

# MICHIGAN FARMER

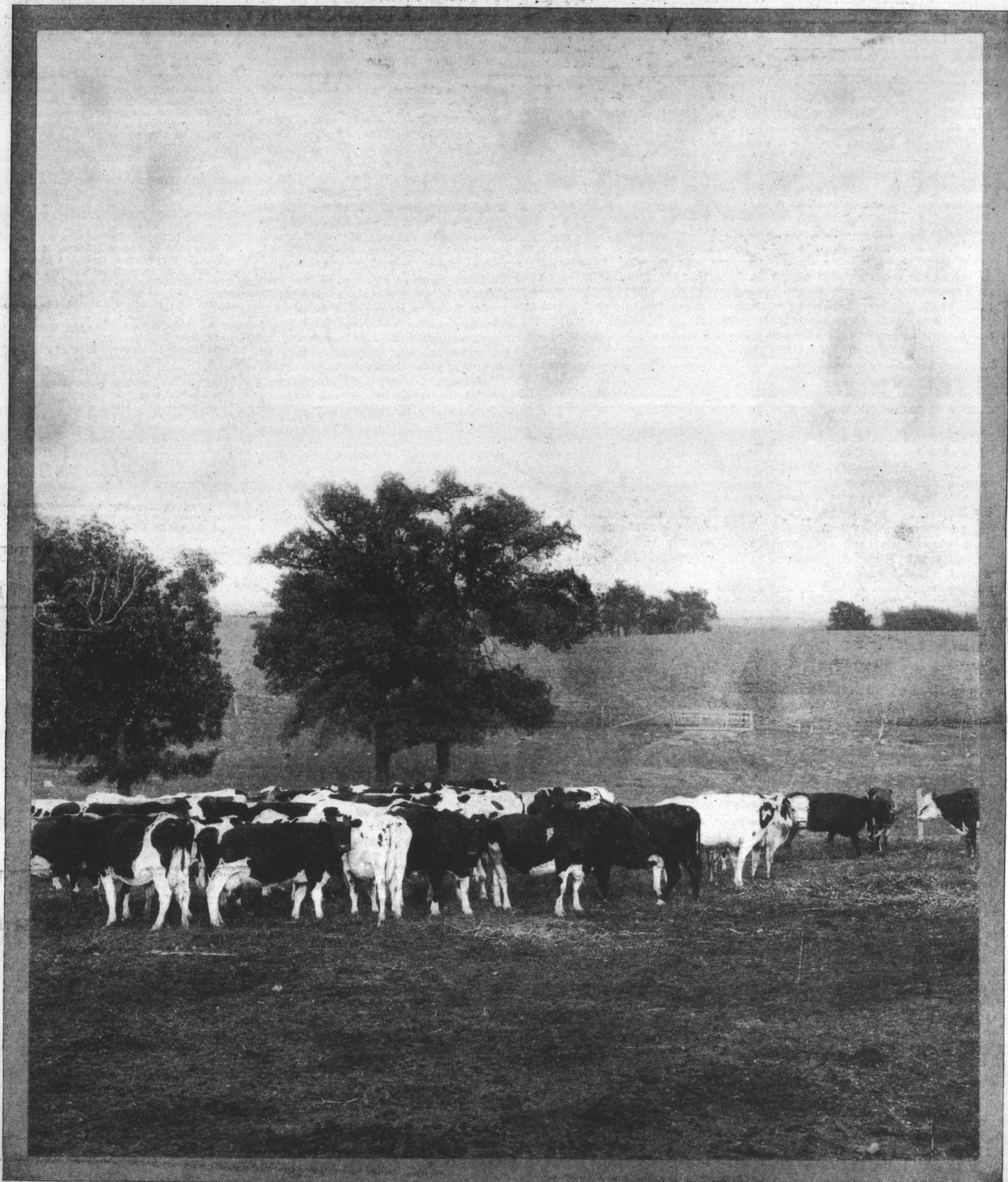
AND LIVE STOCK JOURNAL.  
PUBLISHED WEEKLY. ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural, and Live Stock Journal in the State.

VOL. CXLV. No. 10  
Whole Number 3852

DETROIT, MICH., SATURDAY, SEPTEMBER 4, 1915.

50 CENTS A YEAR,  
\$2 FOR 5 YEARS.





# The Michigan Farmer

Established 1843.

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39 to 45 Congress St. West, Detroit, Michigan  
TELEPHONE MAIN 4325.

NEW YORK OFFICE—41 Park Row.

CHICAGO OFFICE—604 Advertising Building.

CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.

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### TERMS OF SUBSCRIPTION:

One year, 52 issues.....50 cents  
Two years, 104 issues.....1.00  
Three years, 156 issues.....\$1.25  
Five years, 260 issues.....2.00

All sent postpaid.

Canadian subscriptions 50c a year extra for postage.

### RATES OF ADVERTISING:

40 cents per line agate type measurement, or \$5.60 per inch (14 agate lines per inch) per insertion. No advt. inserted for less than \$1.20 each insertion. No objectionable advertisements inserted at any price.

Mem Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as second class matter at the Detroit, Michigan, postoffice.

DETROIT, SEPTEMBER 4, 1915

### CURRENT COMMENT.

#### The Business of Farming.

The first article in the series devoted to the discussion of different phases of this special topic, published in a recent issue, was a strong appeal for simplified farming. By this term the author meant the concentration of the farmer's efforts along a few lines only, in which he would become a specialist. In another column of this issue will be found an article advocating greater diversity and presenting arguments intended to show that by specializing along several or many lines a good manager is more likely to make a business success on the farm. Still another article of this series will appear in a later issue under the title, "The Farm Complete," in which the author introduces still other elements which he considers essential to the highest business success on the farm.

It is, however, significant that each of these writers who are prominent and well-known Michigan farmers, takes into account other factors besides mere financial success in the discussion of farming as a business. Each writer has taken cognizance of the fact that farming is a life as well as a business, and that complete or even satisfactory success on the farm means a home and community life approaching the ideal in character, as well as material success as shown by the cash income from the farm business.

It is unquestionably true that the home and community life is so much a part of our agriculture that it must be considered in connection with any discussion of farming as a business. It is undoubtedly true that very many farmers have made an enviable financial success in the operation of their farms and have yet fallen far short of making a complete success of the business of farming. To neglect the factor of the home or community life in working out a business scheme on the farm is almost as great a mistake as the haphazard method of farming without any definite business plan, which was so common a generation ago and which unfortunately has not yet become so uncommon as to be noted as a marked exception to the general rule.

If we summarize the objects to be attained in the business of farming, we would perforce be obliged to put material success at the top of the column for the reason that it is the means to the end of success along other equally desirable lines. Given material success, every farmer should make it a part of his business to make the home life on the farm a greater

success from the standpoint of comfort and enjoyment as measured by every member of the farm family; first, by the installation of labor-saving devices in the home, then by the addition of comforts and simple luxuries, and last but not least, by making the home and the home life attractive from every standpoint.

In the meantime, the community life should not be neglected, because it is only through the development of a community spirit that the social instinct can be satisfied with a maximum benefit to the individual family and the community at large. These factors of success in the business of farming are too often left for future consideration by busy men who are bending their every energy toward the accomplishment of material success. It will, however, be profitable to pause for sober thought and consideration as a means to the end of achieving a more complete and gratifying degree of success in the business which we have made our life work.

In another column of this issue will be found an account of a city man's farm vacation, in which the writer takes occasion to criticize the management of the farm on which his vacation was spent, and to make other criticisms and suggestions which have a general, rather than a local application.

So far as the question of farm management is concerned, criticism from such a source is quite likely to be read with a smile by the average farmer of experience. Quite generally, too, the smile would be warranted, since the limited knowledge of the actual business difficulties encountered on the farm which the average city critic will possess is pretty sure to disqualify him in the matter of specific criticisms and advice.

It is, however, a fact that such criticisms are often much more worthy of serious consideration than the average farmer reader may realize. Even manufacturers of many years' experience have found it profitable to employ so-called business experts to make surveys of their business and offer suggestions by which same could be made more profitable. It is a fact that a man with an eye and mind trained in the matter of observation may see at a glance some glaring defect in the quality of management given to any business with which he is not familiar, while one who is in constant touch with the business may overlook the point as a mere matter of habitual familiarity.

In any event, this particular criticism contains profitable food for thought on the part of many Michigan Farmer readers. There is no question but that many steps could be saved in a majority of farm homes by the installation of simple conveniences which could be cheaply installed, such as running water in the home where a wind mill is available. There are also very many ways in which the loose ends of the business might be gathered up and a considerable aggregate saving made which would enable the addition of many more conveniences and comforts, to say nothing of luxuries. There is also a big field for progressive enterprise in the marketing of many farm products, including the line produced on the farm which gave this city man his point of view as related to Michigan agriculture. It is for these reasons that space has been given to the criticism above referred to. It is unquestionably good for us to occasionally "see ourselves as others see us."

#### Rural Transportation.

Great changes have occurred in the matter of rural transportation within the lifetime of the present generation. Indeed, within the memory of the "oldest inhabitant" rural transportation

has developed from the primitive ox team and lumber wagon to the steam railroad and trolley lines for long distance, and more recently the automobile for a considerable percentage of traveling for purposes of both business and pleasure.

Until recently the railroads and trolley lines, where these conveniences serve the public, have been employed almost exclusively for the transportation of farm products from the farm to the market. With the increase in the mileage of good roads which has marked recent years, the auto truck in some one of its many developments has found an increasing use for this purpose. Those who have made a careful study of the situation are quite generally of the opinion that the auto truck is bound to find a rapidly increasing use for the transportation of many kinds of farm products from the farm to the city markets within reach in the not distant future. Already many instances are related in which the auto truck has proven the most economical means of transportation for a wide variety of farm products to quite distant markets, and the auto trailer is everywhere finding an increasing use for a like transportation of farm products on a smaller scale. With a greater development of good roads, a development which is certain to be very marked in Michigan within the next decade, the use of power transportation of this kind is certain to increase to a very marked degree. Farmers who are so situated that this method of transportation is feasible or is likely to be feasible in the not distant future, should carefully study the proposition at first hand and be prepared to take early advantage of what has in so many cases proven to be the most economic means of transporting the products of the farm to available city markets.

The automobile exhibit at the State Fair, and other important agricultural fairs, is always of absorbing interest to farmers as well as city patrons. This year will see a great development in the exhibits of auto trucks, trailers and devices for converting pleasure cars into vehicles for the transportation of farm products. This exhibit is one which should be carefully studied by every farmer, since this is a new phase of the transportation problem in which almost every farmer in the state is sure to have a direct interest in the not distant future.

#### Look for them at the State Fair.

Every farmer who attends the State Fair, or any other agricultural fair of importance, makes at least a hasty survey of the exhibits of agricultural implements, farm products, etc. In every case he will find much to interest him, but it is questionable if as much benefit is derived from these exhibits by the average farmer as would be the case if he would make a mental note before attending the fair, of things in which he is particularly interested and of which he would find a further study profitable.

In looking through the advertisements published in his agricultural paper, every farmer sees goods advertised in which he is interested and which he would like to study first hand if the opportunity should present itself. In a large majority of cases that opportunity will be available when attending the State Fair if he will but make a mental note of the matter and carefully look over the exhibits with that object in view. The same thing is, of course, true to a more limited extent at other fairs, but every farmer who attends the State Fair next week, as every farmer in Michigan should who can possibly arrange his affairs to that end, should begin the fair season right by following out this suggestion. A good way

### HAPPENINGS OF THE WEEK.

#### Foreign.

The European War.—The Austro-German armies continue to press back the Russians along the entire eastern line excepting in Galicia and at the extreme north near Riga. In the latter district the Czar's forces have been fighting desperately and appear to have stayed the advance on that city. During the past week the Germans have captured Brest-Litovsk on the Bug river, which is considered the strongest fortress in Russia. They have also taken over Ossowetz on the Narew and Kodno on the Niemen. The Russian third line defense now extends from Riga through to Dvinsk, Vilna, Lida, Pinsk, Rovno to Kamenez near the Galician frontier. The Allied forces are vigorously pushing their land and sea campaign against the Turks in the Dardanelles. Some success has attended these efforts since the British landed a large force a week ago which practically cut off the communication of the Turks defending the Gallipoli Peninsula. Further landings have been made which has given the general opinion that the effort to open the water course is to be prosecuted with great vigor. The Italians report successes in the Strina Valley and in other nearby points where the Austrian forces have been defeated and war munitions captured. Along the western front artillery duels constitute the main activity of the forces. The French, however, have conducted a number of aeroplane raids upon German towns and munition factories. It is reported that a Canadian transport was torpedoed off the Scilly Islands and a thousand men lost. This report is not verified.

Japan has notified Russia that she is preparing to mobilize her entire industrial resources to supply war munitions.

Gen. Hugh L. Scott, chief of staff of the United States Army, has returned to Washington from Mexico where for several weeks he has been doing special work for the State Department in furtherance of the Pan-American peace plans. The time is near at hand for the next Pan-American conference, but no disclosures have been made as to what the next step in the program will be.

Progress is being made in an effort to open direct trade on a large scale with Russia. The two governments have been discussing the matter for several months past and now the matter of finances and transportation arrangements are being completed by business men. It is expected that the American cotton market will be greatly improved through this outlet for the product.

#### National.

Three powder mills were blown up in this country Sunday night. One mill was located near Acton, Mass., and the other two near Wilmington, Del. Two persons were killed.

The United States submarine F-4, submerged outside the Honolulu harbor since March 26, was re-floated on August 29.

There seems to be a very general opinion among business men throughout the country that trade is improving rapidly with a confidence developing that promises to overcome all obstacles. While exports constitute an important factor in the present progress and outlook, domestic orders are increasing in number and size while financial conditions are unusually favorable for the broadening out of general business operations.

Governor Carlson, of Colorado, has begun an investigation into rumors that the miners' union is working to hinder the reorganization of the state guard. The governor has also severely criticized the statements of Mr. Walsh, chairman of the Federal Commission on Industrial Relations for the latter's statements regarding political and industrial conditions in Colorado.

Women suffrage workers will hold their national convention in San Francisco next month and during the first week of December they expect to rally in Washington and make a great demonstration before Congress.

The Pennsylvania Railroad is planning to extend its lines to Detroit.

A new battery designed by Thomas A. Edison, the inventor, and tested out during the past year at the Brooklyn Naval Yards, has satisfied the authorities as an efficient battery for providing submarine motive power. Mr. Edison however, insists that the battery be given a thorough test in actual submarine work before being accepted by the Naval Department. The chief advantage in the invention lies in the elimination of poisonous chlorine gases.



## The Successful Farmer

THE article in your issue of August 14, on "Simplified Farming," has been read with interest. It is encouraging to note how many farmers are beginning to look seriously to the broader phase of farm life. Until country people recognize the importance of this side of country life more generally, the farming community will miss some of its best assets.

Experience teaches the writer that the greatest drawback for a community life in the country is not so much diversity or lack of "time" as it is individualism. We have reached the stage in our rural life where a community spirit must be developed in the interest of all the people or country life cannot hope to compete with the life of cities. Farmers, like every one else, always get time for the things they wish to do most. Many have not seen the necessity or formed the habit of occasionally forgetting their personal business for a little time, and help do those things in their neighborhood that are worth while. We will surely rise to this emergency as we come to see the need of such effort. Our civilization is advancing by leaps and bounds. Things adequate for yesterday do not go today, and tomorrow—well, we must make ready for the necessity and seize the opportunity as soon as possible.

### Some Unsolved Problems.

Transportation and marketing are together one of the greatest problems the American farmer must solve and until he organizes his forces and looks to concerted action this fact will be a great power against division of labor. Last fall the writer saw good apples rotting in orchards because they were too cheap to move; in Chicago they went to the trade at five cents each. At the same time potatoes were slow in western Michigan at 25 to 30 cents. In Chicago they went to the trade at from 75 cents to one dollar a bushel.

### The Busy Farmer.

After studying the community problem as it has been found in a considerable section of Michigan and seeing it operate in many farming communities, we have been forced to the conclusion that it is not diversity, high-priced stock, poverty or "a half-hearted whack at many things" that stands in the way of community welfare. We have visited many farmers with just one specialty that never had a minute's time for things outside of the farm. Also we have seen many busy fellows with several enterprises that had time for anything worth while. Some of the finest tended crops in Michigan this year are planted in small areas while some of the heavier enterprises are sorely neglected. We can cite many cases to prove that this is not a factor in the problems under discussion.

Again, it is not prosperity that makes people responsive to a fuller country life. Many of the most seclusive farmers have farms clear and loan money. Many farmers paying considerable sums for interest listen to the voice of the community. In our opinion it will be easy to prove that this phase of the subject does not meet the situation.

### Farm Surveys Favor Diversity.

The farm survey records taken by our Michigan expert, Mr. C. P. Reed, all go to show that farmers quite generally need to diversify more if we take as proof their labor income. Here the records show that "expensive" live stock is one of the best ear marks to profitable farming. The man that has developed a pure strain of registered stock has given the same quality of effort to other things on the farm and the results show in his labor income. The farm survey records also prove that the average man that plans his farm so he can "rest" win-

ters and take life easy pays dearly for it in his income. Regular and abundant work is the farmer's best asset. But here, as in all else, he must be temperate; thoughtful, and save some good time for his intellectual, community and national life or he does not measure up to the American ideal that all thoughtful people are hastening to emphasize. It is rapidly growing to be a part of our religious ethics to stand for a better world; a righteous nation, a great state, an ideal community, an efficient country school, a home just as complete as we can afford to make it, a business run for the very best there is in the farming game and human lives aimed at the best service we can command.

### The Important Factors.

There are two powerful factors at work that will forward this righteous cause mightily. They are personal endowment and attitude. The farmer that commands the situation will win out in the farming game whether he has a farm given him or must earn one. He will win in this game in spite of ordinary obstacles if he specializes in one line of farming or finds it to his satisfaction to "specialize" in three or four enterprises. The man that "takes a half-hearted whack" at one or a half dozen lines is "down and out" from the beginning. We are coming more and more to the time where true efficiency speaks in unmistakable tones, while the hit and miss man must fall a victim in every battle.

Given "efficiency" the farmer with an attitude and aptness for community life is bound to develop qualities of leadership and become a force for good that all must respect and later recognize. The farmers who rally to this splendid flag that heralds a richer and fuller country life will perform a noble service to their country and their time. Those who desire to balk this movement and through jealousy and opposition endeavor to discourage or even crush this budding opportunity must ultimately pass from the stage of action as traitors incarnate. Given the opportunity let us have lives, heart and ambition to ever stand for the greater rural life.

Shiawassee Co. C. B. Cook.

### ALFALFA SEEDED IN OATS.

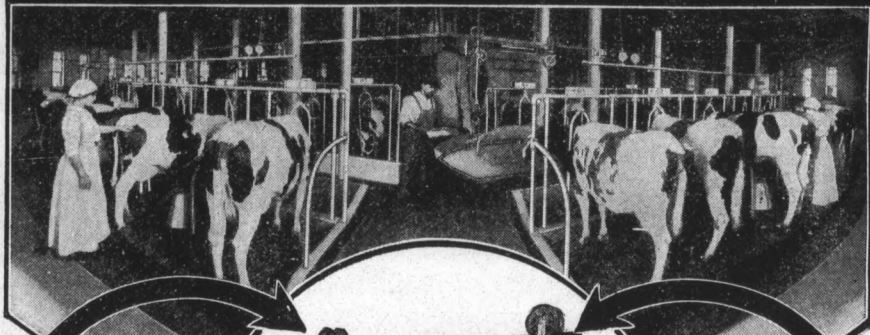
Early in the spring I fitted ground for alfalfa and sowed the nurse crop of oats, but on account of the continual rain was unable to sow the alfalfa until about two months ago. Previous to sowing I worked the ground well and no oats remained in sight, but now I have a good catch of both oats and alfalfa. Will the oats injure the alfalfa? Would you advise cutting and raking the oats or will they die out without injury to the alfalfa?

Cass Co. G. W. C.

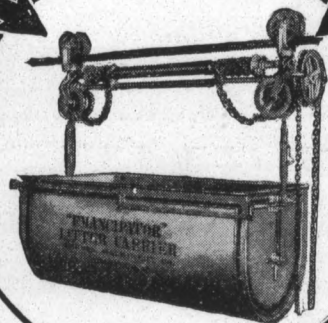
It is difficult to advise without knowing more definitely the stage of growth which has been attained by both oats and alfalfa. The method pursued with this seeding should, in the writer's opinion, depend altogether upon the progress of the crop and the climatic conditions which prevail. Up to date there has unquestionably been sufficient moisture to keep both crops plentifully supplied. If this situation continues throughout the season and the oats do not make too heavy a growth, no harm would be likely to come to the alfalfa seeding because of the presence of the oats on ground. On the other hand, if the alfalfa reaches its maximum growth and sends up new shoots at the crowns before the season is too far advanced, it might be better to remove the oats as suggested. Something would, of course, depend on how thickly the oats were sown.

Problems of this nature must be solved in the light of local conditions, and general advice is not of great value in their solution.

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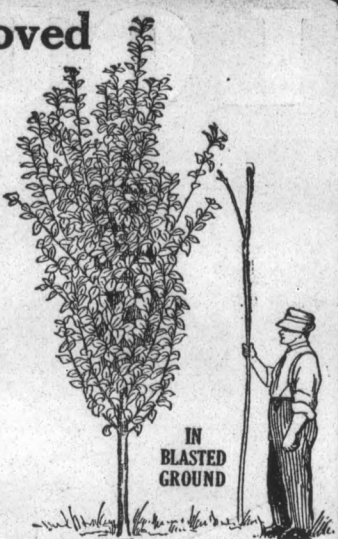
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## A City Man's Farm Vacation

The writer, an office man of Detroit, was recently allotted a number of days' vacation, was confronted by the question how to best use the time for both mental and physical benefit. Love of outdoor life, particularly that relating to gardening and horticulture, led me to choose a place less than 100 miles from the city, where nearly 30 acres was devoted to variety of crops; besides a large area to flowers for the market.

On arrival, I found the place literally "taken with weeds," and the first call was for relief from these pests. After a few days spent under direct rays of a summer sun, was surprised in being able to stand the change from shady, fan-cooled offices, and while the long hours brought extreme weariness by sundown, yet the refreshing sleep and rest contributed very much to a better state of health.

Being a constant reader of your journal, have found its columns at times containing articles on "Problems of the Farmers," among these being the difficulty in securing, and retaining capable help. After my brief experience, and in an avocation delightful to me, with an opportunity to study some of these questions, I am no longer puzzled why some farmers cannot hold competent hired men and women. The surroundings were so unattractive, the absence of every convenience so noticeable, that, too, so common among agriculturists, it is surprising that any help is obtainable whatever.

The plan of work, the carrying on of it, and the whole unsystematic management of what would otherwise have made a fine investment, was so observable, that it was sufficient to thoroughly disgust me. Small fruits that should have given returns of \$500 did not bring over one-fourth that sum, through careless means of marketing. The other crops were principally in a backward state, caused by the life-choking activity of thriving and vigorous weeds; in fact, it seemed impossible to keep up with necessary duties by lack of proper help at the right time.

The farm was equipped with well and windmill, but every particle of water for household purposes had to be carried by the women for 150 feet, while much of this drudgery could have been prevented by the expenditure of a few dollars for iron piping. There was no washing machine or wringer to lighten the labor of the women folks. There was no bathroom, no bath tub, no lavatory conveniences whatever, so that life, even to those who called this "home" must seemed a misnomer, especially as they had all seen better things in days past.

Complimentary to them, I would say that any disgust that imbued me because of lack of these conveniences did not arise from any treatment accorded, for I found them whole-souled, and most exceptionally generous, serving a bill of fare each day, that would bring joy and good health to any, even a half-hearted city person. But right here I desire to impress your readers that it is my belief that it is just such mismanagement, such lack of the necessities that contributes to the difficulties in the farmer securing steady help. Even hired people see much of the world, and know what is customary, and needful, and will not submit to such neglect. One thing perhaps that would contribute to possibility of holding reliable help would be for the farmer to offer man and wife a house, a small plot of ground for garden, and the opportunity for both to work if they could, and the spare time be devoted to their own home, this would make a home feature that might induce many so-named "drifters" to settle down and be-

come both competent and reliable. Farmers might well ask themselves, "what have I to make it attractive for even a farm hand to work for me?" These are days of progress, days of machinery in which one man can do the work formerly done by a dozen, and do it easier, and by encouraging dependable men, the farmer is making it profitable for himself, and insuring the retention of help just at the time most needed. I consider that farmers have it with themselves to solve this question, and that good treatment is one great factor to settle it.

