

# MICHIGAN FARMER

AND  
**LIVE STOCK**  
PUBLISHED WEEKLY.

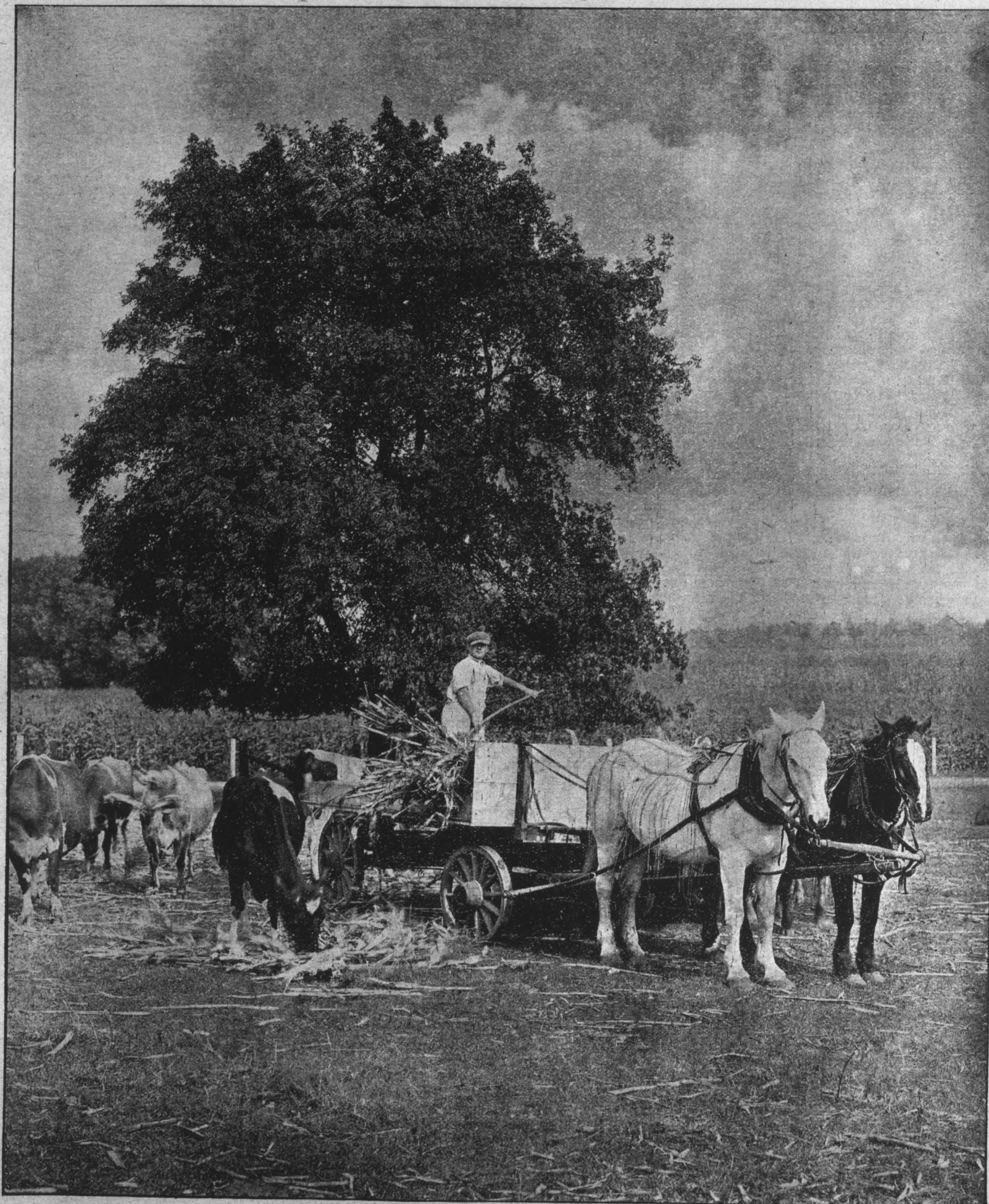
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# The Michigan Farmer

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DETROIT, SEPTEMBER 9, 1916

TEN CENTS TO JANUARY 1.

The Michigan Farmer will be sent to new subscribers beginning with the issue of the week the order is received, to January 1, 1917 for only 10 cents. This trial offer is made with the view of getting as many as possible of farmers who are not now reading the paper to read the Michigan Farmer for this period, in order that they may judge fairly its value as compared to its cost to them. To this end we ask that each trial subscriber who takes advantage of this unusual opportunity read the paper carefully each week and then ask himself fairly if it will not be a profitable investment to renew the subscription for one or more years. Send your order at once and get the most from this special offer. The Michigan Farmer, Detroit, Mich.

### CURRENT COMMENT.

**Co-operative Marketing.** Co-operation has long been considered a desirable goal for attainment by the farmers of Michigan and the country. While a considerable beginning has been made in co-operative enterprises, particularly marketing, in our own state as well as in other sections of the country, it is a matter of common knowledge that this movement has only just begun.

A survey of co-operation in the United States recently made by the United States Department of Agriculture indicates that farmers' co-operative marketing and purchasing organizations will this year transact a total business amounting to more than \$1,400,000,000. In the light of this survey, the conclusion seems warranted that in all communities where co-operation is applied in a practical manner to the farmers' business, the results obtained are far more satisfactory than the average of those secured by individual methods.

By way of further promoting and standardizing co-operative undertakings in this state, the Marketing Department of the Michigan Agricultural College has outlined what is known as the Standard Co-operative Association, an organization with no capital stock, which is composed only of those who make their living by growing farm products, and paying no profits to stockholders, the savings made being distributed among the members in accordance with the amount of business done by each member with the association. In other words, the standard co-operative association is an association of men rather than a combination of capital.

