit buds, especially the peach buds, are badly injured. There will be a slight increase in the acreage of corn and beans. Many new silos will be erected this season. The price of cows still continues high, but the horse market is dull, as there seems to be more for sale than usual. Quite a large amount of money has been raised for good roads.

**Saginaw Co.**—Cold weather still prevails with freezing nights, so that it is impossible to start any spring work. Wheat is apparently in good condition. The outlook is good for a larger acreage and better quality of corn. More silos are being built. The sugar beet crop will probably be short. Pork, dressed 11c; butter-fat 25c at creamery. The demand for milch cows is good, but horses are slightly lower.

**Sanilac Co.**—Cold weather prevailed the first part of April, but the past few days have been springlike. Wheat and meadows have suffered some, but will soon brighten up when the weather becomes warmer. The large acreage plowed last fall will be seeded to oats and barley if the spring is favorable. Farmers are making use

of the King drag and grader on the highway, and there is much improvement. Beans \$1.75; potatoes 55c; butter-fat 24c.

**Arenac Co.**—April has been stormy and cold. Roads are in terrible condition, and very little is being marketed. New seeding and fall grain looks good, considering the dryness last year. There will be the usual amount of grain sown this spring. Beans bring \$1.70; other grain prices are unchanged. Stock is looking fine.

**Berrien Co.**—We are having backward spring, with much cold and freezing weather. Farmers report that the fly has damaged the wheat fields badly. Seeding was lost for many, so they will sow oats for hay. The ground is too heavy yet to plow, as we have had a great deal of rain, and roads are very muddy. The apple and cherry buds are all right, but peaches are not so promising. The hired help question is one of great importance at present, as good reliable help is scarce, or too high priced. Potatoes are worth 50c from buyers, and many are going to market. The spring crop of pigs is fine. Horses \$150@250; cows \$60@100; brood sows \$30@50; hogs \$8.50; corn 60@65c; butter and eggs are low. Fat hogs are all shipped out.

**Delta Co.**—Have had cold weather and it will be two weeks before any seeding can be done. All winter grain has come through in good shape, and meadows are in good condition. The farmers are busy hauling out manure and getting ready for spring work. A few silos will be built here this summer. There are still plenty of potatoes and hay in farmers' hands. Potatoes are selling for 50@60c per bu.; hay \$13.50@15 per ton; oats 45c; eggs 20@25c; butter 30c.

**Mecosta Co.**—Stock of all kinds are looking better than common. Young pigs are quite plentiful for the time of year. Stock generally is rather scarce. Winter grains apparently came through in good condition, but the recent cold weather is not favorable for wheat. Peaches and apricots have suffered from their late fall growth. Veal calves 7c; butter 19c; eggs 16c.

### New York.

**Niagara Co.**—Roads are improving. The weather continues cold, and the fruit buds, particularly peach buds, appear to be killed. Meadows and winter grains are in fine shape, and spring work is opening up slowly. As yet spraying is all that has been done on farms, but we are hoping for warmer weather. Beans \$1.75; oats 11c; corn 15c; eggs 19c; butter 20c; hens are in good demand at 48c; corn 90c; cloverseed 10; mid-\$1.25 each.

### New Jersey.

**Monmouth Co.**—We are having a very backward spring and work is not as far advanced as usual. There will be but very little change in the acreage of different crops. Meadows and winter grains look well. Only a small percentage of fruit buds were killed. There is very little produce being marketed.

### Pennsylvania.

**Lancaster Co.**—Meadows are in excellent condition, and give promise of a good hay crop. Wheat is our only winter grain, and it has come through the winter remarkably well. Hay is being marketed, No. 1 timothy bringing \$15; corn \$1 per bbl; eggs 19c; chickens 16c; butter 30c. Some tobacco being sold. A smaller acreage than usual will be put in this year, and a large acreage of potatoes. The egg production is rather above the average, and the price is lower.

**Perry Co.**—Wheat and grass look fine. Farmers are about three weeks late with spring work, as a week ago the ground was frozen too hard to plow. Fruit buds do not seem to be hurt. There is no demand for horses, while hogs and cattle are high in price. Potatoes are being shipped here from Michigan and New York at \$1.10 per bushel. Cloverseed 15c per pound; eggs 16c; butter 24c.

### Ohio.

**Ashtabula Co.**—The weather has been cold, and spring work is backward. No plowing has been done yet. About the usual acreage of oats will be sown. Feed is getting scarce. Butter 20c; eggs 17c; hogs, live \$8.50; veal 9c. Sugar making is practically over, sugar 12c per lb; syrup \$1.15 per gallon.

**Brown Co.**—There have been a few weeks of wet weather, and as the ground is too wet to work, farmers are employed spraying fruit trees, building fences and hauling manure. Fruit has not been hurt yet. Pastures and meadows, also wheat and rye, are looking well. There have been no oats sown yet. Corn will be the main crop, and some tobacco and potatoes will be planted. Hay \$18@20 per ton; corn 75@80c; potatoes 90c@1.10 per bu; dairy cattle \$50@75; horses \$150@175; butter 18c; eggs 15c per dozen.

(Continued on page 482).



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| Size       | Smooth Tread Prices | Safety Tread Prices | Grey Inner Tube Prices |
|------------|---------------------|---------------------|------------------------|
| 30 x 3     | \$11.70             | \$12.65             | \$2.80                 |
| 30 x 3 1/2 | 15.75               | 17.00               | 3.50                   |
| 32 x 3 1/2 | 16.75               | 18.10               | 3.70                   |
| 33 x 4     | 23.55               | 25.25               | 4.75                   |
| 34 x 4     | 24.35               | 26.05               | 4.90                   |
| 34 x 4 1/2 | 33.00               | 35.00               | 6.15                   |
| 35 x 4 1/2 | 34.00               | 36.05               | 6.30                   |
| 36 x 4 1/2 | 35.00               | 37.10               | 6.45                   |
| 37 x 5     | 41.95               | 44.45               | 7.70                   |
| 38 x 5 1/2 | 54.00               | 57.30               | 8.35                   |

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# Markets.

## GRAINS AND SEEDS.

April 21, 1914.

**Wheat.**—This market has been easier the past week. There is a fair amount of export buying, but interest abroad has weakened somewhat by larger estimates from Russia and more liberal offerings from Australia and Manitoba. On the other hand, Argentine is offering but few cargoes, however, the grade is slightly improved over the earlier shipments. In this country weather conditions have been favorable and with but few exceptions of a lack of moisture, the crop is developing under ideal conditions. One year ago No. 2 red wheat was quoted at \$1.09½ per bushel. Quotations for the past week are:

|           | No. 2 | No. 1 | White | May |
|-----------|-------|-------|-------|-----|
| Wednesday | 99    | 98½   | 99½   | 99½ |
| Thursday  | 98½   | 97½   | 99    | 99  |
| Friday    | 98½   | 98    | 99    | 99  |
| Saturday  | 98    | 97½   | 98½   | 98½ |
| Monday    | 97½   | 97½   | 98    | 98  |
| Tuesday   | 97½   | 97    | 98    | 98  |

Chicago, (April 21).—No. 2 red wheat 94¢@95¢; May 91¼¢; July 85¼¢ per bushel.

**Corn.**—The corn trade has weakened since a week ago. The weakness is credited to heavy shipments from Argentine. Statistics show that a little over 4,000,000 bushels were forwarded to this country last week from South America. This is three times the amount shipped a year ago. One year ago the price for No. 3 corn was 57¢ per bushel. Quotations for the past week are as follows:

|           | No. 2 Mixed | No. 2 Yellow |
|-----------|-------------|--------------|
| Wednesday | 68½         | 70½          |
| Thursday  | 68½         | 70½          |
| Friday    | 68½         | 70½          |
| Saturday  | 68          | 70           |
| Monday    | 67½         | 69½          |
| Tuesday   | 67          | 69           |

Chicago, (April 21).—No. 2 corn 66½¢; May 62¼¢; July 62¼¢ per bu.

**Oats.**—A slightly easier feeling prevails in this department of the grain market, and local prices are off about a cent. Favorable weather has aided farmers in their spring work, and while oats are in a little late, the estimated acreage will approximate the usual amount. One year ago standard oats were quoted at 39¢ per bushel. Quotations are as follows:

|           | Standard | No. 3 White |
|-----------|----------|-------------|
| Wednesday | 42       | 41          |
| Thursday  | 41¾      | 41          |
| Friday    | 41¾      | 41          |
| Saturday  | 41½      | 41          |
| Monday    | 41       | 40½         |
| Tuesday   | 41       | 40½         |

Chicago, (April 21).—No. 3 white 37½¢@38¼¢; standard 38¢@38½¢; May 36¼¢; July 36¼¢ per bushel.

**Beans.**—Fair demand continues at steady prices. The local board of trade quotes immediate and prompt shipments at \$1.98; May \$2.02 per bu. Chicago reports lower prices. Pea beans, hand-picked, choice, are steady at \$2; common \$1.75@1.85; red kidneys, choice \$3.