Wayne Co.

W. H. DAVIS.

### LILLIE FARMSTEAD NOTES.

Early in the season I congratulated myself on the fact that I did not raise any oats this season. This crop was affected by the dry spring. It looked spotted and unthrifty up to the very last of June. Then good rains, cool weather for the time of year was very favorable and at no time in my recollection did this crop ever improve so fast as during July. The result is a bumper crop in this locality. Yields of 75 bushels are common, 80 and 90 bushel yields are many, and some have produced 100 to 125 bushels per acre. I think these are the largest yields ever produced here.

Wheat, however, while a good crop is not coming up to April and May promise. June was too dry and cold. April warranted the opinion that we would have a bumper crop. The crop is averaging from 20 to 35 bushels per acre.

The field of red clover that I clipped about June 10 came on fine and was in full blossom before our wet weather came. I think it fertilized fairly well and that I will have a fair crop of seed. The field we harvested for hay was cut during the first days of July. There is a good growth. It is not yet (August 21) in full bloom. This good growth has been made during wet weather; now if we have some dry weather it may fertilize and produce a good crop of seed, possibly as good as the field left expressly for seed. But if the rains continue there may be no seed at all. Such is the uncertainty of a clover seed crop.

I am pleased with the experiment of doing my own threshing. We set the machine outside the barns and blew the straw into the mow very successfully. Instead of storing in the barns and then threshing, handling the wheat all over again, we unloaded directly to the machine. It is much less labor to pitch the bundles onto the self-feeder than to elevate them up in the barn, or to stack them. We were delayed some by rains, but we simply waited till the wheat was dry before commencing to thresh. I estimate it has cost me no more to haul and thresh this year than it did simply to haul the wheat last year. We did the job with a few men, and handled the straw more successfully.

The man who needs ripe corn this year is worrying right now. His crop has just nicely got the ears set. Will it mature? I hope so and so does he. It is possible to have the crop mature, but we must have some corn weather soon. For myself I am simply anxious. My corn is all sweet corn and only has to mature to the roasting stage. This is probable even in this late season. I wish it would hurry up. One field I would like to put into wheat. I may be able to do this but the time is short, and the nights are cold. We need corn weather. I still have faith we will get some.

A Kansas City telegram reports that the 1,500,000 acres of wheat beaten down in Kansas by rains and winds will not be a total loss, as farmers are sending out buying orders for flocks of from 100 to 1,000 feeding sheep.

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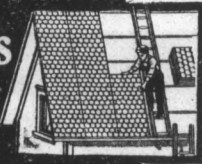
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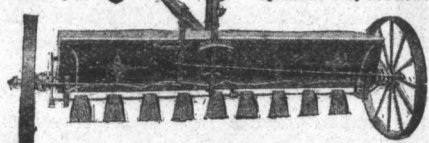
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### GROWING CLOVER ON A RUN-DOWN SOIL.

My experience indicates that the way to get the best results from manure is to put it on a sod, bluegrass preferred, in spring or any time in summer, and leave the sod to thicken and produce a heavy mat of humus to plow for corn or any cultivated crop the following spring. The cultivation of the crop will eradicate the bluegrass. Then lime the land in the fall and sow on a small amount of rye for a cover crop and to hold nitrate during the following winter. The spring following put on 300 to 400 pounds of good phosphate fertilizer per acre, put on spring-tooth drag, drag out rye and seed to clover.

A thick mat of clover will follow such a proceeding on land that absolutely refuses to grow clover before. This clover will have to be clipped as heads appear, probably more than once during the summer of seeding, so as to preserve the strength of the plants.

Such treatment has given me clover as of yore and if this clover is cut when in full bloom, if rain appears soon, I get a second cutting of a ton per acre and with two tons the first cutting this makes three tons per acre, making it a close competitor with alfalfa. Then this system gives me a chance to rotate my crops, which is another point over alfalfa. While I am quite an alfalfa enthusiast, my experience is that June or mammoth clover, which was once so easily grown on most Michigan farms, can be grown again as before. To grow alfalfa I have to make my acres exceedingly rich to get a paying crop. With half the fertilizer applied and half the lime, clover will give a paying yield. Let those who have already rich sweet land grow alfalfa. It is simply grand. But let those who have to reach in their pocket for the purchase of such plant food as the clover is satisfied with grow clover.

In conclusion, I might say that I start with a poor, thin, half-fed bluegrass sod—just here and there a little patch. The manure during the summer makes a fair sod for humus. Each year I treat a piece of ground this way as far as my manure, at the rate of nine loads per acre, will allow me. Each year makes it easier, as I can now draw on improved acres started that way a few years ago. As dry as it was with us last year, I had a splendid catch. Do not be misled by thinking that I do this on a good bluegrass sod, for you will agree with me that a good bluegrass sod will grow clover without any treatment herein described. Those who will try on land that has failed to grow clover will be surprised. The trouble with most farmers on clover sick farms is that they draw on their manure immediately through a grain crop, then another grain crop, and so on, and the clover is out of the question in most cases unless given a first or second show on manure, lime and phosphate. St. Joseph Co. JNO. RIENSTRA.

### SEEDING CLOVER WITH BUCKWHEAT.

In your August 14 issue, C. G. P. speaks of getting his buckwheat off in time to seed to clover this fall.

Last season, about June 25, I sowed buckwheat and seeded with clover. I have a good stand of clover and will cut for seed this year. This is on sand. June 20, this season, I sowed three pecks of buckwheat, one peck of vetch and four quarts of clover and have a fine stand of them all. Now will this vetch live through the winter? A few plants that happened to be in the buckwheat last year are doing fine now, and if it will do as well next year, I will surely have a fine crop to plow down in July. Isabella Co. J. N.



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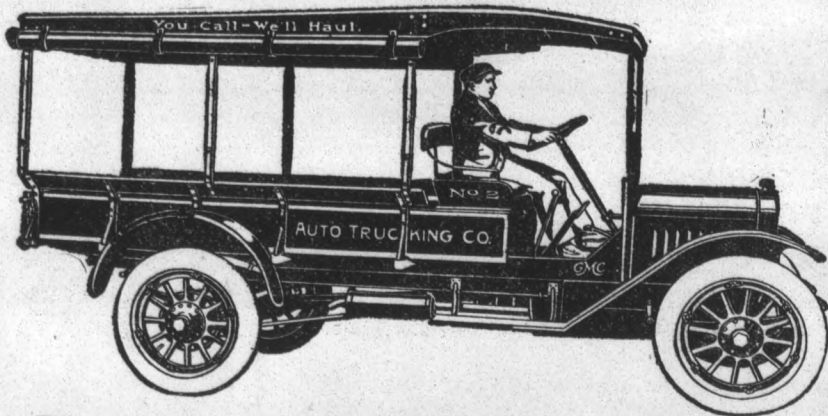
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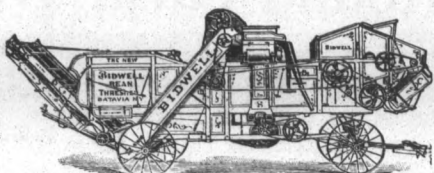
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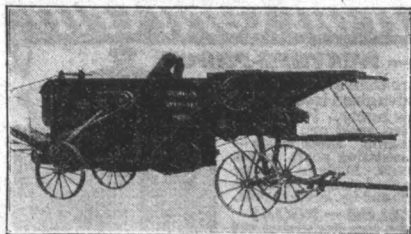
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## Growing Pork Cheaply

In his excellent article in the Michigan Farmer of August 21, W. F. Taylor, of Oceana county, emphasizes the value of pasture for partially grown hogs, and I think he underestimates the value of grasses and green feeds for pigs. He says: "While the pastures are not of much value for small pigs they practically cut the grain ration in two in the case of older animals." I suppose he means that it will require only about one-half as much grain to produce a given amount of pork, if hogs run to pasture, as would be required if they were being fed without the green feeds of any kind.

In feeding partly grown hogs for market I will agree with Mr. Taylor, but in regard to pasture being of little value to the small pigs, I think he has fallen into an error, for several reasons.

Whether pigs are farrowed in the fall or spring of the year, one of the first things to do to insure good health, is to encourage them to get out of the nest and roam around. I know of nothing better for the pigs to roam around on, and stretch out in the warm sunshine, than a carpet of green grass, be it June grass, white clover or June clover. A grassy place is much better for pigs to spend a good deal of time on during the day, than to remain in the nest and breathe foul air, a habit which usually begets diseases of different kinds, causing a slow growth early in life, if they live, and fixes an unthrifty habit of the system which stays with them a long time.

Another benefit received from the grassy place for the small pigs, is that they soon learn to nip at the grass and the tender leaves of the clover. The grass and clover eaten by the little pigs benefits them in several ways; it contains some of the universal elements which they need to develop bone and muscle; it encourages the habit of eating something besides the mother's milk early in life, and it helps to expand the stomach and increase the capabilities of the stomach to hold feed, and insures a more rapid growth while young than would be possible without the grass and clover.

This expanding of the stomach of the pigs while young is of greater importance if we wish to make gains quickly and cheaply, than many realize without giving the matter proper consideration. The more of the palatable and highly nutritious food the pigs can take into the stomach and digest, the more rapid the growth and the cheaper will the gain in weight be produced.

Many times I have been interested to see visitors laugh at the action of the little pigs that were running with the sows and would go out for a stroll on the grass in the morning and in the afternoon towards night. It was my custom to encourage them to come to a trough where I had some dainty feed, like scalded middlings and corn and oat chop, with the oat hulls sifted out, and mixed with either sweet whole milk or sweet skim-milk, sweetened with a little molasses. This feed was always given while warm. As soon as the pigs would reach the trough they would take hold of the feed with a relish which can only be manifested by little pigs. They would eat as long as they could hold feed, and lay right down by the trough and remain until they had recovered possession of themselves, and then stroll off and eat more grass.

Ordinarily they were fed by themselves twice per day, after breakfast in the morning and after dinner at noon. If fitting them for sale or to show at fairs, they were fed after supper, filling them up for the night.

Little pigs fed in the manner described while running with the moth-

er and on pasture, grow rapidly. It is not unusual to get them to weigh, if from thrifty ancestors, 100 lbs. each when three months old. In such cases the period of time in which they are small pigs is short. The thrifty habit has been fixed with them, and they are prepared to eat a good deal as they go along later, digest and assimilate the nutrient elements from the feed much more thoroughly than they could if they had been kept confined and allowed only the milk from the mother and not been allowed the grasses and clovers.

Pigs allowed to run to grass while small get the pure air, exercise freely which gives them good bone and muscle, as they never break down, develop large vital organs, and they are capable of resisting the ordinary diseases which are liable to attack small pigs that are confined to the pens or yards.

Pigs well started in the manner described can later eat the pasture and grain feeds and make greater gains for the feed consumed and for the time fed, than they can if they are neglected and poorly fed while young. As pigs make greater gain for the feed consumed while they are young, it must be apparent that in order to grow pork in the cheapest possible manner, one must give the little fellows free access to grass and the clovers or rape while with the sows, fix the thrifty habit early in life, which enables them to attain to good size and great vigor while young, which will make them the most economical pork producers, as they approach and reach popular market weights.

While I do not wish to pose as a critic or a voluntary adviser in the matter of selecting the stock from which cheaply produced pork can be made, yet I feel constrained to say that there is not enough attention paid to the stock from which the pigs are to be raised. The best is none too good, and the thrifty, vigorous hogs of good size that grow rapidly and mature early, will produce pigs that have the inherent characteristics within them, which enable them to consume large quantities of pasture feeds as well as grain feeds, and attain to good size in a short period of time, and make the kind of pork that is demanded by the consumers of today, in the cheapest possible manner. Given the right kind of stock from which to raise the pigs, give the pigs a show to eat a great variety of feeds, grasses, clovers, rape, peas or anything good for them, with the grains, exercise in the open air and be healthy, a comfortable, dry place in which to sleep, and so manage to feed them in a way that will keep up a constant, rapid growth from start to finish, and the battle for the production of pork cheaply will be won.

Wayne Co.

N. A. CLAPP.

Joseph Horan has returned from Louisville to Chicago, after having been stationed in the southern city since the first of June as a lamb buyer for Armour & Co. He says the Kentucky spring lambs have about all been marketed, with Louisville receipts this season about 40 per cent short of last year, but it was the most profitable season Kentucky lamb producers have ever enjoyed. He tells of the experience of Andy Saunders of Kentucky, in citing one of the highly profitable results from lamb production that came to his notice recently. Mr. Saunders bought 105 head of stock ewes last spring and marketed the ewes and their offspring in Louisville recently. The lambs sold straight at \$8.75 per 100 lbs., averaging 72 lbs., and the entire shipment netted their owner \$1,500 clear profit, which he regards as not at all bad for one little flock of ewes in a single season. One of the remarkable features of this experience was the successful raising of nine sets of triplets, 27 lambs.

There has been an unprecedented shortage in the supply of distillery-fed cattle this year, the deficiency being estimated on good authority as close to 50 per cent.



## Practical Science.

### LABORATORY REPORT.

BY FLOYD W. ROBISON.

#### The Acidity of Vinegar.

Under separate cover I am sending a 4-oz. bottle of pure apple juice of 1911 left outside in a shed until cold weather set in at that time, and then put in barrels in cellar and same has been there ever since. I wish you would test same to see if it has acidity enough to sell for cider vinegar and if not please advise me what to do so I can offer same for sale. Have used some for my own use when drawn from barrel and kept in pantry in the house, same forms a mother. What can be done to keep it clear as drawn from cask? I have about 150 gallons on hand, and on advice from the Editorial Department of Michigan Farmer have sent you this sample.

Ottawa Co. M. B.

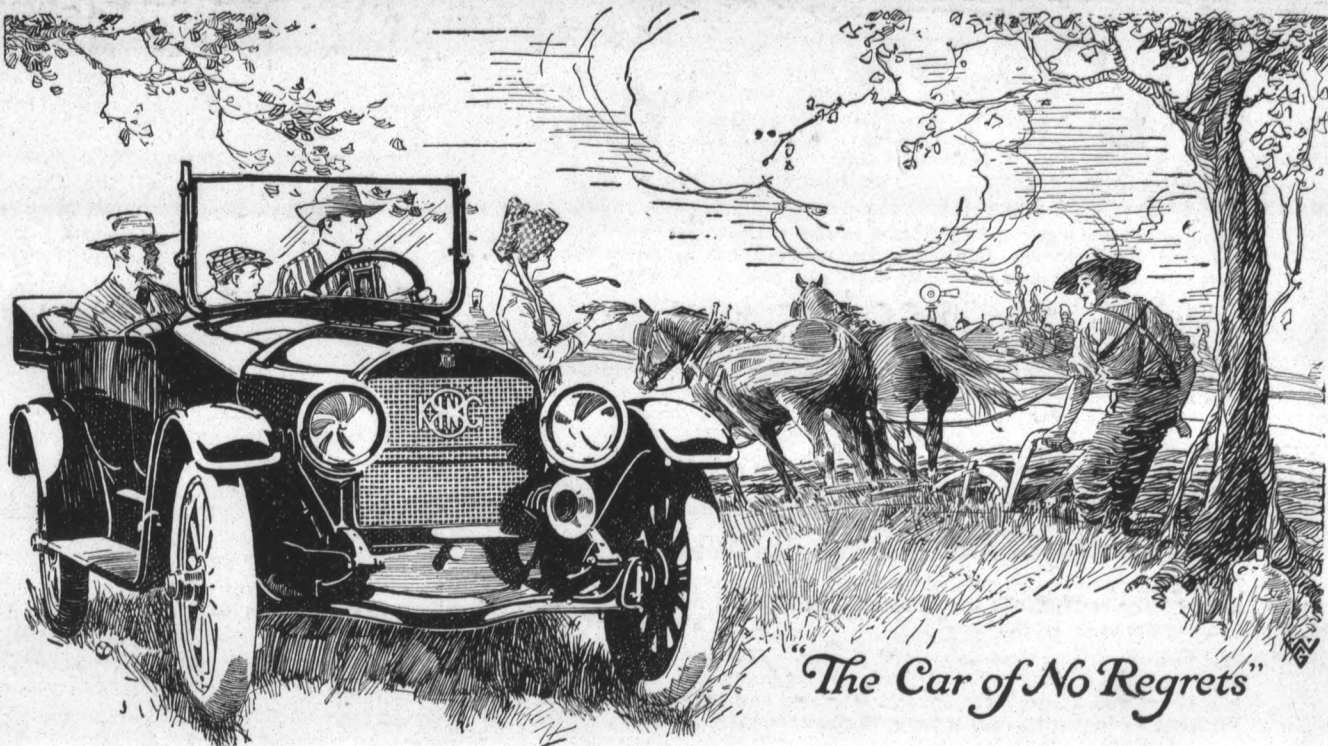
We have made an examination of the sample of vinegar submitted by the above correspondent and find as follows:

Acidity express as acetic acid 2.47 per cent.

The above analysis reveals the condition regarding farmers' cider vinegar which is a very common one. Since the enactment of pure food laws there has been a great deal of difficulty experienced by the farmers in disposing of their vinegar in the town market and naturally it has caused some considerable comment and dissatisfaction. The question has arisen at various times as to the reason of this condition. Farmers know whether their vinegar is pure. They know the product is the pure unadulterated or undiluted juice of the apple and naturally knowing this they wonder why their vinegar should be not only discriminated against but refused the markets of the state. This question has arisen on numerous occasions and food officials have recognized it and taken various positions regarding the salability of such a product as is represented by the above analysis.

Let us discuss briefly this matter in relation to the food law. On the statutes of Michigan is a vinegar law aimed at establishing the absolute purity of cider vinegar. This law provides first, that any product which is not produced from the unadulterated juice of the apple cannot be called cider vinegar. Obviously the vinegar as shown by the above analysis which is without question the unadulterated juice of the apple, under the above count would be considered cider vinegar under the statutes; just as Portia says in Shakespeare's Shylock, "the law hath yet another hold on you," for the statute goes on to say that in addition to being absolutely pure the vinegar must contain as well not less than four per cent absolute acetic acid. Here, then, is the crucial test. To be called a cider vinegar and to be sold as cider vinegar the product must not alone be pure but it must contain at least a certain definite amount of acetic acid. Why is this? The answer to this question as to in what the real value of cider vinegar consists; first of all, we may say that vinegar is valuable because of its acid content. In other words, if it were not sour we would not value it as vinegar. Obviously then, the degree of its acidity or how sour it is has much to do with its value. Assuming then, that it is pure, that is, that nothing has been added to it other than apple juice, the law is perfectly right and just in establishing a minimum of acid content or in other words, say how high the acidity must be in order for it to be marketed under the term vinegar. The consensus of opinion seems to have established this minimum at four per cent and public approval has sanctioned the placing of this minimum at four per cent by the Legislature. Obviously then, a vinegar with only 2.47 per cent acidity can not be sold on

(Continued on page 186).



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Hundreds of farmers are ordering silos now. They know, as you surely do, that this is the only way of getting full feeding value from their corn. You will save the price of your silo if you save this year's crop. A silo full of succulent and palatable silage is better than an empty crib.

Don't try to sidestep present conditions, you can't do it. McClure agents all over the country tell us conditions are about the same, that crops are not what they are cracked up to be, and the man with plenty of feed will have plenty of money in the bank this coming season.

### Nature Will Have Its Way

Neither you nor we can control the weather. You cannot stave off the frosts. You cannot take the moisture out of the ground that is preventing the crops from maturing.

But you can be prepared to save this crop. You can let it grow, give it every chance to mature, and after the first frosts you can put it into a Saginaw Silo, thus getting tons of fattening and milk producing feed. Without a silo you haven't a thing to show for your work.

With the unusual demand for live stock, prices will undoubtedly be high, and it is easy to see that feed prices will also be high. The silo is the only answer, both for the man who raises stock and for the dairyman.

### Now Is the Time For Action

You know these condition as well as we do, you only have to look at your own corn fields and those of your neighbors and you know that a silo is the only means of being absolutely sure of saving your corn crop. It will produce plenty of silage, but what else? Never before have the farmers of this country needed silos like they do right now.

### Immediate Shipment

This is our sincere message to you. You will thank us for it after your silo is up and your immature corn safely put away for next season's feeding.

All our factories are naturally busy working to supply the farmers of this country, but with our facilities we can ship immediately. You will have your Saginaw Silo in plenty of time for filling.

You know this Saginaw Silo, a permanent Steel-Built structure that gives the perfect silage keeping qualities of wood and the wonderful strength of steel. And you can get a Saginaw Silo made of Redwood or Siloed Yellow Pine—both permanent. The Saginaw Silo is your permanent insurance against unknown conditions. It will save your corn crop, not only this year, but every year. Take the bull by the horns, and don't let a day go by without wiring us.

You may wire us today at our expense. We will put you in touch with a Saginaw man. Delay means big losses.

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The McClure Co.



(16.)

## Value of the Cow Testing Association

As Demonstrated by the Fremont Cow Testing Association, Michigan's First Association.

THAT accurate book-keeping is of direct financial value to the dairyman has been fully demonstrated by the history of the Cow-testing Association at Fremont, Mich., according to a recent statement of Helmer Rabild, of the United States Department of Agriculture. During the nine years of its existence the members of this association have more than doubled the net profits.

In 1898, Rabild, a native of Denmark, settled near Fremont and engaged in dairy farming. Later he had charge of a proprietary creamery at Fremont. As manager of the creamery he became well acquainted with the farmers.

### The Beginning of the Cow-testing Association Idea.

In 1905 Rabild was appointed upon the State Dairy and Food Commission. Familiar with the results of co-operative effort in his native land, the Dane conceived the idea of establishing cow-testing associations in Michigan. At that time there was not a single organization of the sort upon American soil, and the plan was not considered practical for our conditions.

However, Henry Rozema, a progressive farmer of Newaygo county became interested in the new idea. In company with the state official he spent several days in calling upon his neighbors and explaining the plan.

A meeting was called on December 26, 1905, and an association was formed. Each member agreed to pay \$1 per cow, to furnish board and lodging for the tester while employed at the farm and to convey him to his next stopping place.

The next problem was to find a man

attention would doubtless have been given to increasing the milk flow.

### A Profitable Investment.

In 1906 the net profit after deducting the cost of feed was \$22.23, while in 1913 it was \$51.08, an increase of 129 per cent. That the greater profits obtained at the end of the period were due to better stock and better methods is clearly proven by the fact that although the price of butter-fat advanced 51.1 per cent, yet the advance in the cost of feed was even greater, being 55.5 per cent. In other words, the dairyman who had not improved his methods was in no way benefited by the higher prices paid for butter-fat.

Of course, there have been obstacles and discouragements to meet, but in spite of these the association has lived and prospered. The early plan of conveying the tester to the next stopping place was found in practice to be decidedly irksome, especially during the busy season. Then, too, sometimes a member would withdraw during the middle of the year. In at least one case the tester departed before fulfilling his contract, leaving the association with an incomplete record.