The provision for this so-called standard association is the first step to be taken by the Office of Markets in this state toward a general promotion of efficiency in the distribution of farm products. The second step will be the

establishment of uniform grades for quality, and the third step will be the classifying and harmonizing of accounting systems so that the operation of the different associations may be compared on an intelligent basis. So aided, the development of co-operative undertakings in Michigan should be more rapid in the future than it has been in the past.

### Marking a Century's Progress.

Last month Oakland county held a centennial celebration. Naturally the program emphasized the progress which has been made in agriculture and manufactures within the period which covers the county's history. Perhaps no incident of the event so well illustrates this progress as the preparations for a parade illustrative of pioneer days. Many heirlooms and relics of bygone days were brought out for this occasion which was made the more realistic by the use of an ox team as motive power for one of the "floats." This ox team was secured in a locality a score or more of miles distant from the county seat, but by way of saving time as well as the energy of the oxen and their driver, they were transported to the county seat where the celebration was held in an auto truck.

What could better illustrate the remarkable progress of the past century, and who would be so rash as to prophesy that the next century will not add to an even greater degree to the development of agriculture, as well as other industries, and to the material prosperity of our farmers and the consequent further elevation of the already high standard of our farm life.

### County Agent Work.

In previous issues a summary of the joint activities of the county agents operating in the twenty-six counties now organized has been given. The last official report of county agent work contains an account of the conference of the county agents of the upper peninsula which was held at Iron Mountain in July. This is the third conference of the kind which has been held as a matter of convenience in getting the agricultural agents of the upper peninsula together.

Eight counties in the upper peninsula are now organized in this work. From the report of this conference it appears that while the work of the county agents in the upper peninsula is slower and more difficult than in the lower part of the state, owing to the undeveloped condition of much of the land, there are compensating advantages in that the country is new, people are open-minded and progress is not hampered so greatly by antiquated methods and traditions.

The opportunity for live stock production in the upper peninsula is very bright and the local markets are very good for live stock products as well as most staple crops. Much emphasis is being placed on the development of the live stock industry by all the county agents, and Mr. W. F. Raven who has been special extension agent in the upper peninsula in recent years stated that more beef cattle had been brought into that section of the state this year than in any preceding year. Live stock associations, largely dairy organizations, have been formed in practically every county where agricultural agents are located.

Dairying is the most favored of any branch of the live stock industry owing to the excellent home markets for the product and the fact that dairy farming provides a constant income, thus being more practical for the new settlers than the departments of live stock production which yield no income until the product is grown and sold. In this connection the important factor of growing winter feed for live stock was given careful consideration, barley and root crops being especially favored for this purpose.

Emphasis is being placed upon the importance of pure seed of standard

varieties adapted to upper peninsula agriculture, and at this conference it was agreed that every effort should be made to get the farmers of that section to produce their own seeds and keep them pure and clean. A feature of county agent work in some counties of that section has been the carrying of a fanning-mill by the county agent in farm to farm visits in the various communities for the purpose of cleaning the seed for the farmers. Something of the scope of this work is shown by the fact that 1,600 bushels of seed were cleaned in this way, much of it also being treated for smut.

Attempts are being made to introduce pedigreed varieties of grain, in order to increase the yield and net profits from grain crops. Standardization of potato varieties has been attempted in the upper peninsula through the formation of potato growers' associations in five of the counties having agricultural agents. Efforts are also being made to modify the premium lists of county fairs, to the end that this movement toward the standardization of varieties may be encouraged by this means.

Another important project for the upper peninsula is the boys' and girls' club work, the county agents present at this conference reporting the organization of from one to six boys' and girls' clubs each. The use of farm account books is being encouraged, and county agents are following up the work among farmers who are keeping such records, in order to encourage them to complete the year and to draw valuable lessons from the data thus obtained. Home economics also came in for a share of discussion at this conference, since an extension specialist in this subject is now working among farm women of the upper peninsula.

Reference to these activities is here made to the end that Michigan Farmer readers may gain a better knowledge of the activities carried out through the medium of the farm bureaus in the newer agricultural sections of the state and the possibilities which such an organization hold for the farmers of even the more sparsely settled and less well developed sections of the state.

### Preparing for Winter.

Preparedness of the right sort will first make provision for the comfort of the farm family, and one of the first requirements for family comfort during the winter period is adequate warmth in the farm home. Published accounts of a meeting of sanitary engineers held in Detroit during the extreme heat of the midsummer season to discuss the house-heating problem naturally caused most readers to smile, but the enjoyment of the comfort of a properly heated home during the cold winter months would bring to the same faces a broader smile of satisfaction which is an index of a greater enjoyment of life.

Preparations for winter upon the farm are too often confined to the securing of the crops and the putting of the barns and stables in order for the winter housing of the live stock. Important as are these factors in preparedness for winter, the comfort of the home itself should be given first consideration, and to insure that comfort consideration must be given to the problems involved in advance of the coming of the winter season. Adequate heat, which can only be secured by the installation of a type of furnace suited to the house, hot and cold running water, which can be inexpensively provided in connection with such a heating outfit, good lights for the winter evenings, and sanitary closets in the house are the most desirable of the many comforts which could be included in a program of preparation for the winter. All these are needed in every home, and should be supplied as rapidly as conditions will permit. They are factors in the maximum enjoyment of life which should be given proper consideration in every farm home in advance of the coming winter season.

### MICHIGAN BEAN JOBBERS' MEETING.

The annual meeting of the Michigan Bean Jobbers' Association will be held at the Pantlind Hotel in the city of Grand Rapids on the afternoon of September 13. Addresses will be given by a representative of the Pure Food Department at Washington, Receiver Paul H. King, of the Pere Marquette, the secretary of the Cannery Association from Washington, and several state speakers of note.