**Rye.**—This cereal is lower. No. 2 is quoted at 66¢ per bu.

**Barley.**—At Chicago barley rules easy and is quoted at 49¢@50¢ per bu., while Milwaukee quotes the malting grades at from 52¢@55¢.

**Cloverseed.**—Values continue about steady. Prime spot \$7.55 per bu.; alsike at \$9.85. Toledo prime cash is quoted at \$7.52½ and prime alsike at \$10 per bushel.

**Timothy.**—Prime spot is selling at \$2.30 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 \$29; coarse middlings \$28; fine middlings \$30; cracked corn \$30; coarse corn meal \$29; corn and oat chop \$26.50 per ton.

**Hay.**—Good hay scarce, with prices higher. Carlots on track at Detroit are: No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2, \$13.50@14.50; light mixed \$15@15.50; No. 1 mixed \$13.50@14.50; No. 1 clover \$12.50@13.

New York.—Prices advanced. No. 1 timothy \$22; standard \$20.

Chicago.—Prices here rule steady. Choice timothy is quoted at \$18@19 per ton; No. 1, \$16@17; No. 2, \$13@14 per ton.

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

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Market firm with prices 2¢ lower. Extra creamery 23½¢ per lb.; firsts 22½¢; dairy 17¢; packing stock 14¢.

Chicago.—Market is steady, with prices 1¢ lower. Extra creamery 24¢; extra firsts 23¢@23½¢; firsts 22¢; seconds 18¢@19½¢; packing stock 14¢ per lb.

Elgin.—Market is firm at 23½¢ per lb., which is 1½¢ lower than last week.

New York.—The market is steady with prices unchanged. Creamery extras 25¢@25½¢; firsts 23½¢@24½¢; seconds 22¢@23¢; packing stock 15¢@16¢ per lb.

**Eggs.**—Market is steady. Prices 1¢ higher. Current receipts of fresh stock are quoted at 19¢.

Chicago.—A steady feeling exists with prices about ¼¢ higher. The home consumptive demand is good; there is also some buying for storage. Miscellaneous lots, cases included 16¼¢@18¼¢; ordinary firsts 16¼¢@17½¢; firsts 17¼¢@18¼¢; seconds 15¢.

New York.—Market barely steady, with prices ½¢ higher. Fresh gathered extras 21½¢@22¢; extra firsts 20½¢@21¢; firsts 19½¢@20¢.

**Poultry.**—Market is steady and firm. Prices are slightly lower on fowls and springs. Live—Springs 18¢@19¢; hens \$19@20¢; turkeys 18¢@20¢; geese 12¢@13¢; ducks 17¢@18¢.

Chicago.—The trade is fair, the demand being entirely to supply home wants. Springs are not quoted but are classed with old roosters as nearly all received are staggy. Prices on fowls are slightly lower. Quotations on live are: Turkeys, good weight 16¢; others 12¢; fowls, choice 16¢; old roosters 12¢; geese 12¢; ducks 16¢@18¢ per lb.

## FRUITS AND VEGETABLES.

**Apples.**—Demand is fairly good and prices are unchanged. No. 1 \$5.50@6.50; No. 2, \$4@4.50 per bbl. In Chicago the easy feeling continues. The warm weather and arrivals of southern fruits and vegetables have detrimental effect on the market. Holders are anxious to sell. Prices are slightly lower. Barrel stock quoted: Spies \$5@6; Baldwins \$5.25@5.50; Ben Davis \$4@4.75; Golden Russets \$4.50@5.50.

**Potatoes.**—Market is firm, with prices slightly higher. Quotations: In bulk 64¢@66¢ per bu.; in sacks 68¢@70¢ per bu. for carlots. At Chicago the market is fairly active with prices unchanged. Liberal arrivals kept the buyers from being anxious and prevented a boost in prices. Good Michigan stock 65¢@70¢ per bu. New potatoes are arriving in small quantities and are selling well at \$7.50 per bbl. According to a carefully gathered report, made by the Chicago Packer, of the amount of old potatoes now on hand, there are no excessive holdings. In but few places is there as much as 25 per cent of the crop left. The reports also show that the larger share of the crop is held by the growers who are holding for higher prices.

## GRAND RAPIDS.

The egg market continues this week at 16½¢, eggs being bought freely for storage purposes now. Dealers are quoting 17¢@18¢ for No. 1 dairy butter. Wheat is up a little, the mills paying 93¢, and other grains are steady as follows: Corn 65¢; oats 39¢; rye 58¢. Apples are quoted locally at \$1.50@2.25 per bu., with the movement light. Oranges and pineapples have a prominent place now and southern strawberries will soon be coming this way in carlots.

## DETROIT EASTERN MARKET.

This market was small Tuesday morning. Farmers are busy with spring work. The few potatoes offered were sold at 85¢@90¢ per bushel. Cabbage ranged from 90¢@1.25; carrots 65¢; eggs 22¢@23¢; loose hay is in small supply and prices range from \$15@18, with the majority of sales near the top figure.

## WOOL.

The decreased sales of the past week at Boston are due to small supplies and the fact that manufacturers are well stocked up for immediate needs. Interest, however, is keen, and prices are strong. There has been unusually large buying in the territory districts at prices ruling considerably above last year's quotations. The season has not sufficiently advanced in the fleece states to indicate what prices will be, however, a few odd sales have been consummated at 28¢ for XX, some unwashed delaines at 23½¢ and a small lot of Ohio unwashed combing ½-blood at 25¢.

## THE LIVE STOCK MARKETS.

### Buffalo.

April 20, 1914.  
(Special Report of Dunning and Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle 210 cars; hogs 90 d. d.; sheep and lambs 80 d. d; calves 1800 head.

With 210 cars of cattle on our market here today, and 24,000 in Chicago and reported fully 15¢ per cwt. lower there, our market was from 30¢@60¢ per cwt. lower, quality considered, on all cattle weighing from 1200 up, and at the close of the market there is at least 75 cars of weighty cattle of 1200 to 1550 lbs. going over unsold. The market was dull and draggy from start to finish and at the close everybody seemed discouraged and dissatisfied with results.

We had a strong market on all grades of hogs today, with a moderate supply, about 90 d. d. all told. Good grades of hogs sold at \$9.25 generally, with a few extreme heavies at \$9.15@9.20. Pigs generally 9¢ per lb.; a few underweights from \$8.75@8.90; roughs \$8@8.25; stags \$6.50@7.50. Late trade was a little bit dull, but a fair clearance was made.

The market was active today on both lambs and sheep. Prices 20¢ lower than the close of last week on lambs; sheep steady. Choice handy clip lambs selling mostly at \$7.50. We look for steady prices on lambs last of week; it will depend upon receipts.

We quote: Wool lambs \$8.60@8.75; choice clip lambs \$7.40@7.50; heavy lambs \$6.75@7; cull to fair lambs \$6.50@7.35; yearlings \$6@6.75; handy ewes \$5.25@5.50; heavy ewes \$5@5.25; wethers \$5.60@5.85; cull sheep \$3.50@4.50; bucks \$3.50@4.50; veals, choice to extra \$9.75@10; fair to good \$8.50@9.50; heavy calves \$5.50@7.

### Chicago.

April 20, 1914.

Cattle. Hogs. Sheep.  
Receipts today...25,000 32,000 22,000  
Same day 1913...18,376 41,362 21,455  
Last week...40,867 93,972 87,370  
Same w'k 1913...49,337 109,122 71,878

Cattle today are much too numerous, and the week begins with a slow trade, butcher stock selling early 10¢@15¢ lower, while buyers were very late in purchasing steers, with bids largely 15¢@20¢ lower. Hogs were active at steady prices. Hogs marketed last week averaged 232 lbs. Shippers paid \$8.60 once more for prime woolled lambs, but the general sheep and lamb market was slow in opening, with buyers bidding 10¢@15¢ lower for most offerings.

Cattle, aside from good fat lots, were largely a dime lower on Monday last week, with receipts of only 20,215 head, following the light supplies of the previous week, but prices were higher on Wednesday on receipts of 12,147 head. The greater part of the steers sold last week at \$8@9.10, with common to fair lightweights going at \$7.10@8, a medium to good class at \$8.10@8.60, good to choice heavy lots of long-fed steers at \$8.65@9.10 and choice to fancy heavy lots at \$9.15@9.55, while yearlings sold at \$7.85@8.60 for common to good lots and at \$8.65@9.45 for good to prime lots. There was a good outlet for butchering cows and heifers on a basis of \$5.30@9, while cutters went at \$4.80@5.25, canners at \$3.50@4.75, and bulls at \$5.50@8. Packers discriminated against the dairy cows, and on some days a goodly portion of the cows came from Wisconsin dairying districts. Good heifers were very scarce and came high. The stocker and feeder traffic was greatly curtailed in volume by scant offerings and higher prices, with sales at \$6@8.25 and choice little yearlings greatly outselling the best heavy feeders. Michigan, Wisconsin and Ohio buyers wanted considerable numbers of these cattle, but the demand was mainly from Illinois and Indiana stockmen. Good to prime stock steer calves brought \$7.50@8.25, and sales took place of stock and feeding cows and heifers at a range of \$5.50@7.25. There was a good calf trade at \$5@10 per 100 lbs for rough heavy to prime light vealers, while milkers and springers went at \$55@85 per head, with dairymen wanting only good to choice cows and others going mostly to killers. Late in the week there were bad breaks in prices for calves, with the best going around \$8.75@9. Bulls sold off sharply, but desirable steers sold higher than a week earlier.