In view of these difficulties it was found best to reorganize the association along new lines. Under the present by-laws, each member gives his note payable in quarterly installments for \$18 in case his herd numbers less than 15 cows, or for \$24 where there are 15 or more cows. One month's pay is withheld from the tester, who is hired by the year. The tester, who is at present Mr. Gilbert Kempf, of Fremont, provides his own means of getting about. Through the associa-

Yearly averages per cow of the seven herds that have been continuously in the association since its organization follow:

Table I.					Table II.				
Year.	No. Cows.	Pounds Milk.	Fat Test.	Butter-fat lbs.	Year.	No. Cows.	Tot. Cost.	Profit.	Value of Fat.
1906	50	5885.0	3.92	231.1	1906	50	\$31.65	\$22.23	\$53.88
1907	60	5952.7	3.94	234.6	1907	60	39.79	28.44	68.23
1908	69	6095.4	4.15	253.3	1908	69	40.45	28.75	69.20
1909	72	6302.6	4.28	269.7	1909	72	42.05	41.93	83.98
1910	79	6208.8	4.28	265.7	1910	79	49.52	40.70	90.22
1911	80	6411.0	4.38	280.9	1911	80	48.48	32.17	80.65
1912	80	6154.8	4.45	173.9	1912	80	44.46	51.27	95.73
1913	69	6123.4	4.64	184.7	1913	69	49.27	51.08	100.35

Data derived from the Bureau of Animal Industry, United States Department of Agriculture.

fitted to do the testing and keep the records. Peter Munson, a Massachusetts watchmaker, was secured by an advertisement. Munson was a native of Sweden and had been trained in cow-testing work in the "old country." He began work January 1, 1906.

### Increase in Production.

Exact data are not available as to the production of the herds in the association before that time. However, the average production of butter-fat per cow in Michigan in 1905 was about 145 pounds. It is believed that these herds were little if any above the average. Only one had any pure-bred animals, the others being grades and native cows.

The results of the first year's work were shown in an average production of 231.1 pounds of butter-fat. From that time on there has been a gradual but steady improvement in the performance of the herds, the average yield of butter-fat in 1913 being 284.7 pounds, showing an increase of 53.6 pounds.

Inspection of Table I will show that the gain has been chiefly made by securing a higher test rather than by greatly increasing the milk flow. During the period the average percentage of butter-fat has been raised from 3.92 to 4.64, an increase of 32.7 per cent, or approximately one-third. During the same period the milk flow has been increased 238.4 pounds or only 4½ per cent. These herds are kept primarily for butter production. If the object had been to sell whole milk, greater

tion the farmers have been brought into closer touch with the Agricultural College and the work of the various experiment stations. They have become regular attendants at the meetings of the State Dairymen's Association and at the National Dairy Show.

Kalamazoo Co. C. A. ROWLAND.

### ENSILOING BEET TOPS.

I am growing 40 acres of sugar beets this year. I have also seven acres of corn drilled. I intend putting up a silo, for the beet tops and corn. Have been told that there was an article in the Michigan Farmer describing the method of filling the silo with same. But it must have been before I got the paper. Would it be too much trouble for you to give me a few particulars? Would it be advisable to alternate beet tops and corn, or should corn be put in first and then the tops? Should water be added in either case? What should be the method followed in feeding, and how much?

Sanilac Co.

R. K.

It will be impossible to alternate beet tops with corn if the corn is cut when it should be, as this will be before the beet tops are ready. The corn could, of course, be cut and shocked and held until the tops are ready and then mixed with them in the silo. I have done this with corn stalks and it worked well. There will be sufficient moisture in the beet tops so no more will be needed with the stalks, even though they be quite dry. It is better, however, to cut the corn and put into the silo when it is ma-



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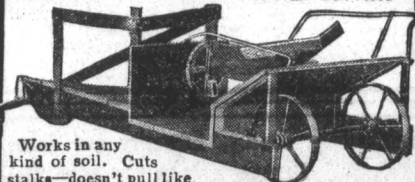
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ture and before it dries out. It makes better silage.

We prefer to feed beet tops only once a day, have always fed corn silage once a day and beet tops once a day. If too many beet tops are fed they will stimulate the secretive organs of the animal unduly. If the corn is mixed with the tops in filling the silo, perhaps this combination silage can be fed twice a day with no injurious results.

#### THE CREAM CAN TANK.

It now looks as though the ancient subject of better quality cream is going to have some real practical treatment. In the days of the shotgun or setter can, long before the separator cold water was used by nearly every dairyman to assist in creaming milk. During the stages of change from the shotgun can to the present gathered cream system, cold water seems to have been forgotten. Through all these years, dairy authorities, commercial and educational, have written and talked, pleaded and urged better quality cream, but we find ourselves today with a poorer quality of cream than ever before, and now comes the cream can tank, which is certainly a most practical solution of the problem.

Nature has richly endowed our land with an abundant supply of cold water. Under nearly every foot of ground in this great country is an inexhaustible supply. All we have to do is to make a simple application of nature's



A Practical Milk Refrigerator.

refrigerator, and we can keep our cream sweet and cool. People who live in cities buy ice and people who live in the country often wish they could. Why not use this cold water for a refrigerator? Make it serve both the dairy and household needs. With this in mind I have designed a cream can tank, and am indebted to Professors J. H. Frandsen and George L. McKay for suggestions. This tank is designed to hold two ten-gallon cans and two shotgun cans. One of these shotgun cans contains a skeleton filler with three compartments, into which can be put such articles as butter, meat or vegetables. The other shotgun can is for cooling down the morning and night's skimming, and the ten-gallon cans are the storage and shipping cans. Simple but efficient locks are provided to hold the cans securely in place.

This tank is 30 inches high and 32 inches in diameter. It is built of two-inch fir, and has a cover with two lids made of double material with insulation between. It has a water intake, which delivers the water at the bottom and an overflow outlet, drawing off the warm water at the surface. This can be connected with the stock tank or turned to any source where it is most needed. By attaching this to the water supply, refrigeration can be easily and cheaply provided. Well or spring water varies in temperature from 54 to 64 degrees F., perhaps an average of about 58 or 60 degrees can be obtained in the principal dairy sec-

tions of the country. At this temperature cream can be held for some time and kept sweet or in excellent condition. The general application of this method on the farm would result in added millions to the dairy industry.

The first step to improve the quality of the cream on the farm is to furnish a place to keep the cream, and any farm equipped with such a tank as described above will have little difficulty in turning out first-class cream, providing ordinary sanitary methods are used.

Nebraska.

A. L. HAECKER.

#### Farm Cheese-Making

NOW can I make and cure farm cheese, such as we buy at the grocery," asks B. N., of Eaton county, in a recent issue of the Michigan Farmer.

Mr. Lillie, in replying to the question, tells how to make cottage cheese which, I suspect, is not the information asked for. The question as worded was somewhat misleading. If B. N. had asked, "How can I make and cure cheese such as we buy at the grocery," I think Mr. Lillie would have been stumped for a reply. Possibly, he might have said that it could not be done.

#### A Cheese-making Community.

The kind of cheese-making I am carrying on is something of a unique industry that has been carried on by my family, and some of the neighbors for about 70 years. I have been told that this is the only neighborhood in the country where each farmer makes his own milk into cheese. I make about \$1,000 worth of cheese each summer, most of which is sold to our home merchants and the surplus sold to Detroit wholesalers.

Believing that B. N. would be interested in our method I will tell what I know about the making of soft Cheddar cheese, which is the kind we make. This cheese while not exactly like the factory made Cheddar, is not at all like cottage cheese. The morning's milk is strained into the boiler or vat containing the evening's milk and the temperature raised to 86 degrees F., when coloring is added at the rate of one ounce to 1,000 pounds of milk, and rennet extract at the rate of four ounces to 1,000 pounds of milk, then the heat is turned off and it is allowed to stand until the whey separates out clear, which is about a half hour. The curd is then cut into small cubes by knives made for this purpose, heat is turned on and the temperature gradually raised to 98 degrees F., during which time the curd is gently stirred to keep from packing. The heat is again turned off and the curd allowed to cook for about one hour, an occasional stirring being required. The time varies during these two intervals because of the difference in the ripeness of the milk when the rennet is added.

#### The Proper Cooking.

The required amount of cooking has been accomplished when the curd has a "shotty" feeling when being stirred, when it squeaks between the teeth or does not pack readily in the hands. When this condition is reached, the whey is drawn off and the curd salted at the rate of one-quarter of a pound for 100 pounds of milk. The curd is then placed in molds and pressed for 24 hours. At night the cheese should be turned in the press. They are then placed on shelves in a warm room, turned every day, and are ready for use when four weeks old. This is a very palatable and nutritious cheese, cures rapidly but is not a long keeper.

Lapeer Co.

C. K. FARLEY.

Raise more feed and buy less would be the best plan for those whose cows are not returning a fair profit. Alfalfa and clover are two essential feed products on a dairy farm.

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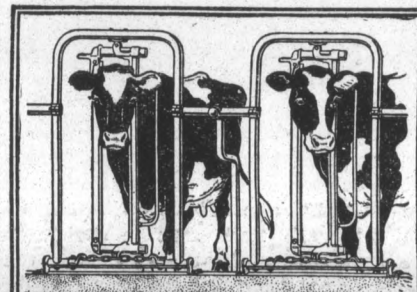
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## Planting Strawberries In the Fall

THESE are several pretty good reasons why strawberries should be planted in the fall. There is only one reason I know of why they should not, and that is the weather. Sometimes the weather man is good and we can then plant with a much better chance of success than we can in the spring.

Very often it is hard to get plants in the spring in time to plant them early, and if they are not planted very early they seldom make as good a growth as the fall planted sorts, even if the weather is not very favorable. Plants can always be had in the fall and they are young, strong, and with the full vitality. Plants shipped in the spring are generally dug in the fall and kept in cold storage until spring, and they are much better planted in the ground. If the plants could be dug and planted as wanted they would be all right set in the spring, but they lose so much vitality when stored all winter that a very severe loss is apt to result.

### Plant Early in the Fall.

Plant early in the fall if the soil is in any condition, for the longer they get to start and strengthen up before frost the better crop of berries you will get the next season. If they are grown to the single plant you can cut several runners and make several fruiting crowns in the two months of growing season you should have in the fall. If you grow the matted row they should set several plants to each one planted. Training these new plants so as to have them in a direct line will make the picking and mulching easier.

The soil for the strawberry patch should be made very rich. Rotted manure should be used and well incorporated with the soil. A loose loam is best for them and some sand will lighten it. After the crop is gathered each season, and again in the fall after

the plants are dormant they should have a dressing of some good fertilizer. I used droppings from the hen house scattered thinly, and the results were all I could desire.

In fall planting firming the soil about the plants is even more important than in the spring, though it is important at any time. In the spring rains will generally come in time to do it if you do not, but in the fall there is very apt to be some dry weather, and the plants will often have to start growth on the moisture in the soil when they are planted. This being the case it is necessary to firm the soil well about the roots and loosen a little on the surface so the roots will be in good contact with the soil around them and so the dust mulch will stop evaporation of the moisture from the surface. Saving a little moisture helps when the young plants are battling for life. If plenty of rain comes there will be a rapid and sturdy growth. If it stays dry the growth will be slow, but if well planted when the soil was in good condition they should make it all right. If late rains come and frost hangs off they can do a wonderful amount of growing late. They will be all ready for business in the spring.

### Potted Plants Start Well.

Potted plants of strawberries are often sold in the fall and they will be certain to start off well, for the roots are not disturbed in the planting. They have only to take hold of the new soil with all the old roots in the old soil to give them a start. These plants are more expensive, but they are much more certain. With them you are sure of the stand, even if the weather is bad, for it can hardly be bad enough to kill these well established plants. They should make stronger plants and bear better than field-grown plants transplanted.

Kansas.

L. H. COBB.

## TROUBLE DEPARTMENT.

### Hot Water for Borers.

Can you tell me what degree of heat to get water to kill peach borers without injury to trees? I have heard of hot water being used around the base of peach trees to destroy the borer, but would like a little more information along this line.

Genesee Co.

E. S.

We doubt very much whether hot water would be of any value in killing the peach borer. As the borer has usually tunneled into the tree a considerable distance, the hot water would not come in contact with it, and therefore would have no effect. The application of hot water to the trunks of the trees, while not immediately injurious will cause the bark to become tender.

The only satisfactory method of ridding the trees of this pest is digging for them either in early spring or fall or if the borer is very bad, at both times. A good preventive measure is to mound the trees with earth to a height of about 12 to 15 inches early in the spring, in order to prevent the laying of eggs at the base of the tree. This earth can be removed late in June or early in July.

### Setting a Blackberry Patch.

My land is sandy but will grow fair corn and clover, and wild blackberries do well here. Would it be advisable to buy nursery stock to set an acre? If so, what kind? How far apart in the row and how far apart should the rows be? Should they be manured in the hill or around the plant?

Lake Co.

M. H. T.

Some of the hardy blackberry varieties from a nursery would be best to use because the wild fruit varies so in size and flavor that you could not market it to advantage. The cultivated varieties would also undoubtedly do better under cultivation than the wild berries. For varieties I would suggest Rathbun for early, Eldorado for midseason and Mersereau for late

season. The rows should be about six feet apart and the plants three and a half to four feet apart in the rows.

If wild blackberries do well and if the ground grows good corn it will not be necessary to use any manure or fertilizer when setting the plants. Blackberries and raspberries do best on soils that are not over rich and do not generally need much fertilization with manure. If you find that the patch is not making good growth after it has started an application of manure would then be of advantage.

### Rose and Carnation Diseases.

I have a couple of rose bushes intended for house culture, Arrippa and Hermosa, also an Otahte Orange, and carnation plants I got last fall. The carnation grew for a time and had one blossom early this spring; since then it has kept drying up till there is nothing but a stub with a few fresh starts but does not grow any more. The other plants lose their leaves as fast as they grow out till they are getting so they do not grow much. The rose bushes had green aphids on them till I got a nicotine preparation from a druggist and put two teaspoons in two quarts of water and dipped them. Have not been bothered since with the aphids but bushes do not grow. I don't think I made the bath too strong as the directions were two to three teaspoons in a quart of water. Can you tell me what is the trouble with my plants? The carnation stub seems to be drying up, the bark is cracked and dead looking.

Menominee Co.

Mrs. C. M.

It is quite probable that your roses have been troubled with a fungus on the foliage, probably either the powdery mildew or the leaf blight, both of these diseases attacking the leaves and if uncontrolled, causing them to fall. Dusting the plants in the early morning with flowers of sulphur while the leaves are still moist is the simplest method of controlling this fungous disease.

It is rather difficult for me to say as to the cause of your trouble with the carnation plants, but providing your

soil conditions are proper, with good drainage and a proper supply of plant food, it is probable that these plants are also troubled with a fungous disease. Stem rot and carnation wilt are quite similar to the conditions described in your letter. Good drainage of the soil, proper ventilation in case the plants are grown indoors and anything that will favor a rapid, vigorous development tends to prevent these troubles. Carnation rust, causing the small, dark, reddish, powdery formations on the foliage and finally causing the plants to die, is one of the most common diseases of this plant. Good ventilation and spraying the plants with Bordeaux controls this disease.

Stem rot in carnations causes the killing of the stem of the plant right near the base. A moist top soil and damp conditions favor this disease. Also setting the plants too deeply in the soil is liable to cause it.

The Rose nicotine applied to control the aphids has probably not injured your foliage or caused the trouble you are having in their development. It is not a spray, however, for fungous diseases.

Mich. Ag. Col. C. P. HALLIGAN.

## THE ACIDITY OF VINEGAR.

(Continued from page 183).

the markets of the state, not only in justice to other manufacturers who have facilities for bringing the acid content up by proper manufacture, but also in justice to the rights of the consumer as well. The difficulty in this particular case undoubtedly lies in the fact that the vinegar stock has not been stored in a place where acidification or rapid souring would take place. It would be well to draw this vinegar off and to filter through a cask filled with corn cobs. In this way the "mother" will be removed and if the vinegar is poured back and forth several times upon the barrel filled with corn cobs and allowed to drain off underneath, acidification should take place quite rapidly and the vinegar will soon become sour enough to make it saleable. This process should take place where there is a good supply of air and where the temperature is about 80 degrees F.

We will go into this question of farmers' cider vinegar again in these columns in a short time.

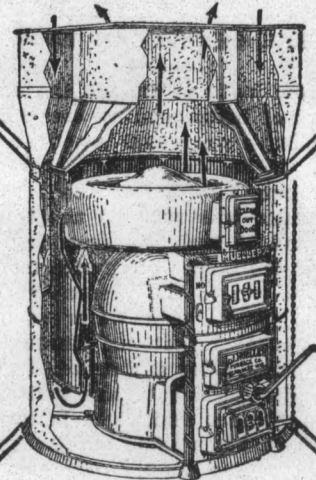
## FIFTY DOLLARS FOR A NUT.

The time has come when we need men who will tell us about the good wild nut trees of America. We now know how to graft them, so that the finding of them amounts to something. We have most surprising resources in the shape of rare nut trees, if we just knew where they were. As an example of these unknown resources, I will cite the recent discovery in Indiana of three or four of the finest pecan trees in the world. It took looking to find these trees from among the thousands of wild ones, but it is true that somebody, some boy, some hunter, some observant farmer, has his eye on nearly all of the extra fine nut trees in his neighborhood. He should tell the world about them, that's all. The way is easy—simply send samples of the nuts, with an account of the tree, to the secretary of the Northern Nut Growers' Association, Dr. W. C. Deming, Georgetown, Conn.

This association is made up of people who are interested in nut trees. They hold their annual meeting this year at Rochester, New York, September 1-2, and expect to see and learn about a lot of remarkable English walnut trees. This association wants your help so badly that it is offering money for it—\$50 for a hazel tree of American origin that can compete with the imported filberts; \$10 for a Northern pecan better than we now have, and \$20 for other nuts that are found by judges to be sufficiently valuable. Now send along your fine hickory nuts, shagbarks, black walnuts, pecans and hazel nuts. You would also be helping along this constructive work as well as yourself if you should join the association.

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# Magazine Section

LITERATURE  
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**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.

HOW many of the people using the common expression, "quick as a flash," have ever considered how quick a flash really is? When a gun is fired at any considerable distance there is an appreciable interval between the flash and the report, caused by the time required for the sound to travel to the observer; sound travels about 1,100 feet in a second and a rough estimate of the distance may therefore be made from the time required for the report to reach the ear; but how fast does the flash travel? For all ordinary purposes we may say no time at all is required for the flash to travel a few miles, but this

## "Quick as a Flash"

By H. M. PHILLIPS

does not satisfy the scientist or the astronomer; a way had to be found to measure it, three ways in fact, and the fact has been established that light travels about 185,000 miles, seven times around the world, in a second. How can such a speed be measured? The answer is an excellent illustration of the ingenious means by which scientists accomplish the apparently impossible.

Science is not so modern as some

may think; the first determination was made in 1675 by a Danish astronomer named Romer. One of the moons of the planet Jupiter, he has four, completes its revolution around the planet in 42 hours, 28 minutes and 36 seconds, as was accurately determined at a certain season of the year. Further observations showed an apparent increase in the time required until six months later it was apparently 16 minutes and 36 seconds behind schedule,

after which it began to gain until at the end of a year it was again on time. Such a variation in speed is hardly imaginable and the fact that it coincided with our solar year was suggestive; the first measurement was made while the earth was in the position of its orbit nearest to Jupiter, six months later it had traveled to a point 189,240,000 miles more distant. The 16 minutes and 36 seconds was the time required for the light to travel that distance, which gives a velocity of 190,000 miles per second. The actual distance has since been more accurately determined and gives the slightly lower velocity of 185,000.

## WORLD EVENTS IN PICTURES



Daughters of the Royal Family of Bulgaria.



Austria Offers \$4,000 for Head of Italian Poet d'Annunzio.



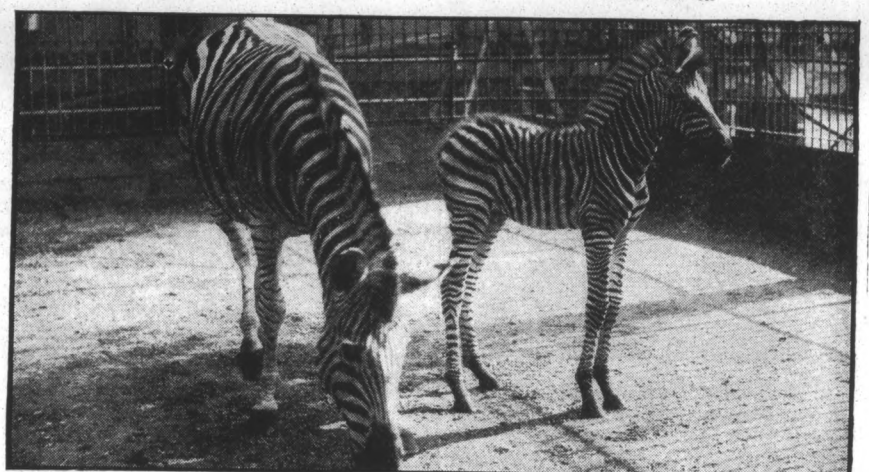
Gen. Hughes, Canada, Attends Quaint Celebration in Wales.



Children of the King and Queen of Roumania.



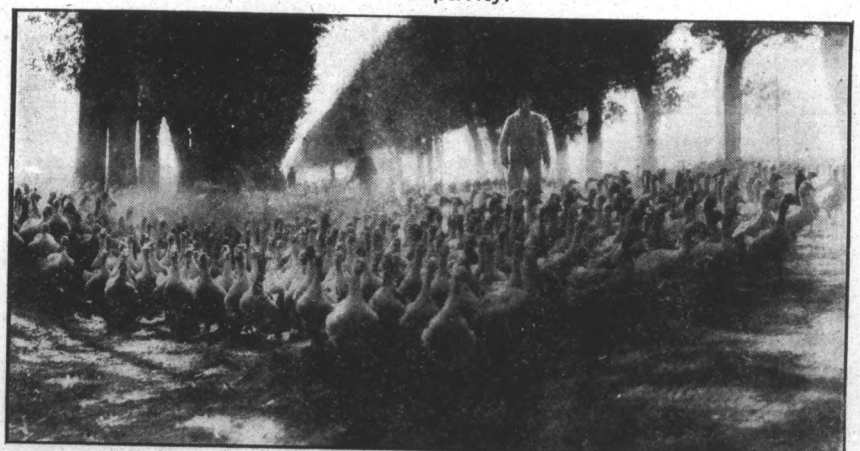
United States Business Men Receiving First Lessons in Care and Use of Rifles at Military Camp.



This Zebra Colt at New York Central Park is Believed to be the First Born in Captivity.



German Instructors Teaching Women Conductors and Guards Efficiency Methods in Handling Tramways.



Germans Commandeering Thousands of Geese During the Invasion of Russian Poland.





## The Many Uses of UNION CARBIDE and ACETYLENE

The Union Carbide Company is the largest user of industrial horsepower in the world.

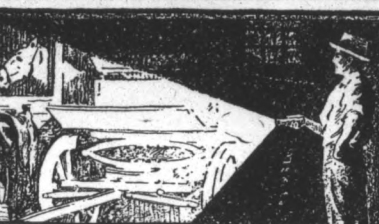
Union Carbide is the granite-like material that yields acetylene gas. In the process of manufacture the power of Niagara Falls and the great rapids at Sault Ste. Marie is transformed into electric current, which in turn is changed into heat. This heat is used to maintain the highest temperature known to science in the hundreds of huge electric furnaces which turn out the Carbide.

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In 1849 Fizeau, a Frenchman, measured the time required for light to travel a distance of about ten miles, which might seem an impossible feat. By an arrangement of lenses and mirrors, in some respects resembling the military heliograph, a ray of light was directed against a mirror at a point five miles distant and reflected back to the starting point. A large toothed wheel somewhat resembling a gear was then placed in the path of this ray in such a manner that the ray had to travel through the space between two teeth and return in the same manner. The wheel was then rotated with gradually increasing speed until finally the ray of light which started in the space between two teeth got back just in time to encounter the tooth itself, so that no light could be detected returning through the wheel; on revolving the wheel still more rapidly the return ray reappeared, passing through the space between the next teeth. Of course, the wheel had to revolve with great rapidity but as there were a great number of teeth on its circumference it was possible to speed it up to the required amount and to calculate the time for a tooth to cover the very small distance, half the distance between two teeth, required to cut off the returning ray.