An invitation is extended by President Orr, of the Michigan Bean Jobbers' Association, to all bean growers of the state whether members of the association or not, to attend this meeting.

### HAPPENINGS OF THE WEEK.

#### Foreign.

The European War.—During the past week interest has been centered in political changes and military movements in the Balkan States. Roumania has entered the war on the side of the Allies and already her troops have invaded Transylvania, a province of Hungary and have crossed into northern Bulgaria. Unofficial reports have also reached this country indicating that Greece has abandoned her neutrality and thrown her lot on the side of the Allies. King Constantine is said to have abdicated the throne of Greece in favor of Crown Prince George with former Premier Venizelos as the ruling power and the allied Mediterranean fleet has assembled before Athens. Serbians have advanced against the Teutons at the western extremity of the Allied front, before Salonika, and the recent successes of the Bulgaiars at other points have been stayed. Russians are co-operating with the Roumanians in forcing back the Austrians in Hungary and 19,339 Teutonic prisoners have been taken. Italian troops have started an offensive in Albania. No important changes are reported on the Russian front north of the Carpathian Mountains. The Germans launched a most violent counter-offensive against the British on the Somme river which was partly successful and the Germans were able to hold the recaptured territory. No change has occurred on the Franco-German front, including the Verdun area. Field Marshal Von Hindenburg has been appointed chief of the German general staff, while Prince Leopold of Bavaria is now in charge of the troops defending the eastern front.

A famine is raging in Syria from Aleppo to Jerusalem, according to recent information. Two-thirds of the inhabitants of villages in the neighborhood of Jerusalem and in Lebanon have died of hunger and typhoid. The total number of those who have perished is given at 100,000.

Fifty lives were lost in a hurricane which struck the Danish West India Island of Dominica on August 28. The wind reached a velocity of more than seventy miles. Over 200 buildings were destroyed, and considerable damage was done to crops.

#### National.

The threatened railway strike has been averted, temporarily at least. This was brought about through the action of Congress on the Adamson bill the provisions of which are agreeable to the railway employees. On the other hand, the railway executives do not believe the law, as it is being considered, is constitutional in that the United States Supreme Court heretofore has declared Congress has no power to fix wages outside of the government service, a result which in effect will be brought about by the new measure. The railroads had placed embargoes upon freight that could not be delivered previous to the hour set for the strike. These embargoes have already been lifted.

Unofficial information has it that the national guardsmen will be recalled to their mobilization camps in the various states by October 1. Now that the strike situation has been practically settled, the services of the guard will not be needed for other purposes.

An order has been issued by the War Department that no more militiamen will be discharged from the United States service because they have dependent relatives. A provision contained in the army appropriation bill which provides funds for needy families of soldiers is the reason given for rescinding the previous order.

The average temperature for the month of August was 65.1 degrees, as compared to a normal temperature for the month of 61.2 degrees. The hottest day was August 20, when the thermometer reached 96 degrees. The lowest official temperature for the month was 55 degrees on August 28.



## Profitable Preparedness

WHEN the governor of your state declares a seed-corn selection day, will you be prepared? This is a question that will confront many of the farmers of the corn belt this year as the returns of the first seed-corn selection days are felt this fall. Last year was the first time such a thing was tried in Indiana but the little replanting that was necessary on those farms that were prepared for it will give this kind of a holiday such a boost that it can never be wiped off the calendar.

This preparedness resolves itself into giving one day toward the latter part of September to the selection and care of seed corn for the 1917 crop. The first thing to provide is the correct attitude toward the movement. It is a well known fact that one bushel of seed corn will plant about six acres of corn. Who is there then, that will not give a few minutes of his time in October to save many hours of time and perhaps the corn crop next year.

Having now acquired some idea of where the saving is to yourself as well as the nation as a whole, provide yourself with a canvas sack that will be easily carried on the shoulder and which will hold a half bushel of seed-corn when full. This sack is to be filled many times on the appointed day with large regular rowed ears from healthy, well-matured hills of corn grown in the average quality of soil for the community. These ears should be carried midway on the stalk between tassel and root and should point downward rather than upward as the former sheds water to better advantage.

When these ears are all selected from the standing corn place them in some kind of a rack so that they may be kept separate with air space between so that they will be dried out by October. This rack may be either elaborate or very simple. Some dry their corn by tying the husks together and throwing the pairs of ears over wires up under the eaves. Others build racks six and seven feet in height and four or five feet wide into which they slip boards every four inches on which they have nailed small cleats two inches apart.

But your preparedness is not yet finished. About the first of February you must get out the "rag doll," or some other form of tester and test five or six grains of corn from different parts on each ear that you intend to use for seed in 1917. A very good substitute for the "rag doll" is a box two feet square and one and a half inches deep filled with soil, covered with a cloth or piece of glass and divided into one and a half-inch squares by strings.

The next step for preparedness is to get the seed ready for the planter by shelling it and fitting it to the correct size of plates. In doing the latter operation it is best to prop the planter wheels up and to turn the checker by hand so as to see which set of plates will drop the most hills that have three or four grains in them.

If one wishes to do more for his county corn growers, he can start growing pure-bred corn. To do this he must have pure-bred corn in his 1916 crop. Then he follows the same procedure until he has all of his ears tested in the winter. He then selects the ears that come closest to his ideal of a good ear of corn. These are shelled separately and numbered. When planting time comes he can reserve a part of the main corn field or have a separate field for his seed plot.