Hogs suffered some sharp declines in prices last week, the big local packers combining to break the market, and in order to bring this about they refused to purchase from speculators. Trade was narrow, and even on days of light receipts a great many

hogs were carried over to the next day. A feature of the market that has attracted much comment is the recent change from increasing average weights of the hogs marketed to increasing percentages of lighter weights and a poorer average grade of the offerings. Packers have discriminated against the big heavy packer hogs, which were generally rejected from loads and sold on their merits. Week before last the hogs received averaged 232 lbs., or four lbs. less than a fortnight earlier and 13 lbs. less than hogs received a year ago. Both receipts and shipments of hogs from here for the week were unusually small, and at the close sales were made at an extreme range of \$8.20@8.75, comparing with \$8.50@8.92½ a week earlier. Pigs closed at \$7.25@8.45 and stags at \$8.75@9.25. Hogs sold at the lowest prices of the month near the close.

Sheep and lambs showed a widening out tendency in prices because of the decreasing proportion of prime flocks offered, and while choice woolled lambs from Colorado advanced to the highest figures recorded in a long time, other grades were on the downgrade. Lambs from Colorado and fed western lambs made a large share of the daily offerings, and clipped flocks came forward in larger numbers and sold at a big discount from prices paid for unshorn stock. As usual, nowhere near enough shearing and feeding lambs were offered to meet the urgent demand. Three decks of fancy 166-lb. Wisconsin-fed woolled wethers sold at \$7.20, an outside price. Closing prices for unshorn stock were: Lambs \$6.50@8.60; yearlings \$7@7.50; wethers \$6@7.20; ewes \$4.25@6.75; bucks \$5.50@6. Shorn lambs brought \$5.50@7.30. The Monday market was higher on too small offerings, the run aggregating but 17,159 head. Shearing and feeding lambs brought \$6.65@7.35.

## CROP AND MARKET NOTES.

(Continued from page 481).

**Carroll Co.**—The weather is very bad for the time of year, being cold with some rain and snow, which is holding back all spring work, and the roads are very muddy. Very little plowing has been done yet. Wheat and rye look good.

**Greene Co.**—April has been a backward month and farmers are behind with their spring work. Oat sowing has just begun, and there will be a smaller acreage than usual. Wheat is looking fine, also clover and timothy meadows are in good condition. Fruit buds are in good shape and promise a full crop. Prices are steady in the grain market, but butter-fat has fallen to 26½¢ and eggs to 15¢.

**Madison Co.**—No spring plowing or other crop preparations have been made on account of the cold weather so far this month. The fat sheep are now being shorn, and buyers are bidding on wool. The price of wool is 20¢, with prospects of a higher price later. Cattle are very high; hogs \$8.75; sheep \$4@6; lambs \$6@6.50; wheat 94¢; oats 40¢; corn 58¢; eggs are lower than for some time, being 15¢ per dozen; butter 25¢; cream 27¢.

### Indiana.

**Tippicanoe Co.**—The late warm rains have helped the wheat and grasses. Everything is turning green and the peach blossoms are beginning to appear. Recent frosts have done considerable injury to the peach blossoms. No corn has been planted yet, in fact, the fields have been too wet to plow. Not very many acres of oats were sown. Horses are in good demand on account of the wet weather putting the farmers back in their work. A great amount of corn will be planted if the ground can be prepared in time. Eggs 18¢; butter 23¢; lard 11¢@12¢; steers \$7.50@8; hogs \$8.70@8.85; sheep \$4.50@5.50; timothy \$15@16.

### Illinois.

**Marion Co.**—April has been rather cold, with heavy frosts on the 7th, 8th and 9th. The peaches and pears are damaged some, but not all killed. Apples are not injured by the frosts, but there will be scarcely any apples here this year, as the trees are very shy of fruit buds. The old meadows are only fair, but the new seeding is fine. Wheat never looked much better at this time of the year. There has been no oats sown yet.

### Colorado.

**Kit Carson Co.**—The weather is fine, and the ground is in fine shape for spring work; nearly everyone is in the field. Grass is starting nicely. Winter grain was damaged some by a freeze in March. A large acreage will be put in corn and spring wheat. There is not much produce being marketed excepting eggs and cream. Eggs 14¢; cream 21¢; corn 80¢; wheat 85¢; barley 85¢; oats 65¢; millet seed 75¢; kaffir \$1.50; maize \$1.50; cane \$1.25; seed corn \$1.75; hogs 8¢.

## THIS IS THE LAST 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.

April 23, 1914.

## Cattle.

Receipts 1356. Market steady with Wednesday; cow stuff steady with last week; all others 10@15c lower.

We quote: Extra dry-fed steers and heifers \$8; steers and heifers, 1000 to 1200, \$7.40@7.65; do 800 to 1000, \$7.25@7.60; do that are fat, 500 to 700, \$6.50@7.25; choice fat cows \$6@6.50; good do \$5.50@5.75; common do \$5@5.25; canners \$3@4.25; choice heavy bulls \$6.75@7; fair to good bolognas, bulls \$6@6.25; stock bulls \$5.50@6.50; choice feeding steers, 800 to 1000, \$6.85@7.40; fair do \$6.60@6.90; choice stockers 500 to 700, \$6.50@6.75; fair do \$6@6.25; stock heifers \$5.50@6; milkers, large, young, medium age \$65@75; common milkers, \$40@55.

Spicer & R. sold Newton B. Co. 2 butchers av 845 at \$6, 2 steers av 1085 at \$7.50, 1 cow wgh 1170 at \$6.50, 17 steers av 1275 at \$8, 12 do av 1182 at \$7.75; to Bresnahan 1 cow wgh 1070 at \$5.50; to Sullivan P. Co. 24 steers av 951 at \$7.55, 1 bull wgh 1620 at \$6.50, 5 steers av 974 at \$7.25; to Hammond, S. & Co. 18 do av 887 at \$7.50, 6 do av 980 at \$7.50, 4 do av 842 at \$7.50, 1 cow wgh 1120 at \$6.25, 1 bull wgh 1320 at \$6.50, 6 cows av 998 at \$5.75, 1 steer wgh 1150 at \$8, 10 do av 740 at \$7.25; to Converse 2 cows av 1005 at \$5.50; to Bresnahan 7 do av 820 at \$5.40, 2 steers av 610 at \$7, 8 do av 720 at \$7; to Kamman B. Co. 3 butchers av 1057 at \$6.75, 1 heifer wgh 760 at \$6.75; to Applebaum 2 bulls av 1245 at \$6.60, 1 do wgh 1000 at \$6.60; to Rattkowsky 5 cows av 1120 at \$6.35; to Horne 2 do av 920 at \$5.65, 3 do av 727 at \$5.75; to Hirschleman 3 steers av 693 at \$7, 11 do av 803 at \$7.30; to Livernoise 22 feeders av 860 at \$7.40.

Bishop, B. & H. sold Bresnahan 3 cows av 833 at \$5.50, 1 do wgh 790 at \$5.50, 3 stockers av 570 at \$6.60; to Newton B. Co. 4 cows av 935 at \$6.25, 5 steers av 754 at \$7.25, 4 do av 830 at \$7.10, 1 cow wgh 950 at \$5.50, 2 do av 1050 at \$5.50, 5 steers av 926 at \$7.35, 1 bull wgh 1230 at \$6.75, 19 steers av 1060 at \$7.35; to Michelson & S. 2 cows av 1000 at \$5.25; to Sullivan P. Co. 14 butchers av 1071 at \$6.50, 12 steers av 870 at \$7.40, 6 cows av 958 at \$6, 1 steer wgh 1480 at \$8, 1 bull wgh 1200 at \$6.50, 8 steers av 815 at \$7.25, 5 cows av 1098 at \$6.25; to Kull 3 butchers av 607 at \$6, 4 steers av 875 at \$7, 1 bull wgh 1130 at \$6.50, 15 steers av 886 at \$7.60; to Thompson Bros. 21 do av 980 at \$7.65; to Horne 3 cows av 920 at \$5.25, 2 do av 820 at \$5.50, 2 do av 865 at \$5.50; to Hammond, S. & Co. 20 steers av 1135 at \$8, 10 do av 952 at \$7.50; to Parker, W. & Co. 15 do av 828 at \$7.35, 17 do av 888 at \$7.50; to Ratner 4 butchers av 892 at \$7, 1 steer wgh 1200 at \$7.20; to Sullivan P. Co. 12 do av 800 at \$7.50, 5 do av 826 at \$7.25, 3 cows av 1237 at \$6.50, 11 do av 866 at \$6, 11 steers av 862 at \$7.35; to Kull 20 do av 1012 at \$7.70.