For really rapid work, consider measuring the time required for light to travel a distance of 27 feet. This was done by Foucault, a celebrated French scientist, during the middle part of the nineteenth century. The method is somewhat complicated and only the general principle can be outlined at the present time. By means of a mirror a ray of sunlight was reflected through a small opening, across which a fine wire was stretched, into a dark room. Soon after entering the room the ray traversed a lens and further on came in contact with a small mirror which could be made to revolve with terrific rapidity. The immediate effect of the rapidly rotating mirror would be to form a band of light all the way around the room in which no "image" or shadow of the wire could be found. At a point 13½ feet from the revolving mirror a stationary mirror was so placed that it would reflect the light directly back upon the revolving mirror which in turn would send it back through the lens. This would produce a shadow of the wire which, while the mirror was turning slowly would fall on the wire itself. It is well known that a mirror need be turned through only a very small angle to produce considerable motion in the spot of light which it reflects; if the ray of light that leaves the revolving mirror to go to the stationary one and back finds that the former has turned slightly in the time taken for the journey the shadow produced after passing the lens will not fall on the wire as before but will be slightly displaced. By measuring the amount of displacement and the speed with which the mirror revolves the time required for the light to pass from one mirror to the other and back can be calculated. After the mirror had been speeded up to the velocity of 800 turns per second satisfactory measurements were obtained. Foucault also placed a tube of water between the two mirrors and found that light traveled somewhat more slowly through water than through air; which was of great scientific importance, in establishing the correctness of the modern theory of the manner in which light is transmitted.

If light travels 185,000 miles a second how far will it travel in a year? This may seem a foolish question, but it requires something like three years for the light from the nearest stars to reach the earth. If one of these stars were provided with the proper mirror and we possessed a telescope of sufficient power we might see what was happening on this earth six years ago. The heavenly distances

are so great that one despairs of expressing them in miles, the astronomer uses the expression "light years," meaning the number of years it would take light to travel the distance. Some of the most distant known stars are thousands of light years away from

the earth, if they were suddenly extinguished we would know nothing of it for that period of time. What a wonderful study of the past might be made if all stars were equipped with mirrors in which we could see what transpired upon this earth.

## THE RED MIST.

By RANDALL PARRISH.

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### CHAPTER XXVI.

#### The Cane Ridge Meeting House.

"Nor would I deny it to either Federal or Confederate. I am not a fanatic, Tom Wyatt, even although my father chose the blue. But my true loyalty just now is to my—my husband." She laughed, moving backward as I impulsively extended my hands. "Do not take this statement too seriously, please. We must play out the play, and I accept my destiny. Shall we go now? Really, I am actually hungry."

We sat over the poor meal a long while talking largely about our childhood days, and bringing back to mind earlier acquaintances. She told me of her home life, the death of her mother, and her experiences while away at school, and, largely in answer to questions, I recounted some of my army hardships and what little I knew of the battles in which I had borne part. But the one topic of importance, although it must have lingered constantly in both our minds, was carefully avoided. Again and again I endeavored to draw her thought that way, only to be adroitly diverted into safer channels. It became, at last, so evident she preferred that all this be ignored; that I finally desisted, and joined with her in light reminiscences. So we sat in the sunlight, talking like old friends, laughing over revived memories, almost forgetting that we were fugitives, our very lives at stake. Twice we heard guns, but the reports were but distant echoes, sounding afar off to the westward. Yet these made me nervous to get away, and when a number sounded together—almost a volley, distinctly audible, I hastened to pack what little remained of food on our horses, and fording the shallow stream, and guiding my horse up the opposite bank into the deep shadow of the woods beyond. Here we skirted the edge of the steep hill, finding difficult passage over rocks, and amid tangled underbrush, seeking the trail whose exact location I could but dimly recall; yet the very lay of the land was a guide, and my eyes, anxiously searching the sharp ascent ahead, finally discerned the dark mouth of the cave, the discovery of which led to our turning sharply to the left.

Noreen dismounted also, and thus we succeeded in inducing the two horses to clamber upward—slipping and sliding on the steep acclivity—until we safely attained the remnant of bridge path, scarcely discernible because of luscious weeds. To all appearance it had been unused for years, and in places entirely obliterated by rains. Yet it was plainly traceable, although neither of us dared to mount, and trust to the uncertain footing of the horses. However, bad as it was, it was now too late to retrace our steps, and we pressed grimly forward, holding firm to the bridle reins, and moving with the utmost caution. As we mounted higher, twisting and turning among the scrub, the valley we had left lay dark and mysterious below, the sun ever sinking lower behind the opposite ridge, until its final rays fairly bridged the chasm. It had disappeared entirely by the time we breathlessly attained the top, yet the western sky was red, the remaining light amply sufficient to enable us to perceive our surroundings. Indeed, it would be an hour, perhaps more, before night enshrouded this high ridge.

We halted beside the chimney rock to regain breath after the toilsome climb, and assure ourselves that the way beyond was clear. Noreen seated herself on the ground, and the horses began to graze, but I walked forward to where I could gain a better view. The summit of the hill was open, except for a considerable grove to the rear of the church. That edifice appeared, as I remembered it, unchanged in any respect—a fairly large building, constructed solidly of logs, with square clapboarded tower in front, four windows on each side, containing small panes of glass, a number of them broken. We were at the rear, which showed a larger window, and a narrow door at one corner, protected by a porch. It appeared desolate and deserted, the loneliness accentuated

by the empty hitching racks on either side. Beyond I caught glimpse of the white ribbon of road, running straight across the level, and dipping down into the depression beyond. There was no movement, no sign of life, anywhere visible—just that desolate, deserted church, standing in rough outline amid the red mist of evening. I stood silent, gazing in every direction, until assured that we were alone on the ridge. Then I retraced my steps to where she waited.

"The way is clear," I said, in answer to her uplifted eyes. "But it will hardly be safe to take the road for some hours yet. Shall we remain here?"

"If you think it safe I would prefer to walk forward to the church; it might be open."

"Oh, I imagine it will be safe enough and we can leave the horses here out of sight. But are you not tired?"

"No," rising to her feet, "you forget I am a mountain girl. I was breathless from tugging at the horse; but I am all right now. They say you can see the road for miles from the church tower."

"Then we will take a peep, if we can break in before daylight ends; I had not thought of that."

We advanced side by side along what was once a well-trodden path, making no attempt at concealment. Indeed, any such effort would have been useless, as the crest of the ridge lay open, and bare of vegetation, but I was so fully convinced we were unobserved that I took no precaution—my entire thought, indeed, centered upon the girl at my side. The small door at the rear of the church resisted our efforts at opening, and we advanced to the front entrance, passing between the walls of the church and the row of hitching posts. All remained silent, the purple haze of twilight beginning to show along the distant ridges. The heavy latch of the front door lifted easily to the pressure of my hand, and we stepped into a narrow vestibule, Noreen grasping my arm nervously, as she faced the shadowed interior of the deserted building. Some instinct of caution caused me to close the door behind us, and then I drew her forward, laughing at her fears, until we obtained glimpse of the larger room, already becoming obscured by the approaching night. It was a rather shabby looking place, not overly clean even in that merciful dimness, a huge stove, rusty red, occupying the space between the two doors, the stovepipe extending to the opposite wall. Rude benches, without backs, stretched almost from wall to wall, a narrow aisle leading to the pulpit, set within an alcove, and scarcely discernible except in barest outlines. Everything was lonely and depressing, the silence unbroken. A clock, run down, stared at me from the further end, and I recognized a big Bible, lying open on the gaunt pulpit stand. A book of some kind, dog-eared and coverless, lay on the floor at my feet, and I bent to pick it up. As I came upright again, a man stepped out from the shadow of a corner, and the steel barrel of a revolver flashed before my eyes. I felt Noreen cringe against me, uttering a muffled cry.

"Stand as yer are, Yank," said a rather pleasant voice. "Pardon me, lady."

### CHAPTER XXVII.

#### With Backs to the Wall.

HE was a young fellow, with bold black eyes, a little jaunty mustache, and a mouth inclined to laugh, but what I stared at in open-eyed astonishment, was his broad-brimmed hat, and natty gray cavalry jacket.

"Some surprise party, I reckon," he chuckled grimly. "What was this, a church wedding, dear boy? Here, Wharton, kindly relieve the gentleman of his arsenal; ah! some assortment, I see. Your pardon, Madam, but occasionally even the fair sex travel armed these days, and I should hate to be harsh. Thank you, very much; Wharton take the lady's gun also. It's all right, boys."

To my unbounded amazement up from the floor, where they had been lying concealed beneath the benches



a considerable number of men came scrambling to their feet. I could not count them in the dim light, but those nearest me were gray clad—troopers, from their short jackets—with carbines in their hands. Wharton, our revolver safe in his grasp, grinned and stepped behind his officer.

"Who, in heavens name, are you?" I asked at last finding my voice. "Confederates here?"

"Your first guess is an excellent one," he answered lightly, evidently enjoying the scene. "It evidences a well disciplined mind, and marvelous power of observation. Yes, my Yankee friend, you now behold Confederates, Johnny Rebs, the enemy; you have the honor of being prisoner to the Third Kentucky Cavalry. Wharton."

"Yes, sir." "Conduct the lady and gentleman to the sanctity of the pulpit, Sergeant, where they may commune with the presiding genius of this house of worship erected in the wilderness. Imagine not," he continued with a wave of his hand, "that the blackened optic which adorns the ministerial countenance was a gift of the Confederacy. Far be it from us," bowing humbly to the astonished Noreen, "to war 'gainst either ladies, or the church; beauty and goodness are ever safe in our hands, and I assure you both that the reverend gentleman was delivered into our care in his present condition of disfigurement."

"You mean you hold prisoner Parson Nichols?" I asked, scarcely grasping the sense of his rambling speech.

"No doubt 'tis he, although I have no recollection that he has confided his name to our ears. We discovered the party alone in this edifice of worship, nursing sundry bruises and abrasions, and feeling that probably he was of the Church Militant, held him for the pleasure of his company. Stone, Michels, return to the front; now, Sergeant, you may take the prisoners."

"Just a moment, Lieutenant," and I faced him squarely, ignoring the grip of Wharton's hand on my arm. "There is no reason to hold us prisoners; all there is Yankee about me is this uniform. I have just escaped from the Federal guard at Lewisburg."

His eyes, laughing yet suspicious, swept our faces.

"I'm not easily fooled," he said, "but ready enough to learn. Who are you?"

"Thomas Wyatt, Sergeant, Staunton Horse Artillery."

"Who is your captain?"

"Philip Lavigne."

"Good; and your first lieutenant?"

"George E. Whitehouse."

"Ah! you know the battery, all right. When were you with them last?"

"Ten days ago, in camp at Front Royal."

"By all the gods, it soundeth strange but true. Come, clear up the mystery—how came you here?"

"On Jackson's orders. I was born in this county, and because of that he chose me to find out the numbers and disposition of the Federal troops in this neighborhood, together with some other facts he wished to know. I was captured in Federal uniform, and held under death sentence as a spy. I escaped last night."

And the woman?"

She threw back the cape which had partially concealed her face, revealing her bright eyes and flushed cheeks.

"Permit me to answer for myself, Lieutenant Harwood."

"You! how do you know my name?"

"From your regiment, sir, as well as certain characteristics of speech I have heard described. I am your cousin."

"My—my cousin? Heaven be praised! I never knew there was so much beauty in our family. My cousin! Hold, till I guess a bit—not Noreen Harwood?"

She nodded, her red lips smiling.

"Noreen Harwood! Why, it takes me off my feet. Yet wait, how comes it you are here with one claiming to be on our side? Did I not hear that my uncle served on Ramsay's staff—ay! a major?"

"My father is dead," she answered, the brightness vanishing from her face. "He was killed only a few days ago."

"I regret to learn that, cousin," and he held out his hand, "for, while I never met him or you before, my father held him in most high regard. Yet I beg your pardon if I perform my duty as a soldier, even under these conditions. We are a small band, in the heart of the enemy's country, and cannot afford any unnecessary risk. Who is this man, and why are you here with him?"

"He has told you the truth," she answered quietly, her hand still within his. "I have known him from childhood."

"He is a Confederate soldier, then?"

"Yes."

"And you, cousin?"

"I am his wife."

There was a moment of silence, of hesitation. I heard the soldiers mov-

ing about the room, and the murmur of voices speaking cautiously. Then Harwood released her hand, and extended his own to me, his eyes frank and cordial.

"I accept you on faith, comrade," he said pleasantly, "but there is a spare gray jacket strapped to my saddle yonder more becoming than that blue coat. Here, Stone," with a glance over his shoulder, and a crispness to his voice, "get the extra blouse from off my horse, and bring it here; run low, lad, and keep in the shadow. Saint Christopher! but 'tis a most happy family reunion we're having; I'll want the story presently, but now I must look to my men. 'Tis no easy game we are playing."

"Let me understand that, Lieutenant," I exclaimed, as he turned away. "How does it happen you are here, and for what purpose?"

"A wild plan of my own, aided and abetted by the commander at Covington. We are of the garrison there," he explained briefly, his glance searching out the dim interior. "The Yankees have a forage train out as far as Hot Springs, under small guard. 'Tis the farthest east they have ever ventured, and our scouts brought the news. To this mind came the brilliant thought of cutting them off on their return march, and I got permission for the dash. We took the cut-off, and landed here about daylight. The train should have been along before now, but there is no sign of it."

"You have been in hiding here all day, and seen nothing?"

"Oh! we've seen enough," and he laughed. "But nothing we cared to measure swords with. The road yonder appears popular, but, by good luck, no Yankee shows an eagerness to attend church. There was a gang of mountain men along by here maybe two hours ago who rode to the door, and took a look at the shebang. Whether they were Yank or Reb I didn't know. Anyhow we were willing enough to see them pass on out o' sight. They looked and talked as though they were spoiling for a fight."

"How many?"

"Thirty, or forty—a right smart crowd. There was only two came up, and rode round the church—a big fellow with a red beard, and a little weakened-faced fox he called Kelly."

"Yes, I know then; they were hunting after us. Did they go on east?"

"They did. So has everyone else we've seen today. That's what puzzled us, as to just what might be up. I reckon you must be some popular to create such a furore. Why, an hour after sun-up a whole blame company of blue-coats went by, riding like mad, their horses dripping, and a young fellow spurring them on. He'd lost his hat, and they never so much as took a side-look at this shebang. They were in some hurry, my friend."

"And neither party has returned?"

"Not a sign of them."

"What force have you here?"

"Twenty-eight enlisted men."

"You have pickets out?"

"One man each way, a mile down the road, concealed. The tower up there commands the country in both directions."

"And your horses?"

"Hidden in the grove yonder."

(Continued next week.)

#### MOST FAIR TIME.

BY M. FITZSIMMONS.

The autumn days is here again, An' Gee, but hain't I glad? I'm 'bout the best boy 'at ever was, A' specially 'fore my dad, Sometimes he scolds me, but I Dassen't sass or drop a tear, I gotta be real good you know 'Cause Fair time's almost here.

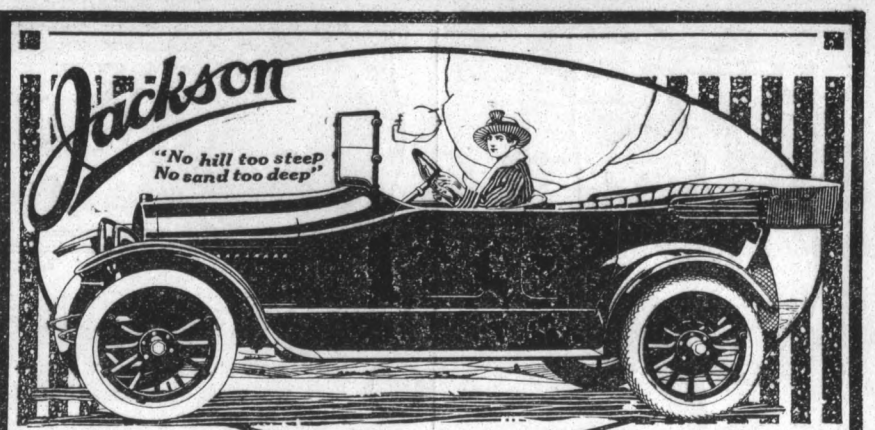
Pa kept me pulling weeds an' grass All summer'n made me hoe, He said I'd have to do it if I saw the wild-west show Or anything else at Fair time, An' so you bet I try To help my folks just all I can, 'Cause Fair time's mighty nigh.

Pa's got some corn an' squashes He say'll 'sprise the crowd, My grand'ma's pieced a bedquilt, An' say, if she ain't proud, The folks're terrible busy Jist 'bout this time o' year, With stuff to take the premiums, 'Cause Fair time's almost here.

Ma's got some jam an' pickles 'At she keeps set way up high, Siss' 'broidering something' funny, With a great big butterfly On top, looks like a nightcap, 'Taint what she calls it though, I ain't done nothin' fer the Fair— 'Cpet wish 'at I could go.

It always seems to be raining harder than it really is when you look at the weather through the window.—Lubbock.

There are more fools and fewer hypocrites than the wise world dreams of.—Schreiner.



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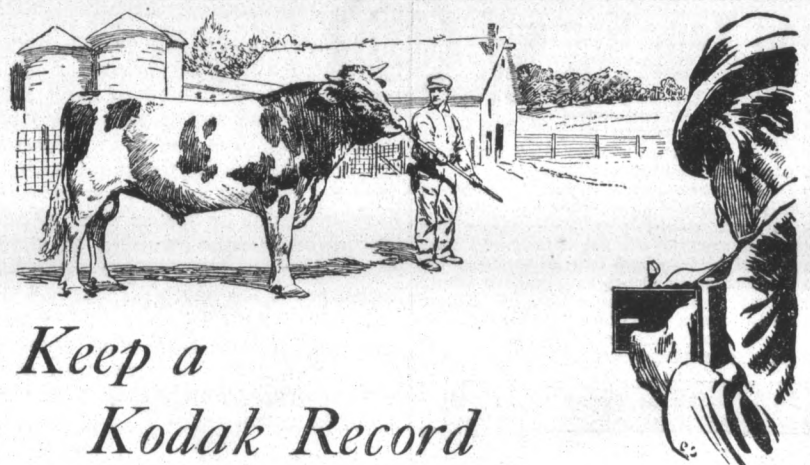
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## Two Wrongs Never Make One Right

**Q**UEER how some of the wise sayings we pick up along the way cling to us and influence our lives in spite of ourselves. When I was a country schoolma'am I boarded one year in a family with two small boys. Like all real boys these two sometimes quarrelled, and the vanquished one always threatened to get even. The mother's invariable reply to all mutterings of vengeance was:

"Two wrongs never make one right."

Of course, the boys had been told that this meant that if someone wronged you and you wronged them to get even, the two wrongs put together couldn't make the whole thing right. They had already learned in school that you can't add a bushel of plums to a bushel of peaches and get two bushels of apples, so, of course, you couldn't add two wrongs and have the answer one right. And because someone else was unjust to you it was not going to better things for you to be unjust to them. The whole thing would still be wrong, and your wrong conduct would only make matters doubly worse.

For the benefit of mothers who preach similar doctrine, I must throw in here, that at the time the sermons seemed to make as much impression on the youngsters as yours do on your children. They still "breathed out threatenings and slaughter," and if they could "put one across" without mother's knowledge, they did so. However, let us hope that having grown to man's estate they remember now the motherly counsel and put it into practice.

For, after all, it is as good a working motto as we need when real life begins. We are bound to meet injustice and abuse and if we stop to "get even" every time we are wronged we are not only going to waste valuable time but we will weaken ourselves for the real issues of life as well. A mind that is constantly dwelling on slights received, and schemes for retaliation hasn't room for anything worth while. Yet multitudes of men and women who call themselves good think of nothing else but how to "get even" with someone whom they fancy has wronged them.

As a matter of fact, half our wrongs are only fancied ones. Most of us take too serious a view of ourselves and our importance and think ourselves slighted when we are only being rated at our true value. None of us are quite so important in the general scheme of things as we think we are and our desire to retaliate when we find ourselves overlooked is simply the desire of a small mind to keep Self before the public. Getting even with such fancied wrongs only makes us appear ridiculous and in no sense better our condition or raises us in the eyes of our fellows.

Real wrongs, too, are never righted by taking revenge. The human impulse is to strike back, but the keenest punishment is often inflicted by ignoring the wrong. The wrongdoer can understand the return blow. What he cannot stand, nor understand, is the fact that he is considered of too little importance to notice. To return good for evil, or at least not to return evil for evil, this would solve the problem of family discord, and neighborhood discord as well. If we would all remember that "two wrongs never make one right" and when we are re-

viled, revile not again, life would gradually take on a different aspect.

DEBORAH.

## POTTING UP PLANTS FOR THE WINTER.

BY L. H. COBB.

As the summer wanes and the cool nights come in the fall we begin to think of getting the plants potted up that we have bedded out during the summer. It is best not to wait until too late for this, for as the days shorten plant vitality lowers, and they will stand less chance of quick recovery if we wait until the last minute. September is a very acceptable month for this work.

The soil for the potting should be prepared a year ahead, but if this is not done, and it seldom is, any good garden soil will do, provided it is loose and rich. Leaf mold, well rotted manure, and sand can be mixed with it and make it rich, loose and porous if it is not already. A little bone meal, a quart to a wheelbarrow full of soil, mixed in just before beginning to pot will be a decided advantage, for it is a slow acting fertilizer and safe, and will give nourishment to the plant for several months.

In potting up the plants care should be taken in the size of pots to keep in mind the kind of plant and the object in view. If flowers are wanted instead of foliage, pot in small pots for the size of the plant, except in the case of plants which bear a crop of flowers and quit, like the chrysanthemums. Geraniums, for instance, should have the pot pretty well filled with roots, and if too large a pot is given and a rich soil, there is apt to be an abundance of foliage, a rank soft growth, and few, if any, flowers. If the plants get pretty dry sometimes, are pot-bound and have a few such hardships to battle with the foliage tinges bronze, and the flowers come out in abundance. With the chrysanthemum, on the other hand, if they get dry, are pot-bound and do not get enough plant food the flowers will be very apt to come semi-double, and lack in richness of color. Anything that checks the growth is injurious, while with the geranium anything that tends to check growth tends to increase bloom. Of course, a normal growing condition must be maintained or the plants will suffer, though they will bloom all the more freely the more they suffer, seemingly making a frantic effort to produce seeds to reproduce themselves before they die. There is a happy medium that will give you good plants and plenty of bloom.

Chrysanthemums may need to be potted before the first of September, for they should be potted up as soon as the buds begin to show. If the buds are allowed to get good sized first they are apt to be checked by the moving, and the result will be noticed in the flowers. After the buds begin to develop they should not have a check until they are full. They are gross feeders and should have a very rich soil, and plant food added every week or two will be beneficial. They have such a heavy root growth they will need an abundance of water, too.

Begonias are very easy to lift, for they do not have a deep root system, and have so many fine fiber roots they soon fit themselves to the new conditions. Geraniums take hold well also.

Fuchsias when lifted must have more care. Heliotropes are very hard to lift successfully, especially if they have heavy tops. Mignonette can hardly be lifted without extreme care. Such plants should have the soil well soaked first, and then be permitted to dry until fairly firm. This fills the plant with moisture, and has the soil in a condition that will not be made into a muck by handling. Take up with all the soil possible on the roots. Cut the tops back some, too.

Callas and cyclamen that have been resting outside should be repotted also and made ready for the window. Callas want very rich soil for they are heavy feeders. The foliage and flowers will both be much finer. The cyclamen needs a soil composed largely of leaf mold. Put the cyclamen pot in a cool window and the calla in a warm one. The calla bulb should be covered up entirely, and nothing more than the tip of the shoot should show. The cyclamen bulb must not be covered at all, but set firmly on the surface. If the cyclamen bulb is not entirely dormant, and it is better to keep them growing just enough to keep the bulbs plump and the roots full and fleshy, it is best to dig the top soil away as deeply as possible without injury to the roots and then repot in a size larger pot, filling up to the bulb with fresh soil.

If you have been careful with the freesia and oxalis bulbs you can plant them now, for it is time. They can be planted in July all right, but they do not lose vitality until later than September. The earlier they are in the pots the better plants they will make, for the outdoor life suits them early in their growth, as it strengthens them for the more trying life in the house when the days shorten.

## LETTER BOX.

Thinks "Grace" Needs a New Point of View.