Here the rows are such that one ear of corn will plant only one row. The rows are then numbered to correspond to the numbers of the ears. When the corn is tasseling each odd numbered row is detasseled but the last four rows next to the field corn are left tasseled so that this will not pollinize the pure strains of corn. At harvest time the best ears on the detasseled rows

are selected as before, while those remaining are used to plant the multiplying field the next year. In this way a new strain of corn peculiarly adapted to the needs of your own vicinity will be developed and you will have helped out many of your neighbors.

Indiana.

W. E. WIECKING.

### SOME CAUSES FOR WHEAT FAILURES.

If more farmers would give some thought as to why wheat fails so often of late years and then work to counteract these causes, wheat failures would be more rare than they are. In our locality wheat was next thing to a failure this time. The crop ranged from nothing at all up to 40 bushels per acre. And for every good crop there were many poor ones and some complete failures. Of course, the season was a bad one for wheat. But if the season alone were responsible for the poor crop there could not have been a few good yields. So there must have been other causes. And an investigation soon convinced us that such was the case. In one instance we found that good seed alone when sowed just at the right time, increased the yield 15 bushels per acre on a part of one field and nothing at all off the rest of it. He said while we were talking about this right there in the field: "It

alin treatment for smut is a sure remedy and economical as to money cost as well as labor.

But other things interfere, too. Low fertility is one of the main causes. Not altogether, because the ground is too poor to raise wheat. Most of the ground contains plant food sufficient to produce a good crop of wheat. But it isn't rich enough to make the wheat grow rank and strong and hardy so as to resist the attacks of diseases and pests and to stand the winters well. And the first thing when land begins to lose fertility it loses its vegetable matter. This causes the ground to heave more in winter. And this could be remedied by plowing under plenty of vegetable matter. It doesn't help much to use commercial fertilizers unless the physical condition of the ground is first improved.

In view of these facts we can't afford to overlook any of these little details which will help so much to make the wheat crop a good one. For only those who take great pains with the sowing of wheat can expect to raise a full crop under present conditions.

Indiana.

E. G.

### CROP AND FERTILIZER QUESTION.

#### The Fertilizer for Wheat on Sandy Soil.

What fertilizer constituents are most essential for producing the best wheat crop on our sand land?

Allegan Co.

READER.

The most essential element of plant

stand that phosphorus is the element that is most likely needed and thus brands of complete fertilizers always contain much more phosphorus than they do nitrogen or potash. There are so many instances, however, where all three elements are needed and the farmer can be induced to do so little experimenting for himself that the safest way for the manufacturer is to advocate complete goods, that is, goods that contain all three of the essential elements—nitrogen, phosphorus and potash.

No one can tell, only in a very general way, what any particular soil needs unless he asks the soil. Ask the soil what it needs and it will tell you in no uncertain language. You ask the soil what it needs by applying the three essential elements of fertility separately, having all other conditions the same. Apply nitrogen (nitrate of soda) on one strip across the field, acid phosphate on another and potash on another, and note which gives the best results. Again, apply these elements in combination, nitrogen and phosphorus, nitrogen and potash, phosphorus and potash, then apply all three combined, which constitutes a complete fertilizer, and by noting carefully the results one can determine the best brand of fertilizer for this land under his conditions.

Very few farmers do this. It is too much trouble. They buy whatever fertilizer the dealer happens to have on hand, which is usually a complete fertilizers, and a complete fertilizer is the only safe one to buy unless one has had experience, except acid phosphate, which will always do good on any soil and any crop. It is the one safe buy.

A good wheat fertilizer is one containing two per cent ammonia, eight per cent phosphoric acid and two per cent potash—known as 2-8-2, or a 1-8-2. Personally I think the best fertilizer for the money is a 14 per cent acid phosphate. You may be able to get more phosphorous for your money in 16 or 18 per cent phosphate but the mechanical condition is apt to be faulty and unless a fertilizer will drill well it is not desirable at any price.

COLON C. LILLIE.

### PASTURING ALFALFA.

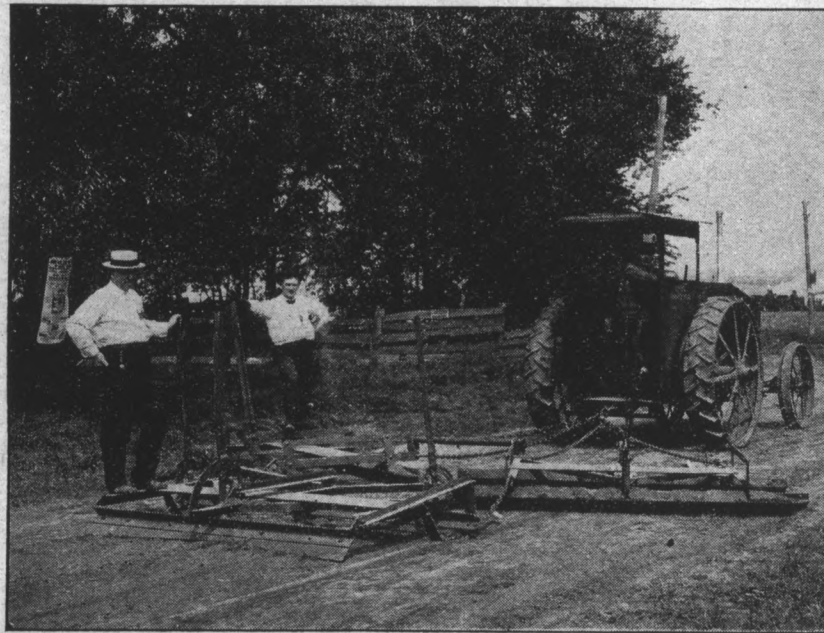
About a year ago I sowed alfalfa on high, sandy, gravel soil. I also sowed lime with it. Through the winter there were spots died out in it and I mowed a good fair crop this summer, after which it came up knee high. Everything in the section was very dry and I turned my cattle in. The second crop turned yellow in spots. Can you give me the cause. My neighbors say my alfalfa will be no good because I turned the cattle in. Is that so?