Haley & M. sold Costello 7 steers av 804 at \$7.10, 1 cow wgh 1030 at \$6.25; to Kamman B. Co. 3 steers av 970 at \$7.40, 17 do av 1750 at \$7.60; to Horne 4 cows av 815 at \$5.50; to Newton B. Co. 1 bull wgh 1500 at \$6.75, 2 cows av 1090 at \$6, 2 do av 1190 at \$6, 1 bull wgh 1750 at \$6.75; to Hammond, S. & Co. 17 steers av 909 at \$7.45; to Bresnahan 18 butchers av 514 at \$6.65; to Horne 1 cow wgh 800 at \$5.50; to Kamman B. Co. 2 steers av 730 at \$6.75; to Thompson Bros. 8 steers av 1007 at \$7.75, 1 bull wgh 1050 at \$6; to Newton B. Co. 2 do av 1165 at \$6.50; to Rattkowsky 1 cow wgh 1070 at \$5.75; to Horne 2 cows av 995 at \$5.50; to Fritchey 18 feeders av 900 at \$7.40, 3 do av 725 at \$7.15, 6 stockers av 680 at \$7.10; to Mich. B. Co. 3 steers av 1030 at \$7.50; to Newton B. Co. 3 cows av 833 at \$6.25, 7 steers av 857 at \$7.25, 4 do av 602 at \$6.50; to Kamman B. Co. 1 cow wgh 1150 at \$6.15, 4 steers av 762 at \$7.40, 1 cow wgh 930 at \$5.75; to Thompson Bros. 3 butchers av 970 at \$6.55, 3 bulls av 1347 at \$6.55.

## Veal Cales.

Receipts 844. Market steady. Best \$8.50@9; others \$6@8.

Bishop, B. & H. sold Hammond S. & Co. 10 av 149 at \$9, 5 av 130 at \$8.50, 3 av 120 at \$7.50, 16 av 140 at \$8.75, 15 av 150 at \$8.75; to Ratner 3 av 130 at \$8.50; to Sullivan P. Co. 3 av 155 at \$9, 3 av 140 at \$9, 2 av 100 at \$8, 16 av 160 at \$9; to Rattkowsky 13 av 130 at \$8.50, 3 av 120 at \$9; to Goose 18 av 145 at \$8.65; to Goose 14 av 130 at \$8.25, 10 av 140 at \$8.50, 15 av 150 at \$8.65, 2 av 185 at \$9, 3 av 155 at \$8.50; to Thompson

Bros. 34 av 140 at \$8; to McGuire 8 av 145 at \$8.50, 19 av 130 at \$9; to Mich. B. Co. 33 av 140 at \$8.50, 44 av 130 at \$9; to Sullivan P. Co. 57 av 140 at \$8.50, 2 av 125 at \$9; to Parker, W. & Co. 8 av 125 at \$9, 8 av 140 at \$8.50; to Burnstine 12 av 145 at \$8.50, 12 av 130 at \$9; to Clarke 7 av 115 at \$8.50.

## Sheep and Lambs.

Receipts 2314. Market steady. Best wool lambs \$8@8.15; fair do \$7.50@8; light to common lambs \$6.50@7.25; yearlings \$7.25; fair to good sheep \$5.50@5.75; culs and common \$4.50@5; clip sheep \$4.50@5; clip lambs \$6.50@7.

Spicer & R. sold Sullivan P. Co. 23 sheep av 95 at \$5.15, 77 lambs av 70 at \$6.75, 43 do av 53 at \$5.50; to Kull 18 clip lambs av 70 at \$6.75.

Haley & M. sold Nagle P. Co. 87 clip lambs av 80 at \$6.55, 20 yearlings av 115 at \$6.25, 7 sheep av 135 at \$5; to Hayes 14 lambs av 75 at \$8, 30 do av 70 at \$6.75.

Sandall sold Kull 44 clip lambs av 50 at \$6.40.

Roe Com. Co. sold Barlage 94 clip lambs av 75 at \$7.10.

## Hogs.

Receipts 6170. None sold up to noon; prospects 10c higher. Pigs \$8.60@8.65; others \$8.65@8.75.

Bishop, B. & H. sold Hammond, S. & Co. 510 av 200 at \$8.75, 1500 av 180 at \$8.70.

Spicer & R. sold Parker, W. & Co. 150 av 190 at \$8.75.

Haley & M. sold same 300 av 190 at \$8.75, 80 av 165 at \$8.70.

Roe Com. Co. sold Sullivan P. Co. 150 av 200 at \$8.70.

## Friday's Market.

April 17, 1914.

## Cattle.

Receipts this week 1957; last week 1297; market dull and 10@15c lower. Best dry-fed steers and heifers \$8; steers and heifers, 1,000 to 1200, \$7.50@7.75; steers and heifers, 800 to 1,000, \$7@7.25; do that are fat, 500 to 700, \$6.50@7; choice fat cows, \$6@6.25; good do \$5.25@5.75; common cows \$4.50@5; canners \$3.25@4.25; choice heavy bulls, \$6.75@7; fair to good bologna bulls \$6.25@6.50; stock bulls \$5.50@6; choice feeding steers, 800 to 1000, \$6.75@7.25; fair do \$6.50@6.75; choice stockers, 500 to 700, \$6.50@7; fair do \$6@6.25; stock heifers \$5@6.25; milkers, large, young, medium age \$65@90; common milkers \$45@55.

## Sheep and Lambs.

Receipts this week 4483; last week 4127; market steady. Best lambs \$8.15; fair lambs \$7.50@7.75; light to common lambs \$6.50@7.25; yearlings \$7.25; fair to good sheep \$5.25@5.50; culs and common \$4@5.

## Hogs.

Receipts this week 10,656; last week 9040; market 5@10c lower. Pigs \$8.50; others \$8.60@8.65 at close.

## OFFICIAL SEED ANALYSIS AT STATE LABORATORY.

In view of the fact that unauthorized articles have appeared in a number of papers throughout the state, which would give the idea that the Seed Laboratory of the State Board of Agriculture is no longer making seed analyses, and which would lead one to believe that the Seed Law is not to be enforced, it is perhaps well to publish an official statement of the matter.

Seed analysis is continuing as before. It is very true that, owing to the fact that the appropriation made for carrying on this work was not large enough to provide for necessary apparatus and sufficient help at the same time, the work has been unavoidably delayed. At the present time the reports are being sent out much faster than the samples are coming in, so that the Seed Laboratory hopes, from now on, to send reports out in time to be used.

ERNST A. BESSEY,  
In charge of Seed Laboratory, East Lansing, Mich.

Horses were in ample supply and in good local and shipping demand last week, especially during the first three days, with prices ruling unchanged in most cases. Farm geldings sold mainly at \$140@185 per head, a few selling as low as \$125, while most of the farm mares brought \$185@225. Light drafters sold at \$225 and upward with a choice class of heavier weights taken on the basis of \$275@350, but not many sold as high as \$300. Inferior horses were slow at \$50@100, with drivers salable around \$100@200. Receipts for the first quarter of the year aggregated 31,899 head, and of this number shippers purchased 27,986 head.

**SOY BEANS**—Early Brown. One of the best and most reliable varieties. Michigan grown seed, \$2.50 per bushel.  
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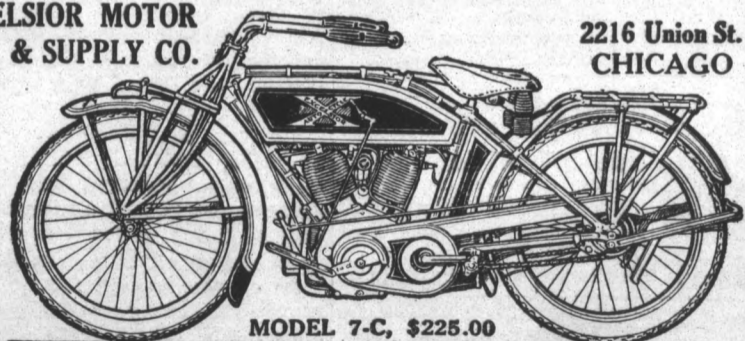
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**Rose Comb Rhode Island Red Eggs** 15 for \$1.50, postpaid. **BUELL BROS., Ann Arbor, Michigan**

**BARRED PLYMOUTH ROCKS**—Cockerels all sold. Have some nice pullets and yearling hens. Eggs for hatching. **OSTRANDER BROS., Morley, Mich.**

**PLYMOUTH ROCK** cockerels 5 to 11 lbs., according to age, hens 5 to 8 lbs., 15 eggs \$2. Mammoth Bronze Tom Turkeys 8 to 35 lbs., according to age. Price \$3 to \$25. 10 eggs \$4. **A. E. ORAMTON, Vassar, Mich.**

**Barred P. Rock Eggs**—From the Bradley strain for hatching at \$1.50 per setting. **A. A. PATTULLO, Deckerville, Michigan.**

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## Tells why chicks die

J. O. Reefer, the poultry expert of 1604 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write **MR. REEFER** for one of these valuable FREE books.

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# Poultry and Bees.

## Spring Work in the Apiary

By F. E. MILLEN,  
State Apiarist.