Household Editor:—When I finished reading "The Domestic Crucible, No. 13," in the Michigan Farmer for June 12, I looked again at the subtitle, "Grace Accepts Defeat and Achieves Victory." What about the "victory," I wondered. Does the author mean to imply that Grace achieved victory because John removed his harness to the carriage-house? Evidently that is the author's intention. However, that does not solve the problem according to my way of thinking, and I wonder if there are not other farm women who will agree with me in that.

If Grace won a victory by the removal of the harness it was a very weak one indeed, and her childish acceptance of defeat could scarcely have left her with peace of mind or a calm spirit. The whole trouble comes from within, from the attitude of mind. I do not mean to infer that John was not at fault, also. Perhaps he had not been trained during boyhood to pick up after himself. And perhaps his hard-worked mother had done her best in this respect, using the same methods employed by her daughter-in-law. And, too, John undoubtedly felt that when he had a home of his own that he was at liberty to make use of the grown-up prerogative to "do as he pleased," without being "nagged at." And I do not know as I blame him very much.

Nevertheless, both Grace and John need a new point of view. Why does a woman want to keep her house in apple-pie order? The house is the



heart of the home, to be lived in. And as living consists largely of work, the house is the work-shop as well as an eating and sleeping apartment. The happiest homes are those in which the family work together. When Grace does all of her work in the house and garden, and John's is confined to the barn and fields, there is not much to connect the two lines of activity. The fact that John leaves his harness on the side porch, where he will see it after supper, is proof-positive that he will enjoy sitting there to mend it, while Grace washes dishes just inside the door. He takes comfort in her nearness.

If Grace is wise she will take advantage of this evidence of John's enjoyment of her society, and work out a new scheme of co-operation, whereby both of them will derive much comfort and a larger vision. There is no other line of activity which can bring the members of the family into such close relationship as work on a farm. An unbiased discussion of conditions as they exist, accompanied by a willingness on the part of both to see the other's point of view, will go a long way toward an amiable settlement.

It is a psychological fact that as soon as you are willing that the other should do as he likes, the other comes around to your point of view, and makes a sincere effort to please. Nothing is gained by nagging, or by martyr-like tolerance. Such methods indicate narrowness of mind.

Everyone must possess a degree of loving charity in order to live in any sort of harmony. In the case of Grace and John, John was by far the more charitable of the two. While he may have made no particular effort to see her point of view, he was willing that she should have her way. Grace is to be pitied because she has allowed such a multitude of petty trials to occupy first place in her mind. Life is much more than keeping side porches in apple-pie order. In the lives of all true women, who have "eyes to see," wisdom, understanding, faith, hope and charity are pre-eminent. "And the greatest of these is charity."

#### HOME QUERIES.

Household Editor:—Will someone please give me full directions how to can peas, without canning powders?—Subscriber.

Shell peas and boil one-half hour. Pack in sterilized jars, fill with cold water, adjust rubbers and tops, set in boiler on a false bottom, pour in cold water to cover cans, cover boiler and boil four hours.

Household Editor:—I have received many helpful suggestions from your paper and wish to ask for more. Will some of the readers tell us if beet tops, spinach or Swiss chard can be canned for winter use and how it should be done? Also how to prepare and can the vegetable soups.

Here is my way of using up the crooked and ill-shaped cucumbers: Wash and slice, without peeling, unless turned yellow. Slices should be about one-fourth inch thick. Let stand in weak salt and water at least two hours, then drain and to each quart of slices take one cup of sugar, one teaspoon each of white mustard seed and celery seed and one onion sliced. Cover with good vinegar, boil for five minutes and seal in cans.—Mrs. M. F., Battle Creek.

Household Editor:—For salt-rising bread scald well a quart bowl and a tablespoon, empty out water and refill bowl one-half full with scalding, not boiling water. Into this put a quarter of a teaspoonful of ginger, half a teaspoonful of soda and same of salt. Stir in, while yet scalding, enough of either flour or sifted graham flour to thicken. Graham flour is a little more sure to rise but white flour makes the whitest bread with less odor while making. Beat smooth, put bowl in a vessel of warm water and set where

it will keep warm. I find the fireless cooker the best place. Sprinkle flour over top of bowl and cover tight. Do this the very last thing at night and let rise until morning. In the morning warm a pan of flour, make a hole in the center, put in a tablespoon of salt, a pinch of soda and stir in one and one-half quarts of water, beating in enough flour to make a thin smooth batter. When smooth add the "risings" and stir in well. Sprinkle flour over top and set in a warm place till it rises. When light mix into loaves without mixing any more than necessary to shape the loaves. Let rise and bake the same as yeast bread. Mix rather soft, as too much flour makes the bread hard and dry. If at any time it is allowed to get cold it will not rise, so I set mine on a warm soapstone, wrapped in a blanket and cover with another blanket.—Mrs. M. K.

#### "NOT PEACE, BUT A SWORD."

Dr. Lyman Abbott remains unalterably opposed to woman suffrage, but his son is for it. Hamilton Wright Mabie is against it, but his daughter is for it. At the very time William Howard Taft was arguing against suffrage, his daughter was a member of the Equal Suffrage League. Grover Cleveland's widow is president of the anti-suffrage association at Princeton but his two daughters are ardent workers for votes for women. In the west families are united on it, but in the east it runs like a sword between the two generations.

In making frosting for cake, use your favorite recipe, but add a teaspoonful of glucose. This keeps it from going to sugar, and the frosting will always be creamy. Ten cents worth will be enough to last a year.—Mrs. F. W.

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No. 1277—Ladies' Bib Apron. Cut in 3 sizes: Small, medium and large. It requires 5½ yards of 36-inch material for a medium size. Price 10c.

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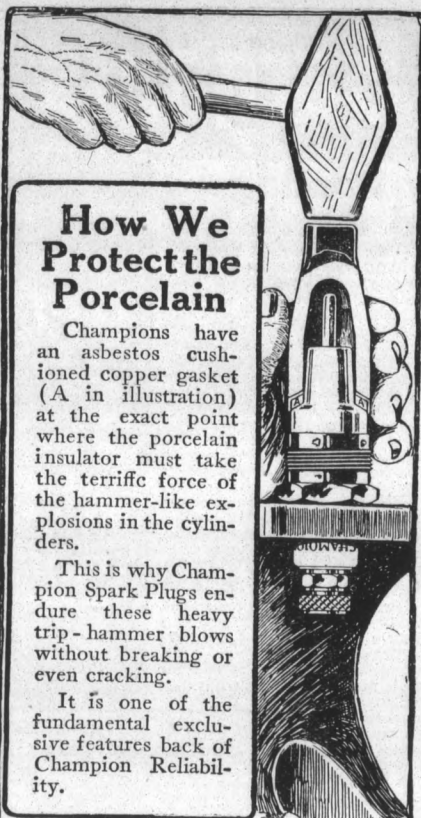
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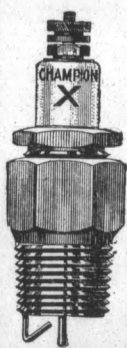
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## Motor Trucks Becoming Popular

A FEW years ago a motor truck was a curiosity, while today there are more than 100,000 trucks in use in the United States. While the motor truck is in common use and indispensable in cities, the rural districts are being "motorized" almost as fast, and people who are always poking fun at farmers about being slow had better look out or they will get run over.

An illustration of how the automobile is widening the zones of business was shown one morning recently on the Grand Rapids city market when a farmer from Evart, 80 miles away, drove in with a load of 18 cases of huckleberries. He had come along at the rate of 20 miles an hour or better and arrived in time for the opening at four o'clock. He expected to be home again in time for dinner. In comparison farmers for years have been driving in with horses from Kent City or other points about 25 miles away and have had to start early the night before to cover this distance before the opening of the market.

Trucks are fast supplanting horses on the cement roads leading into Detroit, largely because of the important time factor.

At Portland, in Ionia county, recently Wm. V. Howe, a farmer of Eagle township, brought in a load of 13 hogs on a motor truck, delivering the pork-

ers at the local stockyards for shipment.

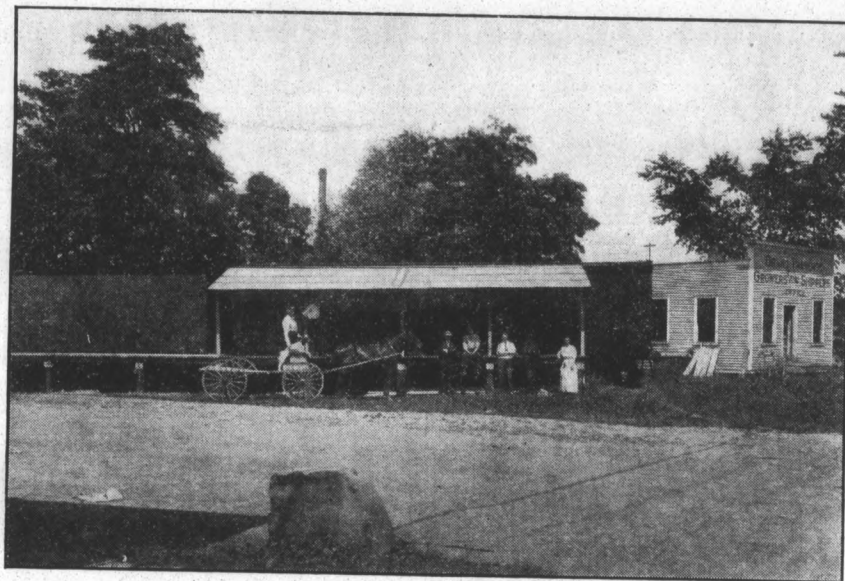
O. D. Tyler, of Portland, has received three thoroughbred Holsteins, the cattle being brought in by motor truck from Howell. The animals were delivered at his farm 80 cents cheaper than it cost him to have two head delivered at Portland by freight a few weeks before. And the trip by motor was made in one day while the shipment by freight required two days.

M. O. Goss, of Van Buren county, in marketing his baled hay at Bangor, hitched four loaded wagons to his oil tractor engine and hauled 16,620 lbs. to town in record time.

A big auto truck is in use this season for the delivery of fruit at Hartford, with loads of four tons of cherries and berries taken over the hills with ease at single trips.

The cannery at Berrien Springs, in Berrien county, with contracts for 500 acres of raspberries and blackberries in and around Bridgman, has been hauling the fruit by means of a motor truck.

A truck line for handling fruit and produce between Bangor and the boats at South Haven is planned and similar lines radiating for many miles into the country from all shipping ports on the lakes, operated in many cases by the boat lines, will soon be established. Kent Co. ALMOND GRIFFEN.



## Exchange Is Meeting Expectations

THE fruit growers of the Grand Traverse region now have a marketing organization nearly a year old which has gotten the wheels of its buzz wagon running so smoothly that the farmers who stayed off at the time of organization are now eagerly watching its movements and the most of them will doubtless get aboard before next marketing season.

Two co-operative organizations have been attempted in years past. Both went on the rocks. For some years buyers have been taking every known advantage of the growers. Last year over 250 carloads of cherries were shipped from this region. They were bought on the Chicago price which averaged about \$1.00 per crate. Cincinnati, Cleveland and most other accessible markets were paying over \$2.00. Of course, the fruit went to the better markets but the growers did not get advantage of it. This and many other conditions drove the growers together and forged the chain of tenacious determination so strong that they are quite unified in their purpose of staying by the new organization and sparing no effort or money to make their Exchange trade mark

stand, the world over, for a clean, honest pack of highest class fruit. It will then be no trouble to command the highest prices and find eager buyers.

### Producers Given Instructions.

The Exchange did a wise thing when it employed R. H. Elsworth as manager. His tact, managerial ability, and wide experience as a publicity expert make him of peculiar value to them in the educational and other work which must be done.

In former years the grading and packing of cherries has been anything but uniform—much of it notoriously inferior. One of the first things the Exchange did last winter was to adopt grading rules and the manager began the campaign of education to aid the growers in reaching the high standard set for them. An experienced man from a well organized fruit district was employed as inspector. Much of his work during the cherry season consisted in going from orchard to orchard, giving suggestions and actually packing cases for the growers, to demonstrate for them just the quality necessary to make up the different grades. The inspector re-

ports marked improvements in the pack and the utmost eagerness on the part of growers to comply with the rules of the Exchange. Every member is on his honor to put up as high class an article as his ability in growing and packing can produce. This striving for excellence in the goods themselves will, within a very few years give the goods bearing the trade mark of the Grand Traverse Fruit and Produce Exchange a most enviable reputation on the markets.

### Members Prove Loyal.

This year has been a very off season so far as cherries are concerned. The latest spring frost in 25 years did the crop considerable damage. Only about half a crop was harvested. The prices were rather low, owing to large production in some other regions. Then, too, the commission men are not standing idly by. They are not at all anxious to see this infant organization grow to such strength that it will deprive them of their Shylock pound of flesh, for the Grand Traverse region ship thousands of cars of fruit and produce annually. During the cherry season buyers frequently offered members of the Exchange more than the Exchange was promising them. Here is the way a case which came under my own observation worked out. An outside commission house buyer offered one Exchange member \$1.75 per case when the Exchange was getting him only \$1.25. He 'phoned to the Exchange. He did not want to violate his agreement to market all his fruit through the Exchange, still he disliked to see the extra 50 cents per crate on a good-sized shipment go glimmering. The manager told him to sell and pay the Exchange the regular commission just as though they had handled the cherries. It was very clear that no such price would have been offered had the Exchange not been in existence. As soon as the check from the commission house arrived the grower loyally took it to the Exchange for record and deduction of commission.

### Properly Incorporated.

If that spirit of loyalty to their organization holds, and there is every reason to believe it will, the fondest dreams of the moving spirits behind the organization will be more than realized.

And, while not extravagant nor beyond the bounds already reached by several similar co-operative organizations in other parts of the country, their dream is a bold conception. Here is the way Manager Elsworth reduced the dream to words: "The organizers of the Exchange were careful in the drafting of articles of incorporation under the Co-operative Act (Act 398, Public Acts of Michigan, 1913), to give the organization ample leeway for expansion as the business grows. We can buy, hold or sell, land, buildings, and personal property. In fact we are permitted to do anything but own a railroad, run a bank, organize a life insurance company or some of the few other lines of enterprise which must charter under special laws.

### Becoming Popular.

"While we started with a membership of less than 70 we now have about 120 and as the advantages of the Exchange become fully known and appreciated among the farmers we shall increase until every farmer who has much produce to market in the entire Grand Traverse region embracing some ten counties, and extending from Manistee on the south to Cheboygan on the north, will belong to our Exchange.

"The sales will all be made from our central office but fruit and produce will be gathered to, inspected and shipped from, the various warehouses owned by the Exchange at strategic locations throughout the region.

"At present we have only one inspector, but as the business grows there will be an inspector at each



warehouse to see that the grade, pack, etc., are according to standard. As soon as our farmers learn to grade and pack according to a uniform standard our fruits and vegetables which have the superior qualities that are given by our climatic and soil conditions, together with proper cultural methods—just so soon will our Exchange be in position to capture the best markets in the world.

"As the Exchange develops we expect to have our own cold storage warehouses and icing service at the various centrally located shipping points. The possibilities, if the farmers will pull together properly, are vast but there are many obstacles to overcome. Thus far, I believe, our members are mighty well pleased with the successes attained. The board of directors and the manager are gratified with the present condition of the Exchange and very optimistic for the future. It's a case of 'United we stand, divided we fall.'"

Mason Co. I. B. McMURTRY.

## Crop and Market Notes.

### Michigan.

**Emmet Co., Aug. 23.**—The last two weeks there has been no rain, following the week of unprecedented precipitation which caught some hay in the fields and laid much grain and corn flat. Wheat and oats and other grain going in in fine condition, with prospects for a good yield. Corn will be very late in ripening, if at all. Some complaint of rust in beans and blight in potatoes. Barns are overflowing with hay, which is selling around \$13 for loose. The resort season is light, about 50 per cent of an average.

**Shiawassee Co., Aug. 23.**—Heavy rain fall is doing inestimable damage to the oat crop. Some haying yet to be done. There will be a heavy second growth of clover for seed and hay. Alfalfa is making a very rapid growth, the third crop ready to be cut. Wheat yielding about 32 bushels per acre; oats from 45 to 90 bushels per acre; corn growing rapidly, but is backward for the season. Late potatoes making a splendid growth, but too wet for low fields. Beans are a very promising crop, but some fields badly damaged from wet weather. About the usual amount of wheat will be sown this fall. Apple crop is very poor.

**Eaton Co., Aug. 21.**—The yield of hay was good, but was difficult to harvest on account of wet weather. Some was rained on when in the field, so much that it was never hauled and some was never cut. All grain is cut, but a large percentage is in the shock. Very little threshing is done. Plenty of rain to help fall plowing. Wheat, new \$1; new oats 35c; beans \$2.25; rye 90c; steers 3@7c; hogs, live 7¼c.

### New York.

**Niagara Co., Aug. 25.**—Very rainy weather seriously affecting cabbage, beans and some potatoes. Nearly one-half of the bean crop spoiled. Oats have caught the heavy rains, too, but all the grain is turning out well. Hay was very poor and is \$18 to \$20 per ton. Corn is very good; there is three-fourths of a crop of early apples, now selling for 80c per bushel or \$2.50 per bbl. Very small crop of late apples and pears, lots of peaches and a medium crop of plums, which are selling at 8@10c per six-pound basket. Peaches are well colored but seem late in coming on. Eggs are 21c; butter 22@24c.

### New Jersey.

**Monmouth Co., Aug. 23.**—The yield of hay and clover fair, alfalfa good; wheat crop extra; oats good, gathered in poor condition on account of the weather. Corn is good but damaged some by the storm. Potatoes above the average. Preparation for seeding well under way. Apples and pears a fair crop; peaches and plums extra good. Wool 25@35c; butter 30@40c; milk 4½c.

### Ohio.

**Holmes Co., Aug. 23.**—Wet weather still continues. Some hay to make yet. Oats to haul in; very little plowing done for wheat; wheat and oats yielding well. Pasture good. The yield of hay is light and brings \$15 per ton. Most of the red clover hay made too late on account of the wet weather, to get a crop of clover seed. Corn looks promising but is late. Potatoes and plums rotting badly, and have a poor flavor; too much rain. Wheat \$1.02; corn 90c; oats 35c; butter-fat 25c; eggs 17c.

**Hancock Co., Aug. 23.**—Nothing doing the past month on account of the heavy rains. Not much wheat threshed in this locality, and spoiling rapidly. Yielding from 20 to 35 bushels per

(Continued on page 194).

# These Goodyear Tires Made Extra-Large

Sizes 30x3½ and 30x3

We are this year giving special attention to users of small-size tires. There are about a million of them. And the tire we build would win them all if all of them could know about it.

## \$317,000 Added

This year we are building these tires larger than ever. We've increased the air capacity by 20 per cent. Added size means added mileage, as every user knows.

We have added 30 per cent to the rubber in the side walls just above the bead. That's where constant bending taxes tire walls most. And where thin-walled tires often chafe and break.

We have made new molds to improve the tire's design. For we have found a new shape which increases endurance.

These three additions will add to our tire cost \$317,000 this year. Yet this year we made another big price reduction—our third in two years, totaling 45 per cent.

## Four-Ply Tires

Even the smallest Goodyear Automobile Tires

**20% More Capacity  
30% More Strength  
In Side Walls**

are four-ply tires—even size 30x3. And our anti-skid tread—the Goodyear All-Weather—is double-thick on all.

So Goodyears have always been exceptional tires. They won on sheer merit the top place in Tiredom, and for years have outsold any other.

Now we add 20 per cent to the air capacity and 30 per cent to the rubber above the bead. And we give you a better design. We are building by far the most capable tires ever built in these small sizes.

So even the occasional mishap and misuse will find new strength to combat them.

## Get These Extras

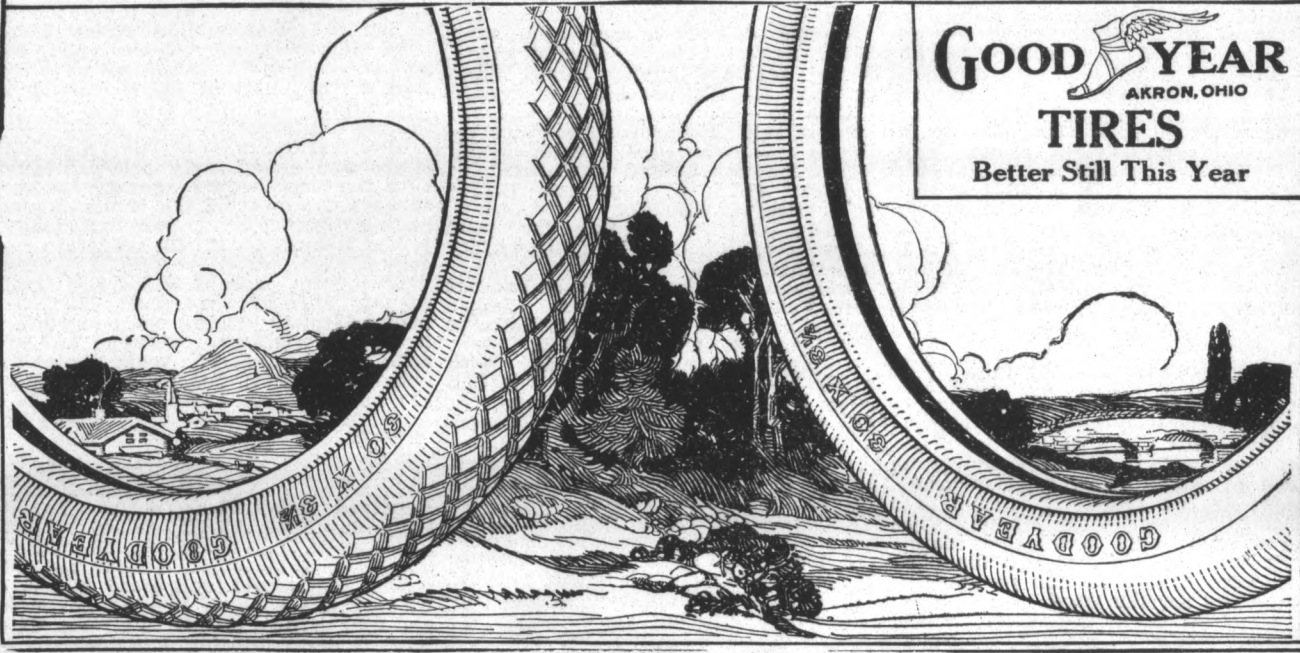
The value we give in Goodyear tires is due to our mammoth output. Get that value—it is due you. Smaller, thinner, lighter tires can't serve as Goodyears do. Even last year's Goodyears, though the leading tires, could not compare with these.

Any Goodyear dealer will supply you. Every neighborhood has a Goodyear Service Station with your size in stock, and it renders full Goodyear Service.

(2648)

**THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO**

Makers of Goodyear "Tire Saver" Accessories; also Goodyear "Wing" Carriage Tires and Other Types



**GOOD YEAR**  
AKRON, OHIO  
**TIRES**  
Better Still This Year



**MODEL "A" HANDY MICHIGAN TRAILER** CAPACITY 750 POUNDS  
LOADED WITH 150 DOZ. CELERY, WEIGHT OVER 1125 POUNDS.  
The HANDY MICHIGAN TRAILER is easily attached to any make of auto and goes wherever the auto goes. A postal brings circular B with a full description.  
**MICHIGAN TRAILER COMPANY, KALAMAZOO, MICHIGAN**

## STATE PRISON EXHIBITS

Hundreds of Michigan farmers who are planning to attend the State Fair at Detroit next week will be glad to know that the Michigan State Prison—the home of the Wolverine tag binder twine—is to make an exhibit this year. The Prison will have a large tent just south of the Agricultural Building. In the tent will be found all of the articles manufactured at the prison including brick, drain tile, building tile and binder twine.

**MICHIGAN STATE PRISON**

## Kelly's TREES

**TRUE TO NAME.** Grown in our own nurseries and positively free from disease. 35 years' experience enables us to give you a binding guarantee and to deliver these splendid trees direct to your orchard at a low figure—Now is the time to plant apple trees. Write for our free catalog and wholesale prices. Kelly Bros., Wholesale Nurseries, 71 Main St., Danville, N. Y. You'll never regret planting Kelly Trees.