Genesee Co.

C. H. L.

While alfalfa may be pastured without ruining the stand, provided good judgment is used, yet it does not bear pasturing particularly well, and it will not pay to pasture a good stand of alfalfa in the same way that other forage crops are pastured. If cattle are turned into alfalfa when it has secured nearly a maximum growth in sufficient numbers so that the crop will be grazed off rapidly, and the stock is then removed permitting it to make a good growth, no serious harm will be done to the stand, or if only a few cattle are turned into a fairly large area of alfalfa and the residue of the crop is cut for hay at the proper stage of growth, comparatively little harm will be done to the stand.

The yellow appearance of the alfalfa leaves is not the result of pasturing, but of a fungous disease known as "leaf spot," which attacks the plant under certain conditions. This has no connection with the pasturing of the alfalfa and will not be a permanent detriment to the stand. The proper course is to cut the crop as soon as practical, and permit the new plants to make a new growth before winter. As this leaf spot generally appears only in the hot weather of midsummer, the next growth of alfalfa will probably show no evidence of same.



Gravel Roads Need Constant Care for the Most Efficient Service.

convinced me that it pays big to use nothing but the very best of seed wheat."

A few years ago farmers could make more money raising wheat than corn. Now the corn crops pay best as a rule. The order is just reversed. Leave out the matter of prices which are bound to have a bearing on the thing and still wheat raising in most sections of the country is not so profitable as corn raising. And why? Simply because the crop is too uncertain. If we were always as sure of a good crop of wheat as we are of a corn crop, we would go in for raising wheat more, even if it is less profitable. We need the wheat, and we need the crop to fill out the rotations. And a big stack of straw doesn't come amiss during the winter.

But the wheat crop fails too often. And there are many causes for it, many of which may be remedied easily. We want to remind you of a few of these causes.

Pests and wheat diseases are more numerous than formerly. The Hessian fly perhaps causes more damage than other pests. Late sowing and the strip around the field sowed early to trap the fly are good remedies for it. Smut and rust are two of our most common wheat diseases. There are now grown several varieties of wheat that are almost proof against rust, and the form-

food on all our Michigan soils is phosphorus. That has been proven over and over again in careful field experiments on hundreds of farms. No one with any experience would think of using a fertilizer for wheat or any other cereal that did not contain some phosphoric acid. No one would advocate nitrate of soda alone for wheat unless it be for top-dressing in spring on fields that had been weakened by a severe winter. No one would advocate potash alone, but hundreds of practical farmers do advocate the use of acid phosphate alone. I have had farmers tell me that 200 pounds of acid phosphate per acre has increased their yield of wheat 10 bushels and more per acre. The cases are very few where an application of 200 pounds of acid phosphate did not give profitable results on any cereal.

I do not say that nitrogen and potash are not beneficial in many cases. I know they are. The using of a complete fertilizer is to be recommended unless the farmer has experimented carefully for himself and knows from those experiments that all he needs is phosphorus. If he will carefully experiment he will be surprised to learn in how many instances the use of plain acid phosphate alone gives him the greatest profit.

Manufacturers of fertilizers under-



## Farm Notes

### Sweet Clover and Rye as Green Manure Crops.

I read the article in the August 5th issue on "Sweet Clover a Boon to Farming on Poor Soils," and I would like to know a little more about it as I have some land that is run somewhat. Does the seed have to be worked into the ground, or can a person sow it in the spring, like other clover in wheat or rye? I have a field I am going to put wheat in this fall and I thought about sowing sweet clover and mammoth clover in the spring and then turn under the following spring. This field had barley on this year, and is somewhat run. What would be your advice on this? I also have a field I intend to sow to rye this fall then plow under in the spring for beans. How long should I leave it grow before I plow it under?

Ionia Co.

I. K.

In seeding sweet clover upon thin soil, it should be sown alone on a well prepared seed bed or with a light nurse crop, preferably in the spring. It should have a comparatively firm seed bed, and either be drilled or harrowed into the surface soil to insure a good stand. On soils deficient in lime an application of lime should be made to correct soil acidity, although this does not appear to be quite as essential for sweet clover as for alfalfa.

The advantage of sweet clover as a green manure crop for thin soils is that it will thrive upon a soil which is low in its content of vegetable matter and humus, thus making it possible to get a good stand where ordinary clover will not make a good catch except under the most favorable conditions. Under very favorable conditions sweet clover might possibly be seeded in wheat or rye with success, but on poor land where it should be grown if at all, it could not be expected to make a good stand under such conditions any more than would the other clovers. The writer has a very good stand of sweet clover on some gravelly hills where it was seeded in a nurse crop of rye sown thinly last fall and harrowed over this spring with a spring-tooth harrow to make a seed bed for the sweet clover.

It is not a bad idea to sow mammoth clover with it, although if the sweet clover makes a good stand, the red clover will not be able to compete with it the following year. A soil which is low in its content of vegetable matter will be considerably improved by plowing down rye as a green manure crop. The stage of growth at which it should be plowed under will depend somewhat upon weather conditions, since it can be allowed to grow larger in a wet spring than in a normal or dry one. As a general rule, however, it should be plowed under when the heads begin to form, if not earlier. Plowing down a heavy growth of rye when the soil is comparatively dry is likely to destroy the capillary connection between the surface soil and subsoil, thus increasing the danger of damage from drouth later in the season.