**B**EEKEEPERS are now entering upon a very busy and important season, and while the preparations for this year's crop should have been commenced last fall, there are many little things that can still be done, to help increase this season's surplus.

All weak colonies should have the entrances of their hives so reduced that robbing will not be started very easily. All hives from which bees have died, either during the winter or this spring, should be removed to the cellar or some place where bees cannot gain access to them. Hives that are allowed to stand in the apiary until the honey has been robbed out, are not only a source of great danger in a foulbrood area, but the owner is going contrary to law and is liable to be prosecuted. Beekeepers should remember this point and also remind their neighbors who may not be aware of the new foulbrood law.

### Treating Weak Colonies.

Weak colonies can be treated in two ways, one is to pack them snugly on top and reduce the entrance to a very small opening. If the colony is not too weak and has a young queen, they should build up in good shape for the later flows. The alternative is to practice the Alexander method of placing one weak colony over a strong one. To be successful with this method one has to use great care in not disturbing the bees during the operation. In short, the plan is as follows: Mark your weak colonies and a like number of strong ones, then in the evening place the weak colonies over the strong ones, with just a queen-excluder between the two hive bodies. If successful the two colonies will be very strong in about six or eight weeks and both queens alive, the worst that can happen will be that the bees kill one queen, even then you will have one good colony. The colony could be divided as the apiarist saw fit.

All queenless colonies should be united with colonies of fair strength, having a queen. This should be done early to get the advantage of the old bees as long as possible. The safest and easiest method of uniting these colonies, at this season, is to place the weak one over the strong colony with one or two sheets of newspaper between the two brood chambers; they will unite in this way without any fighting.

### Spring Feeding.

If you have any colonies that are light in stores, feed them with a sugar syrup, in the proportion of one to one; this can be fed in Mason fruit jars and cheesecloth over the mouth, invert the bottle right on the frames and then pack warmly all around, to keep in the heat. Always remember that the strong colonies are more liable to starve than the weak ones, because they use much more stores in feeding the brood. You cannot afford to lose these, so keep your eye on all strong ones.

Be on the lookout for robbing, and if you find it just commencing reduce the entrance of the colony being robbed, so that only one or two bees can enter at a time. When you get an opportunity examine the colony being robbed and find out if it is queenless or only weak. If robbing has become bad, remove the robbed colony to the cellar for two or three days; after removing the colony place another hive, containing frames, on the old stand; this often fools the bees and they think there is no more

honey and so cease robbing. The robbed colony can then be returned to its old stand, or placed on another stand, as the beekeeper wishes.

### Clipping Queens.

Some beekeepers have an idea that if the queens' wings are clipped, swarming will be retarded. The idea is not to retard or prevent swarming, but to prevent the swarm from absconding. You can also keep a record of the age of your queens when clipping is practiced. By clipping the right wings one year and the left the next, and if necessary both the third year, the age of the queen is seen at a glance. Unless a queen is above the average, it will pay the beekeeper to pinch her head after she is two years old, and introduce a young one.

The subject of the importance of the queen to the colony is much deeper than appears on the surface, a poor queen always means a poor colony, and we forget that we are liable to have poor queens the same as there are poor specimens in every kind of living things. With poultry, for instance, we try to breed from the best all the time, but how many of we beekeepers try to raise queens from our best colonies only? A good queen means a stronger colony, and we know that it is our strong colonies that give us our heaviest surplus. Think of that this summer when you want to requeen those colonies. With the smoke method of introducing a queen, directly into the colony, there is little time lost and very little risk of losing the queen.

### Advantages of Using Foundation.

The use of foundation is another reasonable matter. Are you using full sheets of starters this season? The man who uses only starters loses quite a lot of surplus that he might get if he used full sheets. We must remember that the flowers only secrete nectar for a certain length of time and then the flow ceases. If your bees are busy in the hive making comb they lose that much time and while the flow may last many days longer, every day lost is beyond recall. Try two colonies this season, one on starters and one on full sheets, give them both an equal chance, and see which one will give you the largest surplus. After such an experiment you will need no more urging to use full sheets of foundation.

We should not need reminding that all our supers should be ready now, for the coming crop. Four shallow supers and three deep supers to every colony should be our aim, the flow will not wait while we order supers and other bee fixtures from the factory. You have doubtless been caught this way before; do not let it occur this time.

If we are keeping bees, let us understand all we can about them. An intimate knowledge of their habits will go far in making us more successful, and at the same time teach us to appreciate the wonderful little insects that we have under our control.

### SKIM-MILK FOR CHICKS.

Skim-milk is a farm product whose value is not fully appreciated. It is not generally realized that milk loses very little in actual value as food by skimming. It is true that most of the fat is removed in the cream, yet the most valuable food constituents—nitrogenous substances—remain behind in the skim product. Skim-milk not only contains much nutritive ma-

terial, but this material is a form which is, as a general rule, easily digested. It is not only very healthful, nutritious food for mankind, but when fed to poultry, especially growing chicks, will give excellent results. Its composition is such that it may be substituted for part of the grain food, especially corn, with profit.

Last season I had 400 little White Leghorn chicks. I fed the usual grain scratch feed, together with Cornell mash feed in hoppers outdoors. The chicks were given three pans of skim-milk per day, which was soured to a solid mass. My neighbor, who also has a large flock, fed about the same grain ration, minus the milk. In a month my stock, for all the world, looked to be from two to three weeks older than his, so fast had they developed on the milk diet. While he was cautious about his rations, he experienced great bowel trouble with the chicks, whereas my chicks were healthy, never having once during the wet season contracted roup from exposure. It is simply needless and wasteful, not alone to the pocket-book, but as well to the vitality of the stock, to dope them with prepared medicines for roup and bowel disorders. Skim-milk will carry off all foul gases from the organs, and will place the three vital developments onto the carcass, namely, meat, bone and feathers. I never could understand why some farmers failed to feed skim-milk to the fowls, both growing chicks and matured birds, for they have a far better food for laying quality and developing than any mixture of grain feeds could possibly give.

Milk-fed chicks will make a weekly gain of 4.46 ounces of milk, where, without they will make a gain of only about 2.62 ounces, according to experiments held in our State Agricultural College poultry pens. The largest gains are always found during the periods when the most milk is fed. Skim-milk may well be considered especially valuable as a food for chicks during the hot days of summer, when so many chicks suffer untold agony from the heat, and find water very poor as a thirst quencher.

How much skim-milk should be fed? Chicks cannot consume too great an amount for their good. Here we find that we have a food that is ideal in that every ounce goes to the body of the fowl, and there does its good work. The thing to be closely watched is that the dishes in which the milk is fed are cleaned with scalding hot water every day or so, for the flies will breed about the dishes and will leave death and disease as a result. So keep the dishes clean and wholesome. Ordinary milk pans with an eight-cornered board, with legs about the length of the depth of the pan, are good covers, leaving proper space for the chicks to drink. Take a square board little less than size of width of pan and cut off the corners. This will keep the chicks out of the dish. Be sure to feed skim-milk this year if you desire the best results. It is needful that the chicks be developed as early as possible if they are to make fall-layers, which means profitable fowls.

New York. **EARL W. GAGE.**

### TESTS IN EGG PRODUCTION.

Experiments made by the West Virginia Station indicate that chicks are less vigorous when hatched from eggs laid by hens which have been laying heavily for a long time. A decided lack of phosphorus in the rations resulted in a material decrease in the number of eggs laid. It was demonstrated that the average size of eggs laid by hens varies considerably according to the season, the eggs being heavier during February and March than at any other time; also, that the eggs from mature fowls are heavier than those from pullets.

## Veterinary.

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

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


**Dropsical Swelling.**—I have a 12-year-old mare due to foal in two or three weeks that is stocked in hind legs and has a swelling under belly which extends from udder to girth. E. S., Sanford, Mich.—Exercise her daily, feed her food that has a laxative tendency, and give her a teaspoonful of powdered sulphate of iron, a tablespoonful of ground gentian and a dessertspoonful powdered nitrate of potash at a dose in feed three times a day. Gentle hand-rubbing of legs and swelling under belly will have a good effect, but irritating liniment should not be applied.

**Mare Disowns Colt.**—My mare foaled on April 8; has a nice colt but refuses to let it nurse. Local veterinary thought perhaps udder might be sore, but he is mistaken. O. J. T., Ashley, Mich.—It is impossible to make some mares own their colt. By placing her in a very narrow stall, boxed in, with open sides for colt to reach udder from either side; or apply a gag or twitch while colt is nursing, but this is impractical if it has to be kept up. If you have to raise colt on cow's milk, add one-third water and some sugar.

**Obstructed Udder.**—In the lower portion of one quarter of cow's udder there seems to be some small lumps which prevent a steady flow of milk. After emptying teat it is necessary to wait several seconds before it again fills. J. R., North Branch, Mich.—Apply one part iodine and 15 parts of fresh lard to udder opposite bunches every day or two. Also give 1 dr. potassium iodide at a dose in feed three times a day.