## ALFALFA

AMERICAN NORTHERN CROWN  
YOUNG-RANDOLPH SEED CO., Owosso, Michigan

## PURE FIELD SEEDS

SEED WHEAT—Red Wave, Poole and Winter King; Clover, Timothy, Alsike, Alfalfa and all kinds of Pure Field Seeds, direct from producer to consumer. Free from Noxious weeds. Ask for Samples. BIG TYPE POLAND CHINAS, March and April pigs at reasonable prices.  
**A. C. HOYT & CO., FOSTORIA, OHIO**

**SEED WHEAT** The No. 1 Red Champion and Imported Kharkov from Russia. Two greatest varieties known for yield. Hardest and best milling qualities. Write for sample and prices.  
**W. J. MERRIAM, Almont, Michigan**

**For Sale**—Red Rock wheat at \$2.25 per bu. new sacks furnished. Yield 1914 55 bu. per acre.  
**CHAS. B. COOK FARM, Route 1, Owosso, Mich.**

## LILLIE'S IMPROVED GROENE WHEAT

A vigorous, red, bearded wheat, very stiff straw, and of good milling qualities, a good yielder, write for sample and prices.  
**COLON C. LILLIE, Coopersville, Michigan.**

## NORTHERN GROWN SEED WHEAT

Michigan Red Wave. Hardy, productive, Winter Wheat, \$1.50 per bushel, ten bushels or more, bags free, less quantity, bags 20c each. Cash with order.  
**ROGERS BROS., Alpena, Michigan**

## WINTER BARLEY

Sown in the fall the same as wheat. Ripens about June 25th. Three year average yield of 56½ bushels per acre, equivalent to 84.5 bushels of oats. Price \$2.00 per bushel, sacks free. Michigan Agricultural College, Dept. of Farm Crops, East Lansing, Michigan.

**ROSEN RYE.** Best yielding rye ever discovered. It will yield from 35 to 50 per cent more than common rye. \$1.50 per bu. **A. D. GREGORY, R. No. 3, Ionia, Mich.**

**RED WAVE SEED WHEAT.** The best wheat in Michigan. Write for prices and description. **W. C. TAYLOR, Milan, Mich.**

**WISCONSIN No. 2 RYE** Yields 36 to 42 bushels per acre. \$1.75 per bushel, any quantity, sacks free. **GEO. R. SAPP, Mecosta, Mich., care of "Round Lake Farm."**

**SEED WHEAT,** Grand Prize, Red Wave, hardy, stiff straw, beardless, no foul seed, rye or smut. 1 bu. \$1.55. Sacks free. Get prices in larger lots. **FRANK BARTLETT, Dryden, Mich.**

**RED WAVE SEED WHEAT** Michigan record 55 bu. Cleaned and graded by first class machinery. Write for sample and price. **MARK P. KELLEY, Oxford, Michigan.**

**Ginseng Plants** For Sale—One year old, \$6 per 1000, two year old, \$9 per 1000. Stratified seed, \$4 per lb. **A. K. CARPENTER, Northville, Mich.**

**WANTED**—RYE and VETCH MIXTURE SEND SAMPLES FOR ID TO **YOUNG-RANDOLPH SEED CO., Owosso, Mich.**



# Markets.

## WEATHER FORECAST.

For the week beginning Wednesday, September 1, for the region of the Great Lakes: Warmer weather on Wednesday and Thursday will be followed by somewhat lower temperatures Friday and Saturday in the upper lake region, and by seasonable temperatures elsewhere. The weather will be generally fair.

## GRAINS AND SEEDS.

August 31, 1915.

**Wheat.**—The free movement of wheat in both the winter and spring wheat states has given the trade a bearish tone, and notwithstanding prices Monday were on practically the same level as a week ago, there appears to be a general belief that values will not go much higher for the time being. Western markets are generally lower due to liberal offerings from country districts. However, foreigners are taking some of the grain, but there is nothing like the activity shown in the markets here a year ago although it is generally believed that the needs of European countries are greater. The price for No. 2 red wheat was \$1.15½ per bushel at this date in 1914. Prices for the past week are:

	No. 2	No. 1	Dec.
Wednesday	1.09	1.06	1.07
Thursday	1.09	1.06	1.07
Friday	1.07½	1.04½	1.06
Saturday	1.08	1.05	1.07
Monday	1.08½	1.05½	1.05
Tuesday	1.06½	1.03½	1.01

Chicago.—September wheat 93.6c; December 92.5c; May 97.2c.

**Corn.**—Frosts in numerous districts throughout the north central states was an important element in the trading program in the corn market Monday. It gave the trade considerable strength in spite of a bearish feeling in the wheat division. So much of the corn acreage is late that the likelihood of damage from future frosts is increased to a point where dealers seem indisposed to crowd the market down. In many sections, however, there has been wonderful improvement in the prospects for the grain since a month ago. Kansas, for instance, reports officially a corn crop of 149,000,000 bushels against 87,000,000 a year ago. At this late last year No. 3 corn was quoted at 83c per bu. Prices for the past week are:

	No. 3	No. 3	Yellow.
Wednesday	80½	82½	82½
Thursday	80½	82½	82½
Friday	80	82	82
Saturday	80	82	82
Monday	80½	82½	82½
Tuesday	80	82	82

Chicago.—September corn 71.7c per bushel; December 61.6c; May 63.2c.

**Oats.**—There is a very large movement of oats to primary elevators, much of which is of inferior grade. Prices are on the decline, cash oats on the local market on Monday were one to two cents lower than Saturday's trade. One year ago standard oats were quoted at 51c per bushel. Quotations for the week are:

	Standard.	White.	No. 3
Wednesday	45	43	43
Thursday	45	43	43
Friday	44	42	42
Saturday	44	42	42
Monday	43	40	40
Tuesday	40	39	39

Chicago.—September oats 36.4c per bushel; December 36.2c; May 38.3c.

**Rye.**—This market is quiet with the cash grain marked down nine cents from last week. Cash No. 2 is quoted at 95c per bushel.

**Beans.**—Prices up 15c. Frost damage is reported in different sections. Detroit quotations are: Cash \$3.00 per bushel; September \$2.80. Chicago trade is quiet and steady. Pea beans, hand-picked, choice, are nominal at \$2.85@3; common \$2.62@2.80; red kidneys \$3.25@3.50. At Greenville the

**Clover Seed.**—The outlook for seed crops is discouraging. Prices higher except alsike which is steady. Prime spot \$9.60; October \$10; alsike \$9.25.

**Timothy Seed.**—Prime spot \$3.35.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$6.10; seconds \$5.80; straight \$5.50; spring patent \$7.10; rye flour \$6.50.

**Feed.**—In 100-lb. sacks, jobbing lots are: Bran \$25; standard middlings \$29; fine middlings \$32; cracked corn \$34.50; corn and oat chop \$31.50 per ton.

**Old Hay.**—Market is firm at steady

prices. Carlots on track at Detroit are: No. 1 timothy \$24@25; standard \$23@24; No. 2, \$22@23; light mixed \$23@24; No. 1 mixed, \$18@19; No. 1 clover \$14@15.

**New Hay.**—No. 1 timothy \$18@19; standard timothy \$17@18; light mixed \$17@18; No. 2 timothy \$16@17; No. 1 mixed \$14@15; No. 2 mixed \$12@14; No. 1 clover \$12@14.

Chicago.—Demand good and supply light. New timothy \$13@18 per ton. Straw.—Rye straw \$7.50@8; wheat and oat straw \$6.50@7 per ton.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Although prices are ½c lower than last week the market is gaining strength. Offerings are light. Extra creamery 24½c; firsts 22½c; dairy 21c; packing stock 18c.

**Elgin.**—The market is firm at prices ½c higher than last week. Quotations for the week are 24½c per pound.

Chicago.—Market is firm and advanced prices are well maintained. Supply and demand are good. Extra creamery 24½c; extra firsts 23½@24c; firsts 22@23c; seconds 20@21½c per lb; packing stock 19@19½c.

**Poultry.**—Demand good for heavy hens and broilers. Lower grades are low. Prices are unchanged. Live.—Broilers, No. 1, 16@17c; No. 2, 14½@15c; heavy hens 15c; others 12@14c per pound; ducks 14@15c; geese 10c.

Chicago.—Demand is good for good stock. Irregularity in shipment makes great variation in prices. Fowls, good weights 13@14c; others 10@12c; spg chickens 16@16½c; ducks 12½@14c; geese 8@12c; guinea hens \$2.75@3 per dozen.

**Eggs.**—Receipts are getting light and market is firm at an advance of ½c over last week. Canned firsts sell at 23c; current receipts 21½c.

Chicago.—The feeling is steady at prices slightly advanced over last week. Trade is good. To grade as "firsts" eggs must be closely candled. Miscellaneous lots, cases included 17@21c; ordinary firsts 20@20½c; firsts 21@21½c.

**Veal.**—Quoted steady at 14@14½c for fancy, and 13@13½c for common.

## FRUITS AND VEGETABLES.

**Apples.**—Supply is ample and market druggy. Prices are unchanged. Fancy Duchess apples bring \$2.25; common \$1@1.25 per bbl.

Chicago.—Duchess are dull and are hard to sell. Fancy fruit of other varieties is moving and Wealthies sell well. Duchess quoted at \$1.25@1.50; Astrican \$1.25; Transparents \$1.25@2; Wealthy \$2.25@2.50.

**Pears.**—Market is fair for good stock, good Bartletts bringing \$4.75@5 per bbl.

Chicago.—Market is steady but not brisk, at fairly good prices. Clapp's Favorite sell at \$3@3.50; Bartletts \$3@4; Flemish Beauty \$3@3.50.

**Potatoes.**—Market is steady with prices at \$1.65@1.75 per bbl. At Chicago Michigan whites are selling at 45c per bushel in carlots. At Greenville 30c per bushel is being paid.

**Peaches.**—Markets active, although supply is ample. Island peaches bring 15@20c per 1-5 bu. basket.

Chicago.—Offerings from Michigan are light. Southern peaches still hold the market. Clings sell at 50c per bushel, 10@12c per 1-5 bushel basket; St. Johns 15@20c per 1-5 bushel basket, 75c@1 per bushel.

## WOOL.

Boston.—Because of large foreign orders, manufacturers have been buying freely. The market is still very strong although it has been spotty, some scoured wools having an unusually good demand because of foreign orders. The British War Office is considering the question of releasing some of the stock held in London and Bradford warehouses, to allied countries and neutrals. This suggestion has made heavy holders a little nervous and might amount to a moderate bearish influence in the trade. However, it is improbable that any considerable change in quotations would be effected as the demand is now so broad and the stocks to be offered comparatively limited. Fleeces are only moderately active with a sale of Ohio quarter-bloods last week at 38c.

## GRAND RAPIDS.

Frost damage during the last days of the month has seriously affected potatoes, beans, corn, tomatoes, cucumbers and other late crops in Michigan. Late potatoes suffer also from blight, so that prospects for a big yield and low prices have changed somewhat. Potato prices in this market run about the same, at 35@40c. Warmer weather is needed for fruit and all crops. Peaches are selling up to \$2; Duchess apples continue slow at 30@40c, and plums are quoted at 60@75c. Tomatoes ripen slow and

are still bringing up to \$2 per bushel. Cabbage is worth only 15@20c; eggs are 19@20c; dairy butter 23@24c; wheat, No. 2 red is quoted at 97c; rye 85c; corn 76c; oats 58c; beans \$2.65, hand-picked basis.

## DETROIT EASTERN MARKET.

A large amount of business was done on the eastern market Tuesday morning. Prices are holding about steady. Tomatoes are firmer with the price ranging from \$1@1.50 per bu; potatoes 70@75c; apples 90c@\$1 for Duchess up to \$1.50 for Wolf River; plums \$1@1.25; onions 60@65c; cucumbers, large \$1.25@1.50; medium \$2; corn 75c@\$1 per bag; butter 30@35c; eggs 30c; loose hay ranges from \$15@24 per ton according to quality, best timothy being scarce.

## LIVE STOCK MARKETS.

### Buffalo.

August 30, 1915.

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

Receipts here today as follows: Cattle 175 cars; hogs 81 d. d.; sheep and lambs 24 d. d.; calves 1200 head.

With 175 loads of cattle on the market here today, and 19,000 reported in Chicago, all the best cattle sold steady with last week, while the medium and common kinds sold from 10@15c per cwt. lower and there are several loads left over unsold. We had too many cattle here today to hold our market up and the cow trade was the worst it has been this season. We wish to caution our shippers not to ship any stockers or milch cows here yet, as the government is holding us up until they clean up. They think it will be two weeks, but that is just a guess.

We had a moderate supply of hogs today and the quality poorer than for some time past. There were but few of the good old dry hogs here and this class sold 5@10c higher than the close of last week, while all other grades, and especially common stuff, sold 10@20c lower. A few extreme heavy weight hogs sold at \$7.75, with the bulk of the mixed and mediums from \$7.80@8.20, as to weights; yorkers generally \$8.25; best pigs around 8c per lb; common and grassy kind from \$6@6.50; roughs generally \$5 and stags \$4.50@5. About everything sold at the close of the market and the outlook appears about steady for the near future.

The market was active today on lambs and sheep, with prices steady with the close of last week on lambs; sheep firm; most of the choice lambs selling at \$9.50. Look for steady prices last of week with moderate receipts.

We quote: Lambs \$9.25@9.50; cull to fair \$7.50@9; yearlings \$7@7.50; bucks \$3@5.50; handy ewes \$6@6.25; heavy do \$5.50@6; wethers \$6.50@6.75; cull sheep \$3@5; veals, choice to extra \$12.50@13; fair to good \$8.50@12; heavy calves \$5@8.50.

### Chicago.

August 30, 1915.

Cattle. Hogs. Sheep.  
Received today 19,000 36,000 18,000  
Same day 1914 19,685 29,346 43,078  
Last week 48,216 91,423 63,247  
Same wk 1914 43,955 113,462 148,366

Beef cattle sold well today and the best grades showed 10@15c advance and others ruled steady to strong. The best sold at \$10.20; butcher stock sold on a strong to 15c higher basis. Quality was only fair. About 2,000 range cattle arrived and prices were steady. Calves ruled steady, with the bulk of good to prime vealers at \$11.50@11.75, only poor thin light kinds selling down to \$10. Light hogs sold steady to 5c lower and others mainly 10@15c lower. Packing grades showed the most weakness on the close; sales were at \$6.35@8, bulk making \$6.75@7.40. Last week's hog receipts averaged 246 lbs. Sheep and native lambs sold largely 25c lower while range lambs looked 10@15c off. Several cars of western wethers made \$6.25, with native ewes largely at \$5.75@8.50. Native lambs topped at \$9.35 and best rangers cleared at \$9.40.

Shipments from here last week totaled 11,286 cattle, 19,781 hogs and 3,721 sheep, compared with 17,126 cattle, 16,014 hogs and 50,158 sheep for the corresponding week of 1914.

Cattle prices followed a downward course last week as a result of much larger receipts and no corresponding improvement in the general demand. Declines were anywhere from 15@25c, with the greater part of the steers selling for \$8.25@9.60, and the best steers carrying much weight going at \$9.35@10, while the choicest yearlings brought \$9.50@10.15. Inferior to plain grass steers sold at \$6@7.35, with limited transactions in small lots as low as \$5.60, including steers and heifers mixed. Common to medium warmed-up steers sold at \$7.40@8.35, medium to good handy steers at \$8.40@8.85

and good, fat lots at \$8.90@9.35. Inferior to fair yearlings sold at \$7.50@8.50, with good yearlings offered freely at \$9 and upwards, and fat lots of these cattle were much more active than the equally good, but heavier cattle. Butcher cows and heifers had a good demand, as usual, with fat lots mainly wanted. Sales took place at a range of \$4.90@9.40, with the best cows taken at \$8@8.50 and the higher-priced lots restricted to the choicer class of yearling heifers. Cutters went at \$4.15@4.85, canners at \$3@4.10 and bulls at \$4.50@7.90. Calves were in active demand, so far at least as the desirable light vealers were concerned, and moderate offerings resulted in higher prices, with sales at \$11@12.35, while heavy calves sold at \$5@10. Western range cattle arrived more freely than heretofore, and 25@35c lower prices prevailed, sales ranging at \$6.60@8.75. A train of Canadian range cattle arrived on Wednesday and sold unsatisfactorily. All cattle that are common are doing poorly for their owners, and far too many half-fat cattle are offered for sale.

Hogs were marketed less freely last week than a week earlier, and some good advances in prices took place, good mixed offerings usually showing the most strength. There was a narrowing of the range of prices, and unless the shipping orders for light-weight hogs undergo a material increase, a further narrowing of quotations may be expected. The best prices continued to be paid for prime light shipping hogs, and prime pigs of strong weight sold as high as the best matured hogs. Recent receipts of hogs have averaged 248 lbs., the highest for a year, and comparing with 230 lbs. two years ago, when a good many pigs were arriving. Eastern shippers were not operating very heavily, but their purchases were fair relatively, as the receipts were not large. Heavy packing hogs sold much higher than a week earlier, showing much greater advances than the highest-priced swine. Top was \$8.05, and hogs closed at \$6.35@8, comparing with \$5.80@7.85 a week earlier, pigs selling at \$6.75@8. Heavy packing hogs sold at \$6.35@7.05, heavy shipping hogs at \$7.10@7.65, light bacon hogs at \$7.25@7.90 and prime light shipping hogs at \$7.95@8.

Sheep and lambs were offered on the market sparingly last week, receipts day after day being less than half as many as a year ago, and extremely large advances in prices took place, especially for the better class of lambs from the range country. Lambs greatly predominated in the offerings, including flocks from Idaho, Washington and Nevada, as well as many moderate consignments of native lambs and limited supplies of native ewes. Lambs sold up to \$9.55, comparing with an \$8.85 top a week earlier, closing prices ruling as follows: Lambs \$6.50@9.55; yearlings \$6.50@7.50; wethers \$6@6.75; ewes \$3@6.10; bucks \$4@5.

Horses were in ample supply last week and in active demand from agents of the British and French governments, army horses going at unchanged prices. Most of the sales made in the auction consisted of horses rejected by the foreign agents, these going at \$75@130, with good mares selling up to \$160. Commercial chunks brought \$190@240, and a pair of bays sold at \$540. Horses intended for army purposes must be five years old at least and not over ten years.

## CROP AND MARKET NOTES.

(Continued from page 193).

acre. The oat crop almost ruined, many not through cutting yet. Much of the clover hay spoiled in the mow. Large growth of fodder, but corn not earing up well. Many apples and plums. Pastures good; stock looking good; spring seeding of clover is very good; rye yielding about 10 to 15 bushels per acre. Eggs 17c; wheat \$1.01; rye 60c; corn \$1.15 per cwt; barley 60c; oats 35c; butter 25c.

**Green Co., Aug. 23.**—Yield of hay was good but hard to secure; a great deal spoiling in the mow. Alfalfa is being cut the third time. Some report little red clover well filled with seed, and some do not. Wheat threshing out of field is not completed; it is spoiling considerably. Oats were good but are wet also; not much barley. Corn was in good prospect until the storm of last week lodged it very badly and reduced the prospect. Potatoes good but are rotting. Some plowing done for wheat. Apples in abundance; pears a failure. Peaches plentiful; prices steady.

The good quality of the cattle marketed during August demonstrates that this has been a beef-making season, well-fattened bullocks weighing from 1350 to 1450 lbs. having been conspicuous in the offerings on the Chicago market.



## THIS IS THE FIRST EDITION.

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

## DETROIT LIVE STOCK MARKETS.

## Thursday's Market.

August 26, 1915.

## Cattle.

Receipts 1666. There was a good active trade in the cattle division at the local stock yards this week, the receipts being considerably less than they were a week ago and the meat trade more active. Shippers could not ship common thin canners here, the inspectors are after them strong and they were busy condemning all of this class of cattle in the receipts this week. There is no prospect of anything being allowed to go back for feeding as yet and farmers wanting feeding stock must buy outside of a stock yards. Best heavy steers \$8@8.50; best handy weight butcher steers \$7.50@7.75; mixed steers and heifers \$6.50@7.25; handy light butchers \$6@6.25; light butchers \$5.50@6; best cows \$5.75@6; butcher cows \$5@5.50; common cows \$4.25@4.75; canners \$3@4; best heavy bulls \$5.50; bologna bulls \$5@5.25.

Bishop, B. & H. sold Mich. B. Co. 12 steers av 962 at \$7.50, 29 do av 921 at \$7.65, 3 do av 1177 at \$8, 7 do av 850 at \$6.50, 22 do av 894 at \$7, 4 cows av 1117 at \$6, 3 do av 857 at \$4.25, 1 do wgh 1200 at \$5.50, 3 do av 763 at \$5, 1 bull wgh 820 at \$5, 2 do av 1315 at \$5.60, 7 butchers av 833 at \$6.25, 25 do av 784 at \$6.35, 3 do av 887 at \$6; to Golden 3 cows av 900 at \$4.75; to Goose 4 bulls av 872 at \$5.25; to Sullivan P. Co. 1 steer wgh 840 at \$6, 2 cows av 1110 at \$6, 15 steers av 1000 at \$7.80, 7 do av 810 at \$7, 3 do av 1060 at \$7.50, 2 heifers av 770 at \$6.50, 5 cows av 950 at \$5.75, 6 butchers av 850 at \$6.25, 6 steers av 1100 at \$7.75; to Hammond, S. & Co. 17 steers av 850 at \$7.10, 7 cows av 900 at \$5.25, 7 do av 950 at \$8, 16 steers av 1050 at \$8.25; to Bresnahan 2 bulls av 950 at \$5.50, 9 cows av 850 at \$4.75, 8 steers av 1050 at \$7.35, 21 do av 1200 at \$7.60, 22 do av 1000 at \$7.75, 11 do av 1025 at \$8, 9 do av 850 at \$6.70, 6 cows av 950 at \$5.50; to Mich. B. Co. 26 steers av 975 at \$7.60; to Sullivan P. Co. 2 steers av 1190 at \$8.50.

Reason & S. sold Feldman 4 cows av 1000 at \$5.35; to Thompson Bros. 21 steers av 875 at \$7.35; to Hammond, S. & Co. 4 cows av 1050 at \$5.75; to Rattkowsky 4 heifers av 650 at \$5; to Goose 8 cows av 600 at \$4.70; to Lachalt 6 butchers av 850 at \$6.25, 5 do av 700 at \$6.25; to Rattkowsky 3 cows av 950 at \$4.30; to Hoffend 3 do av 600 at \$5; to Sullivan P. Co. 18 steers av 900 at \$7.25.

Bigelow sold Bresnahan 4 cows av 1055 at \$4, 11 do av 1118 at \$5.50.

Same sold Mich. B. Co. 5 steers av 954 at \$6.50, 1 do wgh 740 at \$6.

## Veal Calves.

Receipts 454. The veal calf trade was unusually active and fully 50c higher than last week on everything but common heavy stuff, which was dull at \$6@7.50; good grades \$11.50@12.50; medium \$8@10.50.

Reason & S. sold Sullivan P. Co. 3 av 210 at \$8, 9 av 250 at \$8.50; to Parker, W. & Co. 4 av 145 at \$11.25.

Roe Com. Co. sold Goose 9 av 275 at \$8.50; to Mich. B. Co. 4 av 180 at \$12, 12 av 150 at \$10, 2 av 195 at \$12, 5 av 165 at \$10, 3 av 210 at \$11.50; to Burnstine 3 av 160 at \$11.50; to Goose 10 av 268 at \$6.

## Sheep and Lambs.

Receipts 2974. The sheep and lamb trade was active, top lambs selling at \$8.50, a trifle less than they did on Wednesday. Sheep sold strong, the best going quickly at \$5.50. Best lambs \$8.50; fair do \$7@7.50; light to common lambs \$6@6.50; fair to good sheep \$5@5.50; culls and common \$3.50@4.