### Fall vs. Spring Sowing of Sweet Clover.

I have a field of about 20 acres that has had corn on for four years. Last spring I plowed it up and sowed oats, and seeded it down with 100 lbs. of red clover, 50 lbs. of alsike and one bushel of timothy. The oats turned out fairly well but the seeding is not very good. I was thinking of putting on about 100 lbs. of sweet clover. Which time will be best to sow this, this fall or next spring?

Schoolcraft Co.

D. C. B.

Experience in growing sweet clover under different conditions is as yet rather limited. Generally speaking, however, it is a reasonable assumption that sweet clover can be successfully seeded at times and under conditions when other clovers might be expected to make a good stand on more fertile land.

The last of August is pretty late for seeding clover or alfalfa and would not be as favorable a time for seeding the sweet clover as would the early spring. Success with sweet clover will be more certain if a good firm seed bed is prepared and the seed is sown under favorable climatic and soil conditions in the spring or early summer. Under favorable conditions a later seeding might give good results but would be far less certain.

### LILLIE FARMSTEAD NOTES.

#### Wheat Seeding.

Just the correct time to sow wheat is a question that no one can state for certain. If we knew what kind of winter we would have the question would be much simplified. Wheat that gets a good growth and covers the ground well is in much better condition to stand our winters than a weaker growth. But if we sow too early, then the Hessian fly is liable to prove quite disastrous to the crop. Now it is difficult to choose between these two foes to our wheat crop. Our fathers used to think that wheat must be sown before September 10 to assure a good crop. But we had no Hessian fly then. I have grown good crops of wheat that were not sown until well into October but the winter was very favorable. Many times October sown wheat in this latitude brings poor returns. I have seen early sown wheat that was sown in late August or early September, all eaten up with the fly. The season makes a difference that none of us can entirely overcome. The safest way always is to take a medium course and sow not too early or too late. For central Michigan, September 15 is about right. Fifteen years ago I would have said it was late enough but the seasons seem to have changed. The springs are later and the falls are also. However, no two seasons are alike and the farmer must take chances whatever date he sows.

There is a whole lot in the farmer doing his part well. Many times it makes a difference of a crop or no crop. Wheat needs rich, well drained land. There is no crop that is more benefited by fertilizer, even on rich soil, fertilizer usually gives splendid results, producing a plump berry and a greater yield.

A well prepared seed bed is of great importance. The plowing ought to be done as early as possible so the soil can be packed down and a firm, fine seed bed be prepared. Better delay sowing for a week, than to sow on poorly prepared land.

We are intending now to sow 60 acres, 20 acres of oat stubble is plowed, rolled and harrowed once (August 28), and can be prepared in good shape for wheat by the proper time to sow. Twenty acres was plowed last spring for beans but never planted because it got too late and because we did not have time to either plant them or cultivate them. This land was all grown up to weeds and grass but we did not replot, but are fitting it with the tractor and disc. I do not think this could have been successfully done with the horse discs, they are not heavy enough. We have disced this field both ways and the work is not done, but I reasoned that we would have a much better seed bed by discing than to replot and with less work. Many people, however, would have plowed this field and perhaps it would have been the better way. One year I prepared oat stubble by discing instead of plowing and we made a splendid seed bed and got a good crop.

Two other fields of ten acres each were sown to peas this spring. After the peas were harvested they grew up to weeds. Some of these weeds were in places three or four feet high. We mowed these down with the mowing machine and are now discing them. My judgment was that on these fields a better seed bed could be prepared with the engine disc than by replowing. Here again some people would differ with me, and should there be plenty of rain early this fall it might be better to plow, but I am figuring that after all this rain the middle of August we are liable to have a dry September and if we do we can hold and conserve the moisture better by discing than by

plowing. We will have to disc three or four times to get this land worked up and the weeds chopped up and worked into the soil to make a good seed bed, but this will be cheaper and easier than plowing and then rolling and harrowing sufficiently to make a fine compact seed bed for the wheat.

Potatoes planted as late as the middle of July are a fairly good stand, are growing nicely, and bid fair to be as good a crop as some that were planted early.

COLON C. LILLIE.

### INDIVIDUAL RESPONSIBILITY FOR GOOD ROADS.

There is no class of people so vitally interested in the roads as the farmer. He is indirectly interested in more rods of road than any others, and now that the automobile, reasonable in price, has removed the last objection or drawback, that of isolation, the farm has become the ideal place of residence. However, with this must come good roads, and while much has been done in this direction and many miles of good roads are being built each year these roads are mostly the main or trunk lines, and there remain the side roads, comparatively few of which are in even fair condition.

The average farmer who does not actually oppose the proposition to leave it to the other fellow. I want to say right here, that any farmer who has eighty rods or more of frontage on the road has an individual responsibility, yes it is more, it is an opportunity. I would rather maintain a good road on my front out of my own pocket, than to remain along side of an eighty-rod mud hole or sand wallow.

I recall some fifteen years ago: The farmers of a certain road district in central Michigan got together one winter, and put on a bee to fix up a certain piece of particularly bad road in the district, about 80 rods I think. The township agreed to buy the gravel, the farmers donating their time and teams. They hauled two yards of gravel to the rod, doing the work in the early winter. When this job was completed, they liked it so well that they continued the work, having bee after bee, resulting in quite a rivalry between different parts of the district as to who should get on the most road. This work continued through this season, and then was begun the next season and continued until several miles of really fine roads were built.

There were people at that time in the adjoining district who looked with something akin to pity at the simple-minded farmers donating their time on the public roads. But the result of the matter was property along these gravel roads became worth much more per acre than that away from them, which more than paid for all the time donated on these roads, proving a winner financially, as well as all the added pleasure of having good roads to travel at all times of the year.