**Catarrh or Inflammation of the Crop.**—Every spring for three years I have been troubled with turkeys taking sick, becoming dumpish and have a watery discharge from mouth. This discharge is yellow and has a very bad odor. The crop is very much distended and is full of this water. When turkey is held up by legs, the water runs out of mouth, but they have no diarrhea. Mrs. J. V. R., Dowagiac, Mich.—Catarrh or inflammation of the crop may be caused by over-feeding or irregular feeding, and when the crop is over-distended, the mucus coat is partially paralyzed; therefore, the secretion of the glands is interfered with, which is followed by a fermentation or decomposition of the contents. It may also be brought on by eating irritating substances. The first step in treating should be to empty the crop by careful pressure and manipulation while the bird is held with its head downward. Give 5 grs. of bicarbonate of soda in an ounce or two of water. Give 1 gr. of quinine at a dose three times a day and feed a good quality of food in limited quantities for a few days.

**Scours in Calves.**—I have lost three good calves recently with what I called white scours or diarrhea. Two of these calves were seemingly all right in the morning when they nursed, but died in the evening; each of them was only 36 hours old, the other one was nine days old. Our local Vet. prescribed laudanum and white of egg, but it did no good. N. M. B., Clarksville, Mich.—This acute contagious disease, causing scouring in the new-born calf, usually proves fatal in from 24 to 36 hours; therefore, prevention is the rational resort. Inoculations with this bacillus (germs) kill guinea pigs and rabbits in from six to 18 hours. No matter what remedies you give, the calves usually die. The stable should be thoroughly disinfected and supplied with clean fresh bedding and the navels of the young calves should be treated; besides, the hind parts of cows should be sponged and washed off thoroughly with a two per cent solution of carbolic acid. Also sprinkle this solution on barn floor. I have repeatedly stated in this column how to care for navels of young stock; therefore, we cannot afford to use space for this purpose too often.



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

**P. C.**—Fall boars and gilts. Spring pigs. Shorthorn females, Oxford Sheep. **C. W. 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.**

**Poland China Bred Sows** Fall Pigs and Minorca cockerels. Satisfaction guaranteed. **R. W. MILLS, Saline, Michigan.**

**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.**

**YORKSHIRE SWINE**—Boars all sold. Yearling sows bred for March farrow. Weanling pigs ready May 1st. **GEO. S. McMULLEN, Grand Ledge, Mich.**

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

**FOR SALE**—Yorkshires, milk fed, spring pigs and a few sows bred for April farrow. Prices reasonable. **O. H. JOSSE, Mt. Clemens, Michigan.**

**Yorkshires** Guaranteed to not die of Cholera. Prolific, long deep and well fleshed. Feb. and March pigs. Trios not akin. Boars. **Cribs Bros., Watervliet, Mich.**

**YORKSHIRES**  
The large, long-bodied, heavy-boned prolific kind. Sows and gilts bred for spring farrow. 60 head of September, October and November pigs. 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.**

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The variety that has brought Wisconsin with- in existence. Has yielded 133 bu. per acre in Wisconsin. Breeding this variety my specialty. Get the best. Also clover, alfalfa and timothy. All seeds State Inspected. Circular and samples.

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We have a big stock of Apple, Peach, Pear, Cherry, & Plum trees, at 3c & up. Shade trees, Berry plants, Roses, Shrubs, Etc. Seed Corn, Potatoes & Oats. We were formerly at Moscow, but have better facilities now to serve our Patrons, send for Catalogue

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## SWEET CLOVER

SEED, pure white and biennial yellow. Prices and circular how to grow it sent on request. Everett Barton, Box 129, Falmouth, Ky.

SEED POTATOES.—The Horticultural Division of the Mich. Experiment Station has a surplus of Sir Walter Raleigh seed potatoes for sale. Price \$1 a bu., F. O. B. Lansing, Mich. Money must accompany order. Address Horticultural Division, East Lansing, Michigan.

WHITE CAP DENT SEED CORN, fire dried, 98% germination, \$2.50 per bushel shelled, bags free. ALFADALE FARM, St. Johns, Michigan.

Strawberry FREE Send address and get 25 fine, Everbearing Strawberry Plants free. Dept. 39, MUTUAL NURSERY CO., St. Louis, Mo.

Senator Dunlap Strawberry Plants for Sale—Fine ones at \$2.50 per 1000. W. M. YALIGER, St. Johns, Mich.

SOY BEANS—Northern grown. Ito San earliest known standard variety. \$3 per bushel. Soil for inoculation and full directions, 50 cents per bushel extra. KENWALL FARM, Swanton, Ohio.

SEED CORN—Mich. Yellow Dent, home grown, fire dried, tested. Golden Fleece and Reg. Swedish Select Oats. Send for sample and circular. E. A. Bywater, Memphis, Mich.

Seed Corn—1000 bus. 1912 crop. Imp. Early Leaming, Reid's Yellow Dent and White Cap. Finest quality, germination perfect. \$2 per bu. Catalog free. THEO. BURT & SONS, Melrose, O.

SEED OATS—Regenerated Swedish Select, stiff straw, heavy yielder, free from smut, prime stock, re-cleaned, \$1 per bu., sacks free. Write for sample. Also Green Mountain Potatoes, vigorous grower, good yielder, quite free from blight. 75c per bu., sacks free. Colon O. Lillie, Coopersville, Mich.

SEED OATS—Choice re-cleaned SENSATION OATS, 75c per bu., are heavy and yield well. J. A. STARR, Royal Oak, Mich.

SEED CORN—High grade, prize winning variety. Satisfaction guaranteed. JESSE W. PICKETT, Caledonia, Michigan.

Selected Seed Potatoes—Sir Walter Raleigh, purity guaranteed. Write us for prices. Stuart Acres Fruit Farms, Marshall, Mich.

Seed Potatoes—FOR SALE late PETOSKEY. Blight proof, free from scab. 80c bu., sacks free. GEO. BILLS, Hale, Michigan.

ASPARAGUS ROOTS—Strong Two Year Old Roots of the following varieties: Bonvalent, Argentuil, Conover's Colossal, Palmetto. STUART ACRES FRUIT FARMS, Marshall, Mich.

# Horticulture.

## CARING FOR NEWLY PLANTED TREES.

I will suppose that the trees from the nurseries have been rightly planted—the tree balanced by root and top pruning, fine rich surface soil firmed around the roots with the feet, then the bottom soil filled in around the tree so the union of the bud and stock is a little below the level of the ground. When the fruit grower has thus planted the tree, he must not think he has done his whole duty and go off and leave it to withstand adverse conditions and take care of itself. Most trees die from such treatment, and it is a fact that, on account of neglect more than one-half of the trees sent out by nurseries never bear profitably.

The little trees we plant are only bundles of possibilities. They have strong cell life that will first send out little fibrous feeding roots, hence the need of fine rich soil close at hand. Water is the vehicle that carries this food in the soil into the structures and the more water the soil absorbs up to the point of free water, the more favorable are the conditions for immediate growth. There are two things one may do as soon as the tree is planted, to conserve soil moisture. One is mulching close around the trees and the other is frequent cultivation. In locations where it is not practical to cultivate close around new set trees every few days, it is policy to place a thick mulch of strawy manure, or other material around the tree to prevent surface evaporation.

### The Importance of Moisture.

The tree builds leaves through which it gets from the atmosphere about nine-tenths of its food. It must first get the one-tenth from the soil before it can take the nine-tenths from the atmosphere. Thus it follows that cultivation and mulching in conserving moisture enables the tree to use a larger leaf surface, and therefore will grow more rapidly. We closely top-prune a tree when planting it, to prevent excessive transpiration of water from its roots through its leaves. The larger water supply at the roots, the less we need to top-prune a tree, and consequently the larger leaf-feeding surface.

The writer has for a few years been planting orchards. Last spring 200 fruit trees and many ornamentals were planted during so severe a drouth that the soil was dry several feet down, and an almost rainless summer followed. Every tree lived and made a very good growth. The inter-crop grown in the newly set orchard was strawberries. Nearly every week we went through the strawberries with a horse cultivator and hoes, and when hoeing the strawberries we hoed the trees, keeping a dust mulch around them all the time. Inter-crops that need to be frequently cultivated will be grown in this orchard, until it comes nearly into full bearing, then cultivation will be kept up from early spring until July, when a cover crop will be sown to be plowed under the following spring. I would not plant an orchard unless I could give the trees thorough cultivation in the way I have described. In western New York I have seen apple trees that had been thoroughly cultivated by growing cabbage and other crops between them, that at eight years of age were bearing the third consecutive crop. I have seen four-year-old cherry trees bearing a very fair crop, and a large peach orchard three years old that I estimated had one bushel per tree, and pears, five

and six years old, bearing fully as much as the peach trees. These were the results of good cultivation and feeding. I have seen trees in sod ground twice as old as these mentioned that had hardly commenced to come into bearing.