Sandel, S. B. & G. sold Newton B. Co. 44 lambs av 75 at \$8.25, 13 do av 75 at \$8.25; to Klinck & Co. 27 do av 80 at \$8.50; to Thompson Bros. 7 do av 55 at \$7; to Hammond, S. & Co. 19 do av 70 at \$8.40; to Sullivan P. Co. 34 sheep av 90 at \$4.50, 41 lambs av 70 at \$8.25, 15 do av 60 at \$6.75, 52 do av 80 at \$8.25, 6 sheep av 115 at \$4.25; to Hammond, S. & Co. 34 lambs av 75 at \$8.50, 10 do av 53 at \$6.75.

Reason & S. sold Parker, W. & Co. 19 lambs av 65 at \$8, 8 do av 55 at \$7, 5 sheep av 95 at \$5; to Sullivan P. Co. 5 do av 105 at \$5, 8 lambs av 75 at \$8; to Parker, W. & Co. 13 do av 70 at \$8, 51 do av 75 at \$8.50, 10 do av 55 at \$7, 18 sheep av 110 at \$5, 34 lambs av 70 at \$8.50, 25 lambs av 80 at \$8.50, 19 do av 65 at \$8; to Fitzpatrick Bros. 14 sheep av 45 at \$2.50.

## Hogs.

Receipts 3961. The hog trade was a trifle better than on Wednesday; light and mixed \$7.80@7.85; heavy \$7@7.25. Packers are bearing down hard on roughs and say they will not pay over \$6 for them.

## Friday's Market.

August 27, 1915.

## Cattle.

Receipts this week 1859; last week 2405. Market dull. The embargo on Saginaw county will be lifted on Monday morning. Best heavy steers \$8@8.50; best handy weight butcher steers \$7.50@7.75; mixed steers and heifers \$6.50@7; handy light butchers \$6@6.25; light butchers \$5.50@6; best cows \$5.75@6; butcher cows \$5@5.50; common cows \$4.25@4.75; canners \$3@4; best heavy bulls \$5.50@5.75; bologna bulls \$5@5.50.

## Veal Calves.

Receipts this week 552; last week 626; market 75c@1 lower. Best \$11@12; others \$6@9.50.

## Sheep and Lambs.

Receipts this week 3559; last week 3639; market slow. Best lambs \$8.50; fair do \$7@7.50; light to common do \$6@6.75; fair to good sheep \$5@5.50; culls and common \$3@4.

## Hogs.

Receipts this week 5566; last week 4820; lights and pigs \$7.80@7.85; heavy \$7.25@7.50; mixed \$7.50@7.80.

## LIVE STOCK NEWS.

There has been considerable talk lately of cattle wanted for export, but exports were out of the question in view of the great cost of ocean transportation, to say nothing of the high cost of big steers placed on the other side of the Atlantic, that being the only description it is possible to utilize in this manner.

Four new cases of foot-and-mouth disease were reported in McDonough county, Ill., recently. They were due to threshing machine crews and perambulating bulls.

Upward of 4500 western range cattle arrived on the Chicago market on a recent Monday. They were mostly of Mexican and Texas breeding, with only a few native rangers offered. The crop of western range cattle is later than usual in moving marketward, grass being luxuriant and most range-men in no hurry to move their stock.

Fat hogs have not been bringing remunerative prices, measured by the feed cost. Recent marketings have run largely to mixed carloads, running from pigs to heavy packing hogs. The best authorities advocate finishing healthy youngsters before sending them to market, and this policy is being generally carried out in the hog raising districts.

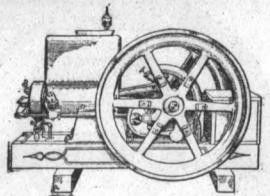
## For Sale

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20 H. Pitts traction engine, 20 H. Rumley, 18 H. Pitts, 16 H. Baker, 16 H. Gaar-Scott, 15 H. H. Huron, 13 H. Nichols & Shepard, 12 H. Leader, 12 H. Case, 28" Pitts Grain Thresher, 30" Pitts, 32" Huber, 30" Advance, 12 H. Portable Gasoline Engine, 17 x 22 Ann Arbor belt power Hay Press, 17 x 22 Ohio, and many others. Write us for complete second hand list.

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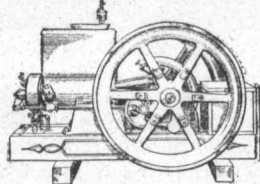
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## CULL BEANS FOR FEED.

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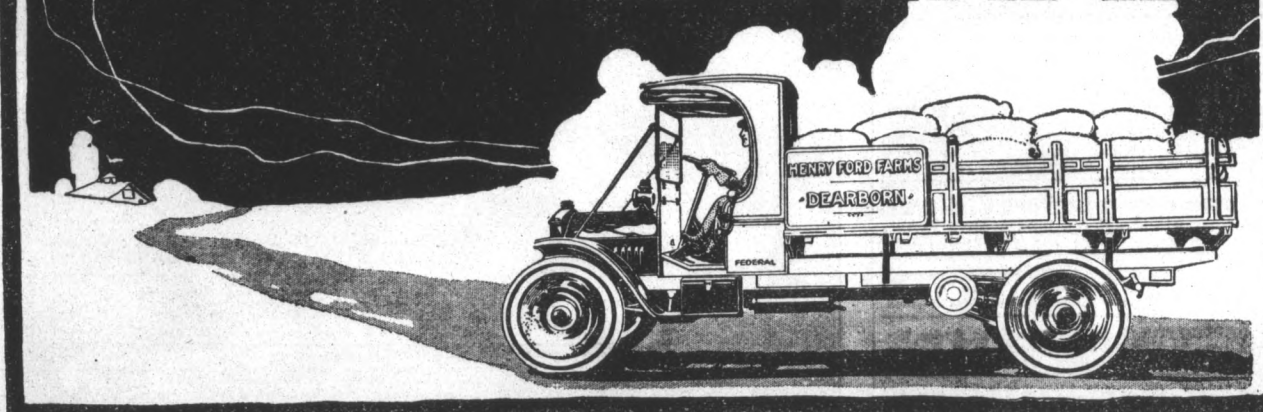
Salvage grains. The Bartlett Co., Jackson, Mich.

FARMERS—We are paying from three to five cents above the highest official Detroit Market quotation for your eggs shipped direct to us by express. Write us for information. It will pay you. American Butter & Cheese Co., Detroit, Mich.

WE CAN SELL STOCKERS and feeders, also feeding lambs, consign hereto us, or if you are in the market for feeding stock write or wire us. HARPER COMMISSION COMPANY, Toledo Union Stock Yards, Toledo, Ohio.

MILCH cow buyers, write me for carload lots, large selection of fall cows, Holstein mostly. Good ones and cheap. Small Commission. LYNN HENDEE, Pinckney, Mich.

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Size	Plain	Non-Skid	Pure Gum	Red Tubes	Tube
30 x 3	\$5.00	\$5.50	\$2.35	\$2.60	
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33 x 4	9.00	10.00	3.90	4.35	
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Also all sizes up to 38 x 5 1/2. State whether clincher, "Q.D." or straight side.

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At our risk you can prove that the "Dead Easy" is quicker, safer, easier and cheaper than any other tire pump, either engine drive or hand power. Free Trial Offer—Write today. NOW, for 15-day—no money-in-advance—free trial offer. GLOBE MANUFACTURING COMPANY, 60 Grant St., Battle Creek, Mich.



**4000 FERRETS FOR SALE**  
Price list free. C. J. DIMICK, Rochester, Ohio.

### POULTRY.

**Barred Rock Cockerels**—for Sept. and Oct. fairs, 500 yearling hens and pullets for shows and breeders. W. C. Coffman, R. 6, Benton Harbor, Mich.

**BARRED ROCKS**—Parks 200-egg strain stock and eggs in season. FRED ASTLING, Constantine, Michigan

**BIG BARGAIN SALE OF BARRED ROCKS.** 200 yearling hens that have laid 140 eggs each since Jan. 1st, 1915 to Aug. 1st, 1915 an average of 20 eggs per hen per month. Prices 6 hens \$10, 12 hens \$18, 20 hens \$25, 50 hens for \$60. They are pure bred, large and closely related to our first winners at Chicago, Cincinnati and Indianapolis shows. Suitable males to go with them at \$2 to \$5 each. 1500 young birds growing. G. EARL HOOVER, R. 7, Matthews, Indiana.

**Buff Rocks,** 3 out of 4 firsts Chicago, 1914. Eggs bal. of season \$1.50-15; \$6-100. S. C. Buff Leghorn eggs \$1-15; \$5-100. Pen of 12 Buff Leghorns \$10. 20 Buff Rock Hens, 75 cents to \$2.50, including Chicago and Minneapolis first prize winners. Bird Lawn Farm, Lawrence, Mich.

**Pine Crest White Orpingtons**—Splendid early hatched Belgian hares and Collie puppies. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Michigan

**RHODE ISLAND REDS and PLYMOUTH ROCKS.** Males 5 to 12 lbs. according to age \$2 to \$5; P. R. hens weight 5 to 9 1/2 lbs., eggs 15 for \$1.00; P. R. eggs \$5 per 100. Mammoth Bronze Tom Turkeys, 8 to 35 lbs. according to age \$5 to \$25, 10 eggs \$5. A. E. Crampton, Yassar, Mich.

**Rose Comb Brown Leghorn Cockerels** from Mad. Sq. winners 50 cts. up according to age. CLAUDIA BETTS, Hillsdale, Michigan.

**R. O. and S. C. RHODE ISLAND REDS** from prize strains, fine layers with long bodies and rich red color. JENNIE BUELL, Ann Arbor, Michigan.

**SALEORPINGTON Cockerels**—12 wks. \$1; 8 wks. 75c. 8 wks. pen, 8 pullets, 1 cockerel \$10. S. O. Kellerstrass, white. M. E. Thompson, Redford, Michigan.

**Slaughter Sale of Barred & White Rocks** Cocks \$3.00 to \$5.00. Hens \$1.00 to \$3.00. Young stock after September 1st. Riverview Poultry Farm, Box 795, Union, City, Mich.

**SILVER Laced Golden and White Wyandotte Eggs** for hatching. Ten cents each or 30 for \$2.50. I pay parcel post charges. C. W. BROWNING, Portland, Michigan.

**White Wyandotte Eggs**—50c for 15, \$4.00 for 100. My two best pens \$2.00 for 15, \$3.75 for 30. DAVID RAY, 202 Forest Ave., Ypsilanti, Mich.

**White P. Rocks, Pekin and white runner ducks,** White guineas, eggs and day old ducks and chicks. H. V. HOSTETLER, St. Johns, Michigan.

### DOGS.

**FOX, COON, SKUNK AND RABBIT HOUNDS** Broke to gun and field. Prices right. Fox and Coon hound pups \$5 each. Stamp for reply. H. C. LYLE, Fredericksburg, Ohio.

**HOUNDS FOR HUNTING**—Fox, Coon and Rabbits, all ages, 500 ferrets, send 2 cent stamp. W. E. LECKY, Holmesville, Ohio.

## How to Select the Laying Hen

THE following few proven facts should enable all to pick the good layers from the poor, or non-layers. Every farmer and poultry raiser should make it a point to cull his flock of chickens closely in the fall of each year, if not before. Quite often it is possible to cull a flock a third or more; thus reducing the feed bill without reducing the egg yield to any noticeable extent.

The latest and quickest molters are the best layers. By this we mean that those hens molting in the latter part of September, October and November are better layers than those molting earlier. It is poor practice to keep the early molters and to sell the late molters. This is being done on many farms. Experiments have repeatedly proven that the 200-egg hens did not begin to moult until November.

### Relation of Shanks to Egg Production.

Individuals with pale colored shanks in such breeds as Rocks, Wyandottes, Reds and Leghorns, are considered better layers than those with bright yellow colored shanks. This indication of the laying capacity of a hen is, of course, only true when applied in the fall of the year and among breeds with yellow shanks.

The color of ear lobes is also an indication of laying qualities, but in this case is only applicable in breeds with yellow, creamy or white ear lobes. The Rocks, Reds, Wyandottes, and other American, English and Asiatic breeds, have red ear lobes, hence for these breeds this indication is valueless. But in the Leghorn this indication is reliable, and it has been found that those with white ear lobes in the fall are better layers than those with yellow or creamy colored ear lobes.

### Strong Bird Best Layer.

A constitutionally strong bird, and one that passes through the moult quickly and easily is a better layer than a weak specimen that develops all kinds of ailments while passing through the moult. Also, those that show the least broodiness are better layers than those broody a large part of the time. A bird with closely worn toenails is considered a better layer than those with long toenails and a bird that goes into the moult with a very much worn and ragged plumage is a better layer than one with no marks that bespeak of hard work the past year.

Other valuable indications well to

bear in mind in any time of the year are the actions of the birds. A bird first off the roost in the morning and the last on them at night is considered a better layer than the one that spends most of the time on the roost or stands around in a humped up appearance in the corner of the pen. A singing and working individual is always a better layer than the quiet and lazy kind.

### Good Eaters Are Good Layers.

Those that go to roost with a full crop are good layers, hence the statement, "a heavy eater is a good layer." A fowl, in order to be in laying condition, must carry a little surplus fat. A poor or lean hen can never be a laying hen.

A rather large comb and wattles for the breed is considered another good characteristic of a good layer, and in Leghorns, some breeders insist that those individuals with rather high tails are better layers than those with very low tails.

The pullets that commence laying early are generally considered better layers than those that mature late, hence the statement, "keep the early laying pullets." Nervous and active individuals are generally better layers than those that are slow, inactive and indifferent.

F. W. KAZMEIER.

### SUGGESTIONS ON THE CARE OF TURKEYS.

At this season we watch the turkeys to see that they get home at night. Sometimes they will go miles from home when allowed to stay out at night but they are not so apt to wander far and forget to come home at night when plenty of fresh drinking water is kept where we want them to run. So, often when on a foraging expedition they will go where they can find water. Turkeys require a considerable amount of water; and it is bad for them to drink stagnant water such as they get in dry hot weather when streams are low, or around stables.

As they grow older they like a large range and the turkeys that have plenty of range have better plumage and make the best breeders. If we can secure thrifty and large frames now, nature will put on the weight at maturity, and in the fall they will be as good market turkeys as anybody would want. The tall, rangy, big-boned birds

look slim now but they are the ones that develop into large birds.

We give them a little whole corn as soon as they are old enough to eat it because it makes them grow fast. However, it won't do to feed much corn till the weather gets cool and the time for fattening comes. We never allow them to form the habit of hanging around waiting to eat with the chickens, but keep them going out on the range as long as possible. They will clean the corn of grasshoppers at this season and get much in the stubble fields that everything else has overlooked.

We find the early hatched turkeys are more thrifty during the summer and fall than the late hatched birds.

For indigestion we give a full tablespoon of castor oil with five or six drops of turpentine in it, and look for lice. Lice and worms follow indigestion. Turkeys should have free access to charcoal; it is an excellent health promoter for the turkey family.

It is claimed that crooked breast bones are caused by birds roosting too young. We are certain that this is often the result of inbreeding. We once bought a sitting of eggs from a well known breeder of Bronze turkeys. The only tom raised had a crooked breast bone, but as he was so good in other respects we concluded to breed from him. The next season we had quite a number of turkeys with crooked breast bones. It was several years after we disposed of this gobbler before we were entirely rid of this deformity.

FRANCES WOOD.

### PROTEIN FOOD INCREASES EGG PRODUCTION.

That it is a poor policy for farmers to not feed some kind of food to their chickens which is high in protein value—such as beef scraps or sour milk—is the opinion of H. L. Kempster, of the Missouri Experiment Station.

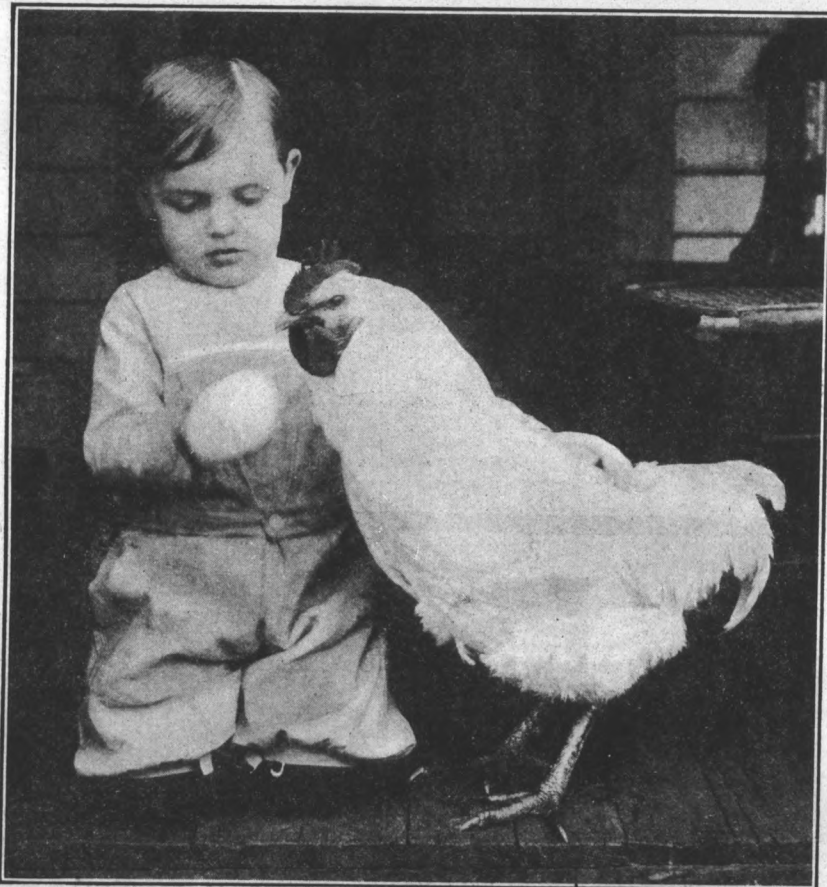
Three separate pens with the same number of chickens were used in an experiment which proves that protein food produces greater results at lower costs. All were fed corn all of the time, wheat part of the time, and in addition ground grain rations of bran, middlings, and corn meal. Besides this regular feed for the chickens in all three pens, those in pen one were fed beef scraps, and those in pen three were given all the sour milk they wanted. The hens were about the same age. The experiment covered the time between Nov. 1 and June 1.

Those hens in pen two—given only the regular feed—produced only 800 eggs; those in pen one—given beef scraps—produced 1,518 eggs, and those in pen three—fed sour milk—produced 1,425 eggs. The hens in pen one ate 923 pounds of grain, those in pen two 944 pounds and those in pen three 836 pounds.

The amount of beef scraps fed to the chickens in pen one was 60 pounds, costing \$1.80. These hens produced 718 more eggs than those chickens fed only the regular ration. In other words these chickens produced 718 additional eggs on feed which cost but \$1.80 more than the regular ration. Those hens fed sour milk produced nearly as many eggs as those fed the beef scrap ration.

### A GOOD VETERINARY BOOK.

Very often a veterinary book can save some money. We have been able to buy 1,000 of Gleason's Veterinary Books at 29 cents apiece. Our subscribers can have them at just what they cost us, but they must be subscribers to the Michigan Farmer, so we are offering them now for 79 cents with the Michigan Farmer a year, postage paid. By that, we mean that there will be no postal charges. Present subscribers can have the book for 29 cents. There is a very great bargain in this. It would cost at least 50 cents more in any other way.



"Don't Blame Me."



## Farmers' Clubs

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

President—R. J. Robb, Mason.  
Vice-president—C. J. Reed, Spring Arbor.

Secretary and Treasurer—Mrs. J. S. Brown, Howell.

Directors—Alfred Allen, Mason; Joseph Harmon, Battle Creek; C. B. Scully, Almont; C. T. Hamline, Alma; W. K. Crafts, Grass Lake; Edward Burke, St. Johns.

#### Associational Motto:

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

### SOME OPPORTUNITIES FOR THE FARMERS' CLUB.

With the coming of the autumn season, the local Farmers' Clubs of the state will become increasingly active. Many local Clubs hold no meetings during the summer months, while many others hold half-day meetings only. In any case there will be renewed interest in Club work with the passing of the strenuous season of farm work, and it is not too early for the leaders among the members of any local Farmers' Club to begin the mapping out of a fall campaign for the organization.

The average local Club is prone to be satisfied with the social features of the Club and the general discussion of public questions of importance. These are not only wholly legitimate but very desirable activities and should, of course, be continued. But there are other lines of work which might be taken up with good profit to the members in the conduct of their business. The experience gained by the members in the conduct of their farms during the present season will, if properly developed through the medium of the Club, supply valuable material to this end. Of course, something of this benefit is realized under present conditions, but only a fraction of what might be the case under better methods of developing this fund of knowledge. How, then, can it be accomplished?

#### Have an "Experience Meeting."

One means of accomplishing this desirable end would be to have a special experience program, in which the members would be asked to relate personal experiences in the conduct of their farms which have increased the sum of their agricultural knowledge. These experiences could then be classified by a committee into topics for discussion and a leader appointed to conduct each question whose business it would be to find other men who had gained experience along the same line to the end that all sides of the question may be properly discussed. In this way much helpful knowledge would be disseminated among the Club members, which would be valuable to them in the future conduct of their business. This general idea might be developed along many different lines. In a future issue we will undertake to give an example of one method of developing it advantageously.—A. F.

#### CLUB DISCUSSIONS.

**Hold Successful Picnic.**—The Clover Leaf Farmers' Club held its monthly meeting in Shidler's Grove on the bank of Gun River. Gun Plains Grangers were guests for the day. A picnic dinner was enjoyed, after which C. B. Cook, county agent, gave an interesting discourse on the farm bureau work. Everyone enjoyed his common-sense remarks. The remainder of the afternoon was spent in visiting and a ball game. All enjoyed a very good time in spite of the cold, cloudy weather. President Miller invited the Club to his home for the next meeting, which will be held the fourth Tuesday in September.—Mrs. Starr Fenner, Cor. Sec.

## Grange.

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

### BARRY COUNTY GRANGE PICNIC.

Fine weather, which is appreciated just now by farmers especially, was responsible for keeping down the attendance at the annual picnic of the Barry County Pomona Grangers at the fair grounds at Hastings. It is estimated that there were present about 225 members, representing Castleton, Maple Leaf, Star, Hastings, Johnstown, Irving and Glass Creek Granges. The meeting was called to order by Elmer Hathaway, the president, who turned the program over to Mrs. Anna Kronewitter, the lecturer. The program consisted of three excellent talks and music and readings, which were greatly appreciated.

John C. Ketcham, Master of the State Grange, in a brief and interesting address, discussed the possibilities of new Granges in Barry county and also urged that the Grange be strengthened wherever possible. He said he hoped that all farmers would visit the M. A. C. on Labor Day. Mr. Ketcham intends to arrange for addresses and other features at the college, so that all farmers attending will derive a great deal of benefit from the trip. Mr. Ketcham also discussed the methods of farming in Colorado where he recently delivered a series of lectures.

R. M. Bates, of Hastings Grange, discussed the value of the town Grange, which he said ought to develop co-operation between the merchants and farmers and to enable both to be of mutual assistance in building roads and in promoting public improvements.

Roy G. Barnum of Castleton Grange read an excellent paper entitled, "The Function of the Grange in Promoting Co-operation Among Farmers." This address will appear in our columns in the near future.

Co-operation in shipping is a subject which is greatly interesting Grangers in this state. One of the chief measures passed at the meeting was the adoption of a resolution, which will result in the delivery of lectures before various Granges of the country by C. J. Miller, of the West Calhoun Co-operative Live Stock Shipping Association. He will discuss the functions of the organization.

State Grange Master Ketcham expressed himself as well pleased with the meeting and its accomplishments. All enjoyed a picnic dinner in the dining hall and the fine music by the Glass Creek band. Under the direction of Pomona Grange Master Hathaway, fifth degrees were conferred upon several candidates.

### EATON COUNTY LEADER IN GRANGE WORK.

Eaton County Granges were given a big puff by State Grange Master J. C. Ketcham when he spoke at the picnic held at Pine Lake, near Olivet. Mr. Ketcham said that Eaton county leads all the others in the state as far as the Grange is concerned. He also told of the important part that Michigan plays in the Grange for this state is first in the number of its organizations and third in its membership. Mr. Ketcham's address was greatly enjoyed. About 300 people were present at the picnic which was declared to have been one of the best held in years.