I know of no one thing that will so add to the desirability of a farm home as good roads to and from the market town and to the place or center of its social, or church activities. The writer, who lived many years on a farm about five miles from the market, social, and church center, once figured up with his wife how many hours they had spent, and how many miles they had traveled to and from this place, and the result was staggering. Come to find out, quite a respectable portion of their lives were thus spent. When the weather was fine the trips were pleasant ones, but on cold winter, early spring or late fall days the shorter the trip the greater the pleasure. Now, with the modern auto, it takes about one-quarter of the time, and shall I say about four times the pleasure, with good roads.

One great trouble with the good roads situation in many farm communities is, that all the money is spent on building the roads, or rather they seem to figure that is all that is needed to be spent, and no provision is made for

maintenance of the same. A gravel road needs more or less attention each year. It is very important that the wheel tracks be scraped in from the side where shoved out when fresh, this should be done at least once each month when the road is new, as in this way a deeper cement bottom is made where the greatest wear is, and where the road always begins to cut up and mix with the clay and sand.

This is usually all that is needed the first season, but after the first season there is always more or less patching, drawing in loads, or part of loads here and there, and every so often it becomes necessary to cover with a lighter coat of gravel, depending on the amount of travel, or on the general condition of the road.

Once having had "good roads" there will never be a return to the old mud road.

Isabella Co.

W. J. COOPER.

### REDUCING THE HOBO NUISANCE.

Nearly every farmer receives frequent visits from the hobo class and these wanderers are a nuisance as well as a menace to the welfare of the community. At present there is a job in this country for every strong man. A man cannot endure the hardship of tramping around the country without a home or friends. It therefore follows that the hobo should return to the working class and be eliminated from the charity roll.

Why do we have hoboes? Possibly because they think farmers are easy marks. They obtain a square meal at the back door, fill their pockets from the garden and probably go down the road feeling that farmers are so anxious to support them that it would really be foolish to work. The hobo is undoubtedly a weak-willed man or he would not be a hobo. When we come forth with all that he asks we are simply encouraging a weakling to follow the line of least resistance. If all of the farmers on any one road would stubbornly refuse to pay tribute to hoboes we would soon see that road dropped from their schedule. It requires some nerve and the fear of hidden guns, burned barns and stolen property comes near to home when an especially unpleasant appearing tramp requests a meal. However, a firm refusal will usually send the grumbler down the road to the next house and if he keeps up his fruitless search for food he may be glad to accept a job or tramp back to the town from where he started as rapidly as possible.

There is nothing gained by being stingy, but too often the man who neglects laudable projects when dispensing charity will favor every tramp and believe all the lies told by the passing gypsy band. Many farmers recommend the wood pile for the passing tramp but they require so much watching and cause the women of the farm so much uneasiness that I prefer to see them amble down the road and then split my own wood. Undesirable labor is worse than none so there is little use of keeping even a wood pile to scare away the tramps.

The traveling gypsy band is second to the hobo and when they stop for the night near a farm it means careful watchfulness to prevent depredations. These people live by begging and sometimes offer in return a lingo called fortune telling. They are too often just plain thieves and pickpockets traveling under a disguise. This summer one of them in our section posed very nicely as a Cherokee Indian bound from Oklahoma to Northern Michigan, until the police caught her robbing a till and she registered at the jail as a Chicago domestic. I believe in preparedness at home on the farm, and a good watch dog combined with a stern resolution to send the beggars away empty-handed may help in reducing the number of vagabonds who have adopted sponging on farmers as their summer vocation.

Ingham Co.

R. G. KIRBY.



**B**EFORE beginning the harvest of a large crop of apples the prudent orchard owner devotes a few days' time to overhauling the ladders, baskets, sorting tables and other equipment so that the work may be rushed as rapidly as possible after the fruit is in condition to gather. By devoting a few days to preliminary work in getting the equipment and packages ready for the harvest and gathering wind-falls from under the trees, so that they will not become mixed with the fruit that falls during the picking operations, much of the unpleasant labor connected with the apple harvest is eliminated before the real work of harvesting the crop begins.

If the farm is situated in close proximity to a large city the sound specimens that have fallen to the ground may be sold at remunerative prices. One of the most successful apple growers in Niagara County, New York, sends two motor trucks loaded with apples to the Buffalo market each day during the time the pickers are at work in his orchards. The trees are low-headed and the ground protected with a cover crop so that the fallen apples are rarely bruised. Two men gather the fruit before the picking crew gets to the block of trees. It is then hauled to the storage house where the best fruit packed in peach baskets and hauled to the city market where they find a ready sale. The culls are made into cider and the cider made into vinegar which is sold to city dealers and grocers. When apples are high in price the sale of the fallen fruit pays the labor charges for harvesting the entire crop and results in a much better pack to go into storage or to ship to distant markets.

#### Picking the Trees.

When the work of picking begins one should plan to keep the hands at work among the trees so that the fruit growing on the lower branches will be evenly mixed with that from the tops and centers of the trees in order that the packers may secure an abundant supply of highly colored specimens for packing without waiting or slighting the appearance of other packages. By using step ladders for gathering the fruit on the lower branches and light ladders that may be handled easily by the pickers, but few apples will be damaged by changing the ladders to different parts of the tree. Light and strong ladders, padded baskets and sorting tables and careful picking and handling of the fruit are essential in securing a good even pack.