### Pruning Young Trees.

As to pruning young trees, the writer buys one-year-old trees so they can be headed low, perhaps 12 to 18 inches from the ground. Then, in a general way, he lets them grow, as he does not believe in too much pruning with high cultivation, excessive cutting of branches reduces the leaf surface, and will reduce the growth of the trees and make more liable immature growth. Branches too close together are cut out, and some in the center if too dense. A great deal depends on the kind of tree, variety, soil, and culture. Trees should not be over-fed with nitrogenous fertilizers. If making tender wood too rapidly apply phosphoric acid and potash, preferably in wood ashes. Try to keep the tree vigorous and growing steadily.

New York.

W. H. JENKINS.

## MONEY IN APPLES.

It has been said that a single apple tree, under favorable conditions, has been known to produce more dollars than can be derived from an acre of hay; from two apple trees more dollars than from an acre of corn; from three apple trees more dollars than from an acre of potatoes.

At first thought this may seem impossible, but there are many fruit growers all over the state obtaining just such results.

D. W. Wadsworth, Bangor, Mich., picked 64 bushels of Spies from a single tree. One year, from 11 Baldwin trees, he packed 144 barrels. Wakeman & Son, Bangor, picked 300 barrels of Northern Spies from 33 trees, which sold for \$1,105. Ralph Ballard, Niles, Mich., last fall sold his eight-acre crop of Duchess apples for \$4,000, on the trees, or an average of \$500 per acre. We have sold Grimes Golden for \$3.25 per barrel on the packing table when the crop would average seven barrels to the tree.

Michigan is well located in reference to markets, and during the last few years thousands of dollars have been made by Michigan apple growers. Van Buren Co. A. HAMILTON.

## TROUBLE DEPARTMENT

### Pruning Apple Trees.

I have an orchard which has not been trimmed for several years except to have some of the smaller twigs cut. There is no expert pruner hereabouts so we wish to do the work ourselves. Can you give me some information as to what parts should be removed and what is the latest date at which this work may be done?

Huron Co.

J. M.

The cutting out of the smaller twigs without reference to the general welfare of the tree, is a common fault of those who do not understand the principles of pruning. Such pruning does injury instead of good, as it destroys a lot of valuable bearing surface and does not accomplish the objects of pruning.

Pruning is for the purpose of cutting out excessive parts so that the remaining parts can reach their highest development and thus bring the tree to its maximum efficiency. It is also for the purpose of letting the proper amount of sunlight in the trees so that the fruit can properly color up and also to assist in the

control of fungous diseases. Controlling the height and shape of the tree so as to facilitate picking and spraying, is the most important factor in pruning, from the economic standpoint.

Pruning should be from the top down, rather than from the bottom up, as the object is to have the full bearing surface of the tree without any waste of scaffold or main limbs. In most cases it is advisable to cut out the larger limbs where necessary, instead of trimming out a lot of fine brush. This is especially advisable where the varieties are late in coming into bearing, as the fruit buds are formed on the shorter growths and the object is to conserve all of the fruit buds possible. Where the tree tends to overbear, the cutting out of some of the smaller growth would thin out some of the fruit buds and in that way help in checking excessive bearing.

By no means let anyone trim the limbs bare of twigs as far up as he can reach. Neither should anyone be allowed to do excessive pruning in one part of the tree and neglect the other, unless to remove a prominent part of the tree which causes it to be ill shaped. With but few exceptions the pruning should be distributed throughout the tree.

There is an old saying that one should prune when the knife is sharp, which has a lot of truth in it and goes to show that one had better prune any time than not at all. The best time, however, is to prune in March or early in April as, for quick healing purposes, the wounds should be made as close to the time that the sap starts flowing as possible. It is also an advantage to prune when the trees are dormant, as one can see better what to do.

## EXAMINE TREES FOR PLANT LICE.

The apple trees should be examined at this time for plant lice eggs. These are small, oval and shining black objects which are most often found in the rough places on the twigs and partly protected by the bud scales. If the eggs are found, use some commercial tobacco extract with the early lime-sulphur and arsenate of lead sprays. Good results may be had by using it in the just before and immediately after blossom sprays.

## FRUIT GROWERS DISCUSS APPLE PRODUCTION.

The regular monthly meeting of the Oakland County Horticultural Society was held in conjunction with the monthly meeting of the Wixom Farmers' Club, at Wixom, April 8, 1914.

The president of the Horticultural Society, Mr. C. S. Bingham, read a paper which was a report of the Horticultural Department at the recent Institute at the M. A. C. The paper contained many valuable hints and suggestions for fruit growers.

Mr. F. A. Wilken, of the Michigan Farmer editorial staff, gave a very interesting talk on "Special Tools for Fruit Raisers." The talk was replete with definite information for fruit growers who are seeking information as to how the work of setting and caring for the orchard can be performed to the best advantage.

A short paper was read, prepared by C. S. Bartlett, of Pontiac, on "What Farm Organizations Can do for Oakland County." The paper plead for united efforts on the part of the various farmers' organizations in order to make a "Better Oakland."

In answer to the question, "Is the Apple Industry Likely to be Overdone?" R. J. Coryell, of Birmingham, said, No! Two-thirds of the increase in population in the state is in Detroit, and the present population is not nearly all supplied with good fruit.

The fact was brought out during the general discussion, that the Flint Brothers have been getting \$10 per barrel for their extra apples during the past winter. Such prices certainly ought to encourage fruit growers to make an effort to produce fruit of fine quality.

## Write for Free Katalog of the World's Best 5&10¢ Bargains

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best 5 & 10 cent bargains from it by mail. It is a modern 5 & 10 cent store in your home.

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No. AX50. This serviceable apron is well made of splendid quality percale in blue, neatly bound all around with white tape. Comes in choice patterns, popular checks, neat figures or stripes in the most durable colors. It is indeed a remarkable value in a lady's apron for 10 cents and really shows you what good merchandise you can get for a small amount of money from Kresge's New Parcel Post 5 and 10 cent store.

Write for free copy of Kresge's Katalog of Wonderful 5 and 10¢ Bargains. It will be ready to mail about Jan. 10th. Address: Office Box 35 B, S. S. KRESGE CO., Detroit, Mich. The Original Parcel Post 5 and 10 Cent Store With over 100 Branches

## DAIRY FARMERS WANTED

THE Southeastern States need more milk, cream and butter producers. Each year \$32,500,000 worth of Northern dairy products are shipped into the South. You can make money in this many crops, all the year-round country. Ample rain, (irrigation unnecessary) mild winters and pleasant summers make living enjoyable and highly profitable.

### GOOD LAND \$15 AN ACRE UP

produces heavy yields of alfalfa, clover, corn, wheat, fruit and truck. Profitable local markets greater than supply. Alfalfa booklet, the "Southern Field" magazine and facts about dairying along the Southern Ry., M. & O. R. R. and Ga. So. & Fla. Ry., sent on request. M. V. RICHARDS, L. & I. A. G. Room 70 Southern Ry., Washington, D. C.



## Hustlers Take Notice

THE MICHIGAN FARMER has an opening for a few hustlers to solicit subscriptions. An easy selling proposition is given to the solicitor and an extra large commission paid so that any hustler can make \$25 to \$35 per week. Write at once for full particulars to THE MICHIGAN FARMER, Detroit, Michigan.

166 Acre Tile Drained Farm—On paved road leading into Detroit. All under plow. Clay loam. Flowing well, house, barns, etc. Near Detroit-Toledo Electric Line. Will divide to suit. James A. Hurst, 1020 Hammond Bldg., Detroit, Mich.

### POULTRY—TOO LATE TO CLASSIFY.

EGGS FOR HATCHING, from pure bred Light Brahma fowls. \$1 for 15, \$5 for 100. Fowls are large, healthy, good layers. MRS. E. B. WILLITS, R. No. 16, Reading, Michigan.

EGGS FOR HATCHING—Buff Orpington, \$1 per 15, \$2.50 per 45, \$5 per 100. MRS. CALVIN FULLER, R. No. 2, Bancroft, Mich.

MONEY In Peacocks and Pheasants: Buy and sell at best prices. Lock Box 116, South Bend, Indiana.

## Farmers' Clubs

### THE FARM LABOR PROBLEM.

(Continued from last week.)

I think I have touched sufficiently upon causes of scarcity of help on the farm, but lest someone think I have omitted a most important one, I will mention the financial question. The prime cause of the above, in the opinion of many is, I know, poor pay on the farm, good pay in the many new industries, such as auto factories, which are surely carrying away many of our rural workers. But after careful thought and inquiry, I disagree. The competent, willing farm hand now can easily get \$35 per month for nine months and \$15 at least for the other three, his board, his room, his laundry, the use of a horse and rig, and other home privileges, or \$30 and the rest and his horse kept. If he is not money ahead, he will at least have as much as the factory hand, say in Detroit, who usually get \$2.25 per day and is "docked" for the half-day Saturday that the factory is closed, and for time lost when the machine needs repairing, burns out or what not, who pays at least \$5 per week for board and room, and for laundry and car fare besides. The farm hand takes a day, or part of a day, off frequently and on full pay. He has much greater variety in his work. He is not under the constant nervous tension of getting a required amount done. As to the hours, those of many a farm hand are no worse than those required in factories, ten hours per day and two hours three nights out of the week, and these hours are one steady unceasing grind to accomplish their "stint."