"This year is the banner year for Michigan in organizing of Granges," said Mr. Ketcham. "Thus far in 1915 there have been more Granges organized than any time since the year 1876. In this state alone there are 60,000 Grange members and 900 Granges. In the United States there are 1,000,000 farmers, their wives, and children who are members of a Grange, while there are 10,000 organizations. Thirty-two out of the 48 states in the Union are organized as Grange states."



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bunch of joy  
in every  
puff of  
Prince Albert  
tobacco!

YOU don't have to call for an encyclopedia to find out how P. A. sets on your taste! You just open up your supply, fill your old jimmy pipe, strike a match—and puff away! Because, you have struck tobacco happiness on the first bound—and you're set for the future on the smoke question. The patented process fixes that—and cuts out bite and parch!

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## COLD WEATHER WILL SOON BE HERE!

Have you a FUR COAT or ROBE that needs a NEW LINING, FASTENERS, or the FUR repaired? THE BLISSFIELD ROBE & TANNING CO., will gladly pay the CHARGES if sent to them, and by return mail will give you a low estimate on putting your FUR GOODS in condition as good as new. If the price is not satisfactory, goods are returned FREE OF CHARGE.

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Trade **Vaseline** Mark  
Carbolated  
Petroleum Jelly

A most effective antiseptic dressing wherever the skin is broken or cut; also especially good for barber's itch, insect bites, poison ivy and corns.

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Chance of a lifetime here: owner called to distant state; big equipped farm going at a remarkable bargain; fine location, near town and depot, schools and other conveniences close by; 200 acres under cultivation, level, big crops, balance pasture and wood; 6-room cottage, 40-ft. basement barn; if taken at once 2 young horses, 5 cows, 3 shoats, poultry, all farming machinery, tools and crops included, price for everything only \$3500, easy terms; Full details and traveling directions, page 27, "Strout's Farm Catalogue 33," write today for your free copy.

E. A. STROUT FARM AGENCY,  
Station 101, University Block, Syracuse, N. Y.

## A Rare Chance Michigan Farm Land MUST BE SOLD To Close an Estate

This property is not in a wilderness. It has settlers all around it. Good land, good roads, good shipping facilities, churches, schools, telephone service, 2,000 acres offered in 80-acre lots and upward at low prices. Easy terms. For particulars write.

ARTHUR D. JOHNSON, Clare, Michigan.

## FARMS, GOOD, CHEAP, PROFITABLE

UNUSUAL OPPORTUNITIES NOW  
State Board of Agriculture, Dover, Del.

**FARMS WANTED**—We have direct buyers. Write lowest price. We help buyers locate desirable property free. American Investment Association, 10 Palace Bldg., Minneapolis, Minn.

**OWN A FARM**—Never was a better time to see Gladwin Co. Make date at once for auto tour to my Improved and Unimproved farm lands. You will never regret it. U. G. REYNOLDS, Gladwin, Michigan

**For Sale** 1286 Acres, or part of same, partly improved land, buildings and orchard. A good Stock Ranch. V. W. WHITE, West Branch, Mich.

## Farms and Farm Lands For Sale

### WHY PAY RENT

when you can buy the best farm land in Michigan at from \$12 to \$20 an acre on easy terms. Write for particulars. STAFFELD BROTHERS, Owners, 15 Merrill Bldg., Saginaw, West Side, Mich.



# Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

## SAFE, SPEEDY AND POSITIVE.

Supersedes All Caustery or Firing. Invaluable as a CURE for

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WIND PUFFS,  
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SKIN DISEASES,  
RINGBONE,  
PINK EYE,  
SWEENEY,  
BONY TUMORS,  
LAMENESS FROM  
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## REMOVES

BUNCHES or  
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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

## The Accepted Standard VETERINARY REMEDY

Always Reliable.  
Sure in Results.



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## CAUSTIC BALSAM IS THE BEST

Your Gombault's Caustic Balsam is the best I know of. I have bought four bottles for my neighbors, and two for myself. I have cured a sweened horse with the Balsam.  
—Louis Miller, Sharon, Wis.

## GOMBALTS CAUSTIC BALSAM IS EXCELLENT.

Having read an advertisement in Wisconsin Agriculturist about your Gombault's Caustic Balsam, I have tried some of it and think it excellent.—J. M. Woradzowsky, Big Flats, Wis.

Sole Agents for the United States and Canada.  
**The Lawrence-Williams Co.**  
TORONTO, ONT. CLEVELAND, OHIO.

## BREEDERS' DIRECTORY

### CATTLE.

## ABERDEEN-ANGUS

HERD ESTABLISHED IN 1900.  
TROJAN-ERICAS and BLACKBIRDS only. Young bulls and Percheron stallions for sale. Also breeders of Percheron, Hackney and Saddle Horses. WOODCOTE STOCK FARM, Ionia, Mich.

## ABERDEEN ANGUS

If you are in need of an extra good bull or a few choice young cows or heifers, we have them for sale. Our herd is headed by the Grand Champion Black Monarch 3rd. We invite you to come to our Farm and see them. They are bred right and priced right. U. L. Clark, Hunters Creek, Mich. Sidney Smith, Mgr.

AYRSHIRES—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

THE VILLAGE FARM,  
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GUERNSEY CATTLE.

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## BEACH FARM GUERNSEYS

Combine the blood of the following great producing sires and dams:—  
Masher Sequel - 57 A. R. Daughters  
Galaxy's Sequel - 37 A. R. "  
Glenwood Boy of Haddon - 26 A. R. "  
May Rose King - 21 A. R. "  
Dairymaid of Pinehurst - 910 lbs. fat  
Dolly Bloom - 836 "  
Imp. Itchen Daisy - 714 "  
Selma of Pinehurst - 762 "  
Stanford's Princess - 725 "  
Bulls for sale only.

A Dairy Show Every Day.  
CAMPBELL & ANGEVINE, Coldwater, Mich.

For Sale—Reg. Guernsey Cattle and BERKSHIRE Dams. If you want the right kind write for price and breeding. BYERS & BARNES BROS., Coldwater, Michigan.

GUERNSEYS—REGISTERED BULL CALVES  
Containing blood of world champions.  
HICKS' GUERNSEY FARM, Saginaw, W. B., Mich.

GUERNSEY BULLS FOR SALE, ready for service from A. R. Dams. If you want the right kind write for price and breeding. BYERS & BARNES BROS., Coldwater, Michigan.

REGISTERED Young Guernsey Bulls, great grand-sons of Gov. Cheno. Serviceable age nicely marked, exceptional breeding. Avondale Stock Farm, Wayne, Mich.

HEREFORDS: Two last Oct. bull calves for sale. Big fellows. ALLEN BROS., Paw Paw, Michigan

## Do You Want A Bull?

Ready For Service.

From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6 1/2 % fat daughter of Pontiac Aggie Korndyke who has more 30 lb. daughters than any other living bull. If you do write for pedigree.

EDWIN S. LEWIS, Marshall, Mich.

## Espanore Farm, LANSING, MICHIGAN.

Home of the great Holstein bull "Pledge Spofford Calamity Paul"—sire of a 35-lb. cow and three over 30 lbs. If you are looking for a bull calf of this kind of breeding write for prices and pedigrees.

CHASE S. OSBORN, } Owners.  
ADAM E. FERGUSON, }

## 1 4-YEAR-OLD BULL

by a 31-lb. son of Pontiac Korndyke, and out of 27-lb. dam. 2 two-year-old and three yearling bulls. The above bulls have breeding and individuality to spare. Also a few richly bred bull calves. These will be priced right. This is a chance to get a valuable bull for little money. Get busy, as this ad. will appear but twice.

L. E. CONNELL, Fayette, Ohio.

## HATCH HERD YPSILANTI, MICHIGAN

Registered Holstein-Friesian sires, grandson's of World's greatest dairy sire, out of choice A. R. O. dams and King Pontiac Jewel Korndyke; Brother of K. P. Pontiac Lass 44.15; average record of 50 dams in his pedigree 31.25 in 17 days; average per cent of fat three nearest dams 4.37; of his own dam 4.98. Sires in first three generations already have over 600 A. R. O. daughters. A few females bred to "King". Prices reasonable.

## The Two Greatest Bulls KING OF THE PONTIACS

DE KOL 2d's BUTTER BOY 3rd

I have young bulls from cows having high official records and Granddaughters of above bulls. Stock extra good. Prices reasonable.

BIGELOW'S HOLSTEIN FARMS,  
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FOR SALE—REGISTERED HOLSTEIN BULL born Feb. 26, 1914. Mostly white. Dam has A. R. O. record, also Chester White Pigs. CHARLES I. COOK, Box 438, Fowlerville, Michigan.

## "TOP-NOTCH" HOLSTEIN

20, 25, 30, 35 and 37-lb. Bulls from large milking, A. R. O. dams. Nice variety from three farms to select from. Breed Better; Get the Best.

MCPHERSON FARMS CO., Howell, Michigan.

REGISTERED Holsteins—Herd headed by Albma Bonte Butter Boy. His dam has A. R. O. records as follows: at 2 yrs. milk 430, but or 18.55; 4 yrs. milk 604.8, butter 27.03; at 6 yrs. milk 620, butter 28.55 lbs. W. B. READER, Howell, Mich.

Breeders' Directory—Continued on page 199.

## 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.

Teats Grown Together.—I have a heifer calf four weeks old that I intended to raise for a cow, but just discovered that two of her teats are grown together. What can be done for a case of this kind? W. S. T., Ravenna, Mich.—Make veal of her.

Injured Udder.—Some two weeks ago my cow must have injured lower part of belly and fore part of bag; since then blood is mixed with milk. J., Newport, Mich.—Apply one part tincture arnica and seven parts water three or four times a day.

Atrophy of Shoulder Muscles.—I have a three-year-old colt with sweened shoulder, but shows no lameness. What can be done to fill out shoulders? H. A. H., Detroit, Mich.—Pull out skin and gently hand-rub sweened part for 15 or 20 minutes twice a day. Also apply equal parts of turpentine, aqua ammonia and olive oil after each rubbing, but only a little of it.

Enlarged Glands.—Last spring I bought a ten-year-old horse which has two round moveable bunches in throat one on each side of neck. C. P. Erickson, Fruitport, Mich.—Clip off hair and apply one part iodine and nine parts lard to bunches three times a week.

Chronic Cough.—Ever since last April my two-year-old heifer that will freshen in September has been coughing. Our local Vet. applied tuberculin test, but she failed to react. He examined her throat and found that she had been punctured through the wind-pipe, but thought she would outgrow this trouble; instead of getting better, she is worse. B. R. P., Crosswell, Mich.—Apply one part iodine and seven parts fresh lard to injured part of neck every day or two. It is possible that a surgical operation on throat might relieve her.

Cow Gives Bloody Milk.—Please advise me what to give a cow that gives bloody milk. Mrs. W. D., Lansing, Mich.—I am rather astonished to receive so many requests to answer personal letters by mail when the headlines of this department distinctly state that a communication of this kind must be considered private practice, and will not be answered unless a fee of \$1 is enclosed. Your cow has perhaps either been hooked, or bruised udder by coming in contact with a hard substance. Dissolve 1/4 lb. of acetate of lead in a gallon of water and add one pint tincture of arnica and apply to bruised portion of udder three times a day.

Contagious Abortion.—Please give a remedy for abortion in cows, as I would like to know how to treat the disease. J. B., Dearborn, Mich.—Separate diseased from healthy, burn afterbirth and foetus, or bury them deeply in the ground. Clean and thoroughly disinfect your stable and use any one of the contagious abortion remedies that are repeatedly advertised in this paper. Kindly understand, it is no easy task to get rid of abortion when a dairy of cattle becomes infected. Doubtless you have often read what I have written on this subject before; consequently, it is unnecessary for me to repeat it now.

Shoulder Lameness.—While doing heavy work some three months ago my horse went lame in shoulder, and since then I applied strong liniment and also applied a blister, but he has not recovered. R. B. A., Howell, Mich.—Mix together equal parts tincture cantharides, aqua ammonia, turpentine and raw linseed oil and apply to shoulder twice a week. It is perhaps needless for me to say that your horse should have rest.

Paralysis of Ear and Muscles of Face.—Early last spring one of my horses was accidentally struck just back and below left ear; next morning ear was drooping and he had lost control of it, eyelid and left side of his mouth became affected. He lost control of his lips and has never recovered, but by massaging the side of head affected, between the ear and lip and applying a liniment, his ear has become all right, also the eye, but his lip still hangs pendulous. M. W. H., Alger, Mich.—Give your horse 1 dr. of ground nux vomica at a dose in feed

three times a day and apply equal parts of alcohol and tepid water to lip three times a day.

Garget.—I have a cow that came fresh six weeks ago, since then she has had more or less udder trouble, and the treatment I have given and the remedies I have applied fail to clear her bag. C. B., Jackson, Mich.—Apply one part fluid extract phyto-lacca, one part fluid extract belladonna, adding four parts of lanolin, then apply to udder once or twice a day. If this udder trouble is the result of an injury, remove the cause.

Rheumatism.—I have two cows that are stiff and sore in front legs, but do not seem to have much pain. They also appear to be rather fond of chewing bones. C. J., East Jordan, Mich.—Mix together one part powdered nitrate of potash, one part salicylic acid and six parts ground gentian and give a tablespoonful at a dose in feed three times a day.

Umbilical Tumor.—I have a heifer calf about two months old which has always run with the cow, but four or five days ago a swelling appeared at navel which is hard and about the size of a turkey egg. I might add that this calf appears to be in perfect health otherwise. F. R., Ashley, Mich.—Apply one part iodine and seven parts lard to bunch every day or two.

Vertigo.—I have a pig that is weak, either in legs or back. He seems to be all right otherwise, but staggers when walking and acts crazy. I had a similar case last year, but by special care and feeding he grew to be a large hog. Is there anything I can do to help this one? C. J. B., Homer, Mich.—Give your hog bromide of potassium in feed three or four times a day and if he weighs 100 lbs. a teaspoonful would be a full dose. His bowels should be kept open; furthermore, he should not be overfed.

Valvular Heart Trouble.—Ten of our lambs have been found dead in the lot lately and apparently died without a struggle, for we found them lying in a natural position. They do not show any symptoms of sickness before death. I have changed their pasture several times, are now on second growth clover and are not weaned. They drink water from a new galvanized sheet pan and this morning I noticed one that had apparently lost control of all four legs, and in a few hours it was dead. I cut it open, made a close examination, found nothing unusual except a little sand in the bowels. These lambs are plump, fat and are apparently healthy, and have plenty of shade. I am at a loss to know cause of death. F. T., Springport, Mich.—I am inclined to believe that your lambs may have valvular heart trouble and die from its effects. I do not believe it good practice to dope your sheep or lambs until you know what ails them and whether or not the remedy we might prescribe would be likely to help them.

Suppurative Lymphatic Trouble.—I have a three-year-old Durham cow that is troubled with bunches on hind leg and some of them have broken open, others remain hard. Is there any danger in using her milk? C. P., Glennie, Mich.—Give your cow 1/2 oz. of Donovan's solution and 1 oz. of sulphate of soda at a dose in a quart of water as a drench three times a day. Paint bunches and sores with tincture of iodine every day or two, and don't use the milk as long as sores are discharging pus.

Infected Udder.—The first milk that comes from my cow's udder is curd-like, but contains no blood. This cow has been giving milk for the past nine months and is due to freshen December 15. W. B. V., Sutton's Bay, Mich.—Apply one part iodine and 19 parts lard to infected portion of udder three times a week. Give her 1/2 oz. of hyposulphite of soda at a dose two or three times a day.

Mites—Young Chicks May Die from the Effects of too Much Wet.—About two weeks ago some of my chickens commenced to lose their feathers, at first under body and wings, then become entirely well. They do not appear to be sick, eat well and two of them died. Their bodies or heads are not swollen, bowels act right, and I am puzzled to know what ails them. At first I thought it was mites, but I fail to find any on them. I have a neighbor that lost about half of her flock; she had about 150. My older chicks are not affected at all and I found mites in their coop, but they roost in a different place. Mrs. M. R. S., Caledonia, Mich.—I am somewhat inclined to believe that mites are perhaps the cause of your young chickens dying. You should examine their roosting place carefully for mites and in doing so, look under their roosting rail as mites usually come off chickens early in the morning and go back on them soon after they take their places in the coop. Kerosene applied faithfully to their resting poles is quite effective. Are you sure that the wet weather and exposure to cold rains are not killing them??



Cough.—Two of my cows are coughing some and I would like to know if it is contagious. I would also like to know what causes it? G. J. New Lothrop, Mich.—First of all let me say that cough is but a symptom and not a disease in itself; furthermore, a chronic cough is occasionally associated with diseases other than those of organs of respiration. With your cattle, I should say it was not contagious but the result of exciting causes, such as taking cold, or inhaling dust or some other irritant. Rub throat with equal parts turpentine and camphorated oil every day. Give each cow ½ oz. of powdered licorice, 1 dr. powdered lobelia and 1 dr. potassium iodide at a dose two or three times a day.

Congestion of Brain.—I have a hen that staggers when she walks, jerks head, pulls it to one side and when she eats drives her beak into food sideways, and acts as if she did not see very well. She also acts as if crazy and she is the third one of my flock that has shown these symptoms, but none of them have recovered. Z. A. Hemlock, Mich.—Your hen will perhaps have another attack of brain hemorrhage and fall over dead. Give her 2 grs. of bromide potassium at a dose three times a day; besides, give her a teaspoonful of epsom salts occasionally to purge her.

Ridgling Boar.—A short time ago I bought a male pig for breeding purposes, and lately I discovered that he is a ridgling. Will a hog of this kind do for breeding purposes, if not can he be successfully castrated? E. H. Stanton, Mich.—A hog of this kind is, of course, less sure as a breeder; however, they do breed. I know of no reason why your Vet. could not successfully castrate a ridgling boar. He should first ascertain that the testicle is not located in the inguinal canal. This precaution is essential, for if it is, it cannot be withdrawn through the abdominal incision; furthermore, cleanings must be exercised in an operation of this kind, in order to insure the life of the hog.

Gastritis.—We have a cat that fails to retain food, but is inclined to vomit after eating. We also have another cat that has no control of her bowels, especially when she becomes frightened. C. N. B., Lake Ann, Mich.—Give your cat that vomits five grains of sub-nitrate of bismuth at a dose in a tablespoonful or two of milk three times a day, and this same medicine will act fairly well on your other cat, but the dose may require to be increased.

Sitfast.—Short-winded Horse.—When I can't get results elsewhere, I always go to you for advice. Have a horse with a hard bunch on shoulder, not a sitfast, but am unable to reduce or heal it. I also have another horse that is short-winded and pants while working. S. M. Bailey, Mich.—The callous on shoulder is of a fibrous nature similar to that composing a sitfast. When a sore of this kind becomes malignant, it is almost impossible to heal it and in my practice I never hesitate to remove such a malignant growth, then recovery is sure to follow. Apply one part iodoform and five parts powdered charcoal to wound twice a day. Your other horse may have throat trouble or a weak heart; however, I am most inclined to believe it heart trouble. Give him 1 dr. ground nux vomica and ½ dr. of powdered digitalis and a dessertspoonful of Fowler's solution of arsenic at a dose in feed three times a day. He should not be fed too much bulky food and furthermore, he should be fed a good quality of feed.

Knuckling.—Have a colt five weeks old that knuckles over in fore fetlock joints and is not improving. S. B. Dafeo, Mich.—Colt's mother should be well fed in order that she may produce plenty of rich milk; besides, you should furnish the colt with some ground oats and wheat bran for it to eat as soon as it craves it.

Halter Puller.—Falls Down.—Some time ago I wrote you regarding my four-year-old horse, halter pulling; you told me how to hitch him in order that he could not break loose, but every time he pulls on halter he falls down in a heap and our Vet. tells me that he has paralysis. G. W., Muskegon, Mich.—Falling down only when he halter pulls does not indicate paralysis and if he were mine I should continue hitching him to something solid and by a safe rope around body through chin piece of halter, it should be so that he cannot break loose. Give him ½ dr. of ground nux vomica and 2 drs. of potassium bromide at a dose in feed three times a day.

Chronic Bone Spavin Lameness.—I have a four-year-old colt that has been troubled with bone spavin since he was a year old and I would like to know how to treat him. M. G., Paris, Mich.—Either apply one part red iodide mercury and four parts lard or try any one of the ringbone remedies that are regularly advertised in this paper, but remember it will be necessary to give the horse rest or he will perhaps not get well.

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Have a select lot of choice pigs for improving pedigreed herds at from \$35 to \$50. Some good boars for farmers use \$15 to \$25. Two sows bred for fall farrow \$50 each.

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**\$200** Buys one registered Holstein yearling heifer and one bull 15 months old not akin. ½ white. King Seis and Johanna breeding. B. B. Reavey, Akron, Mich.

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**\$80** Gets a 6 mos. old HOLSTEIN BULL CALF, whose sire is full bro to a former World's Champion 3 yr. old. Elmer E. Smith, Bedford, Mich.

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**HOLSTEINS AND GUERNSEYS** Our Holsteins combine the blood of Belle Korndyke and DeKol 2nd. Our Guernseys are strong in Lady Gempsey, Glenwood Boy of Haddon, and Stranford's Glenwood of Pinehurst blood. Some fine bull calves of both breeds for sale. Boardman Farm, Jackson, Mich.

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**Shorthorns for Sale**, farm ¼ mile east of Davis crossing on A. A. R. R. W. B. McQUILLAN, Chilson, Liv. Co., Michigan.

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### HOGS.

**Durocs & Victorias**—Grand bunch of Gilts due March and April. Comprising the blood of Superba, Defender, Much Col., Orions and others. A few young boars. M. T. STORY, Lowell, Mich.

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**BERKSHIRES** Choice spring boars and gilts, priced to move quick. Farmers stock. ELMHURST STOCK FARM, Almont, Mich.

**Berkshires.** Two fall gilts bred for Aug. & Sept. farrowing and a choice lot of April gilts for sale. A. A. PATTULLO, Deckerville, Mich.

**BERKSHIRES**—Some choice brood sows and spring pigs, either sex, also one stock boar for sale cheap. I. M. LEWIS & SON, Akron, Mich.

**Royalton Bred Berkshires**—Boar pigs ready to ship last of July at 12 weeks age with registry papers. Write for pedigree and prices. D. F. VALENTINE, Supt., Temperance, Mich.

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### Big Type, O.I.C.'s and Chester White Swine.

400 fall pigs either sex. Special prices for the next 30 days, also bred gilts and service males and we are booking orders for spring pig, all our stock is good enough that I will ship O. I. C. D. and reg. free in the O. I. C. or Chester White Assn. We won, more prizes than all other breeders put together, at Ill. and Wis. State Fairs. Write for Show record.

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Gilts bred for Sept. farrow and March pigs now ready to ship. Extra good ones at prices that will move them. Pairs not akin. I will be pleased to ship them O. I. C. D. and record them free in purchaser's name. NEWMAN'S STOCK FARM R. No. 1, Marietta, Mich.

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SOW WEIGHED 932 LBS.  
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**BIG Type boars by Big Smooth Jumbo.** Greatest boar in State, 748 lbs at 17 mo. These boars are long, tall, big bone sold at farmers prices, shipped C. O. Call or write. Wm. Waffie, Coldwater, Mich.

**For Sale Poland Chinas** of Merit, also Ayreshire Bull. B. M. WING & SON, Sheridan, Mich.

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Imported Strain. Both sexes. Prices Reasonable.  
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**50 YORKSHIRES**—All ages. Red Follied Cattle, Rooks, I. R. Ducks, Oxford Down Sheep. W. P. E. C. CARR, Homer, Mich.

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**FOR SALE** Lawrence Lodge Yorkshires. Boars from 3 to 8 mos. old. Weanling pigs to ship Sept. 1st. GEO. McMULLEN, Grand Ledge, Mich.

**Mulefoot Hogs:**—Weanling pigs, pairs not akin. Bred sows and gilts for fall farrow, two service boars. C. F. BACON, R. 3, Britton, Mich.

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Brood mares, Fillies and Young Stallions. Priced to sell. Inspection invited.  
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