But what can the farmer do to alleviate present conditions? As Roosevelt says, "No country life can be satisfactory when the owners of farms tend, for whatever reason, to go away to live in cities instead of working their farms, and moreover it cannot be really satisfactory when the labor system is so managed that there is for part of the year a demand for labor that cannot be met, and during another part of the year, no demand for labor at all, so that the farmers tend to rely on migratory laborers who come out to work in the country with no permanent interest in it, and no prospect of steady employment. It is exceedingly difficult to make a good citizen out of a man who cannot count upon some steadiness and continuity of the work which means to him his livelihood. Economic conditions on the farm, the variety and kind of crop growing as distributed in time and the housing for the men, must be so shaped that the farm laborer can be steadily employed under conditions which foster self-respect and tend for his development. Conditions must be so shaped that the farmer's wife and the laborer's wife are not mere drudges; instead, new machines must be introduced to economize labor within the house."

(Continued next week.)

### CLUB DISCUSSIONS.

A New Lease of Life.—The Central Farmers' Club, after having apparently given up the ghost, came to, and has taken a new lease of life. February 19 the men served an oyster dinner to about 70 at the home of Mr. and Mrs. Chas. Ludwick, after which a fine program of music, recitations, and two excellent papers was given. On March 19 nearly as large an attendance was present at the home of Mr. and Mrs. W. H. Langdon. An excellent paper on "Hog Raising," by James Shirras, and one by D. G. Locke, on "The Tax Commission," were discussed quite extensively. Mrs. Jennie Gleason then read an interesting paper in verse on "Our Community Life." Question box proved an interesting feature. Club decided to hold a picnic in August.

## Grange.

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

### AMONG THE LIVE GRANGES.

At the Plymouth Grange meeting, held Thursday, April 11, 25 candidates were given the third and fourth degrees. The work was given during the forenoon and a dinner was served at noon. The afternoon was divided between a social time and the following program: Music; recitation by Louise Spicer; "The Rural School Problem," Mr. Isbell; "Sense in the Kitchen," Olive Brown; surprise feature by the married men; music, piano solo, Mrs. Roberts and Miss Powell.

Four candidates received the third and fourth degrees at the April 17 meeting of Prospect Grange. The following program was thoroughly enjoyed by all present: Roll call, a verse of scripture; question, "How can we best co-operate with our best home dealers?" Roy Brown; question, "What do you think of the consolidated school system?" E. L. Hunter; recitation, Esther Scheels; question, "Do you think it pays to treat our potatoes for blight?" D. A. Hager; music, Hazel Hager and Eddie Ives; reading, Norris Perkins; question, "Is it proper for the mother or the children to be served first in the home?" Grace Hunter.

Ernest G. Pray, master of Eaton County Pomona Grange, was the guest of honor of Bellevue Grange at the enthusiastic and interest first April meeting that opened with one of the finest dinners ever spread in Eaton county. In addressing the Grange, Mr. Pray urged strong and close organization and that the members strive always to establish better co-operation among themselves. He said that the Eaton County Granges were just now at the high tide of success and that it was just the time when great watchfulness was needed. He complimented the Bellevue Grange on its good showing at the meeting and on its comfortable hall, and said that the day was past when farmers needed to quail at being called "Reubens." "The farmer now-a-days can hold up his head and walk with pride in any company," said Mr. Pray, "and you here belong to one of the best communities of the state. We have never yet felt the full strength of the Grange, but we are gradually coming to recognize it. When I was in Washington recently at a Grange conference, several congressmen called at my hotel to see me because I represented your Grange organization. A few years ago this would not have happened. Now the legislators are seeking to know what we want, because we have the strongest and best organization in the commonwealth, and because our principles are broad and not narrow, because we are in a position to do the greatest good to the greatest number." Others participating in the program were: Mrs. Albert Miller, who gave a recitation, and Mrs. William Charles, Jr., who gave a reading.

Sodus Grange, No. 123, of Berrien county, has been holding lively meetings all winter. This Grange occupies a prominent part in the social and intellectual life of Sodus, and is exerting an influence toward the moral well being of the community. The interest is so good that even bad weather does not prevent a good attendance.

### GRANGES ORGANIZED.

Following is the record of the number of Granges organized and re-organized in the various states from January, 1914, to March 31, 1914.

| Organized.          |     |
|---------------------|-----|
| Missouri .....      | 4   |
| Montana .....       | 10  |
| Nebraska .....      | 29  |
| California .....    | 4   |
| Colorado .....      | 3   |
| Indiana .....       | 2   |
| Iowa .....          | 11  |
| Kansas .....        | 26  |
| Maine .....         | 1   |
| Maryland .....      | 2   |
| Massachusetts ..... | 3   |
| Michigan .....      | 12  |
| Minnesota .....     | 1   |
| New Jersey .....    | 1   |
| North Dakota .....  | 9   |
| New York .....      | 12  |
| Ohio .....          | 29  |
| Oregon .....        | 8   |
| Pennsylvania .....  | 18  |
| South Dakota .....  | 12  |
| Vermont .....       | 1   |
| Washington .....    | 9   |
| West Virginia ..... | 1   |
| Wisconsin .....     | 9   |
| Wyoming .....       | 3   |
| Total .....         | 220 |

| Re-organized.      |    |
|--------------------|----|
| Colorado .....     | 1  |
| Montana .....      | 1  |
| Ohio .....         | 1  |
| Oregon .....       | 2  |
| Pennsylvania ..... | 2  |
| South Dakota ..... | 3  |
| Total .....        | 11 |

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

FOR SALE—In whole or part. \$20 acre soil, buildings and fences. Must sell soon. O. S. SCHAEFER, 214 Dewey Ave., Swissvale, Pa.

## 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.

6000 ACRES—Rainy Lake, Presque Isle County, Michigan. Land cleared, \$10 to \$12.50 per acre. Small payment, long time. Also, 200-acre ranch and partly improved farm. No crop failures or floods. Grain, grass, fruit, vegetables and live stock returns challenge comparison. JOHN G. KRAUTH, owner, Rainy Lake Settlement, P. O. Millersburg, Mich.

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SOUTH GEORGIA FARMS—Two crops a year here, no snow. New Colony of Ohio and Michigan Farmers. Virgin soils, on railroad. Write for folder today. WAYNE DEVELOPMENT COMPANY, Owners, Grand Bldg., Brunswick, Georgia.

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Team, 10 Cows, Full Equipment Good 106-acre money-making farm, all stocked and equipped, ready for business, you can move in today and make profits immediately; only 3/4 mile to store and post office, 3/4 mile to station and creamery; level productive acres, splendid pastures, 15 acres woods, lots of fruit; new 8-room house, barn for 19 cows; low taxes; if taken at once, team, 10 cows, harness, wagons, valuable machinery, tools, all yours, only \$4200, part cash; see full details, page 1, "Strout's Spring List of Farm Bargains," just out, copy free. E. A. STROUT FARM AGENCY, Station 101, Union Bank Bldg., Pittsburgh, Pa.

# You Pay Too Much For Tires

When You Pay More  
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Prices on Goodyear No-Rim-Cut tires have dropped 28 per cent in the past year alone.

Some other tire makers have not met these reductions. But let us see if those high prices mean better tires.

In No-Rim-Cut tires you get these four features found in no other tire in the world:

**The 126 braided wires** in the tire base—the only way known to make a satisfactory tire that can't rim-cut.

**The "On-Air Cure."** That is, each tire is final-cured on an air lag shaped like an inner tube. That is done to save the countless blow-outs due to wrinkled fabric. And it adds to our tire cost \$1,500 per day.

**The Rivet Fabric** breaker strip, for the rights to which we paid \$50,000. It lessens, by 60 per cent, the danger of loose treads.

**The All-Weather Tread.** A double-thick tread of very tough rubber. As smooth as a plain tread on dry roads, but a sharp anti-skid on wet.

Note that no other tire, whatever the price, offers one of these costly and tire-saving features.



**GOODYEAR**  
AKRON, OHIO  
**No-Rim-Cut Tires**  
With All-Weather Treads or Plain

## More Mileage

Will higher-cost tires give more mileage? We have had scores of experts working for years to build a tire that gives more mileage. They are in our department of research and experiment. They have made thousands of tests. And they say that No-Rim-Cut tires as made today mark the limit in tire mileage.

And note this: In late years, when most cars carried odometers for measuring tire mileage, No-Rim-Cut tires have outsold any other. In 1913 we sold eleven times as many as in 1909. And all because of mileage records on perhaps 400,000 cars.

## The Real Reason

It is easy to build tires to cost less than Goodyears. It is simply impossible to build a tire worth more.

The reason for our prices lies in mammoth output—the largest in the world. It lies in efficiency which results from years of tire-making. It lies in small profits. Our profit last year averaged 6½ per cent.

Let these tires show you what they save in trouble, save in upkeep to hundreds of thousands of users.

Goodyear dealers are everywhere.

**THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio**

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Branches and Agencies in 103 Principal Cities DEALERS EVERYWHERE Write Us on Anything You Want in Rubber

(1480)

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