For commercial purposes the fruit should be harvested as soon as it has developed full size and color, except, perhaps a few specimens. Apples that do not develop red are ready for packing when they reach their full size or when a few specimens begin to soften, or to drop readily. Packing much earlier sacrifices appearance and quality and has a tendency to injure the fruit spurs, while later picking results in loss of keeping quality and increases the risk from storms and unfavorable weather. In the eastern and middle-western states the grower who has a large orchard often find it necessary to begin picking as early as possible in order to get his fruit safely under cover before cold weather interferes with his work. Promptness and care in the handling has much to do with insuring keeping quality of the fruit.

#### Pack the Fruit Immediately.

The value of care and promptness in packing and handling apples, especially in their effect on freshness and keeping quality, is not duly appreciated by many growers. If the fruit has been well sprayed, so that it is practically free from insect injury and fungus infection, the shortcomings that develop in keeping quality are very largely due to improper methods during or immediately after picking. All bruises and punctures should, of course, be avoided. This is best accomplished by the use of padded baskets and sorting tables.

Successful apple growers handle the

## Harvesting the Apple Crop

By W. MILTON KELLY

fruit as few times as possible before it is packed into the final form intended for market. The best results are secured by picking the fruit and cooling it just as soon as possible after it is picked, and keeping it cool. By having the fruit placed on sorting tables by the pickers and the barrels or boxes transferred to the storage house without delay the fruit will outlast that which has received only ordinary treatment.

The practice of employing careless pickers and emptying the fruit in piles exposed to the sun for several days, hastens the ripening processes and shortens the life of the fruit when placed in storage. In other words, the treatment is just the opposite of what is needed for best-keeping conditions. The latter are secured by cooling the fruit just as soon as it is picked and keeping it cool. The most successful growers plan to have their fruit graded and put into the final packages with as little delay as possible. If it is intended for storage over any considerable period it is hauled to the cooling plant soon as it is packed. Good fruit

outlasts that

and time to use the box package and for others to pack their choice, highly colored fruit from their young trees in barrels would be to neglect the opportunity presented by using the box. In general the main distinctions between the two packages are that the barrel is the cheaper package and is better suited for fruit that goes to the general trade, while the box costs more and is the ideal package for the fancy trade. The use of the box for inferior fruit is not economical, just the same as the use of the barrel for the finest quality of fruit for dessert fruit is a waste of opportunity. In brief, there is no best package. The circumstances and condition must necessarily govern the selection of the package.

"I have had many years' experience handling New York apples, besides I now have more than 15,000 boxes of Washington fruit in my storehouse. I have tried packing in boxes, but it takes so much value off from my barrel stock that I find it unsatisfactory. Some of our apple growers who have young trees and practice intelligent methods of cultivation and spraying



Care in Harvesting and Packing Brings the Fruit Grower Extra Dollars.

which has received only the ordinary treatment.

#### Picking the Fruit.

Good pickers are scarce, but I think that much of the trouble is due to the practice of paying the help by the barrel or attempting to rush the work with a few inexperienced hands. When a man takes an apple between his thumb and finger and presses it hard, he is pretty apt to make a bruise; and if he yanks off the next year's branch the tree is injured. It ought to be lifted properly where it will come off at the hinge which nature has provided for that apple. At the right place, if the apple is taken in the hand so there is no pressure of the fingers, and lifted it will come off at that hinge, and it will leave the next year's bud in place where it ought to be. Many careful orchard owners have pretty nearly eliminated the off year on apples, and I think it is due, in a large measure, to care in picking.

For the past few years the question of packing the fruit in boxes has become a pet hobby with many experts and writers. It is but natural, then, that many growers have looked with favor upon it and have adopted it without knowing its disadvantages. The average orchard owner is constantly perplexed by this problem of which is the better package to use, and, therefore, before giving my individual opinion of this subject I wish to quote from an interview with one of the leading growers and shippers of New York apples, and a man who is also interested in the apple growing sections of the Pacific Coast states.

#### Use Box for Fancy Fruit.

Mr. C. W. Hoag, of Lockport, said to the writer: "For many growers it would be simply a waste of good mon-

are growing just as attractive apples as the western growers and find no difficulty in securing just as good prices, but this is an individual problem and any man who will take the pains to put up his fruit in fine condition need not seek a co-operative organization to find good customers for all of the apples he can grow and market. What we need most is some fixed standard of packing and grading that will keep the rotten, cull stuff off from the market. So long as growers can not see their way clear to put up their fruit in good condition no co-operative organization on earth can help them out of their present troubles."

#### The Time to Market Fruit.

While the individual farmer, who has a comparatively small orchard, is at the mercy of organized buyers and transportation companies, yet as the original owner of the fruit he should exercise his ability as a salesman—whether individually or through some kind of a selling association. The foremost problem confronting him is that of being able to hold his fruit until the market conditions are favorable for selling. For example, the Snow apple is demanded on the market in October and November, through the holidays, sometimes lasts even till New Years; then the King and Spitzenberg, those are favorites on the market at that time, and the Rhode Island Greenings and that class of apples. In January and February the market demands the Northern Spy and later the Baldwin and Russets. Now the idea is to put the apples on the market when it demands them and not sell to middlemen early in the season. Why should the growers of beautiful, long-keeping apples put them on the market two or three months before it demands them?

Now there are many advantages in holding the fruit that apple growers want to think of and study. Not only the matter of securing better prices for a few years, but the maintaining of the reputation of their farms or communities for the production of choice fruit. Growers who sell their entire crop to traveling buyers who pick and put the orchard run into barrels and dump it on the market during the winter are giving the industry a black eye. Growers must protect their markets by protecting the quality of their fruit. Never allow your choice fruit to be used to face a mess of slush for some speculator to get rich on.

#### Advantage of Storage Room.

The growers who have storage facilities are able to hold their apples until the markets are cleared of the poorer grades with which they are flooded during the early winter. Cold storage houses remove the necessity for selling at once—a necessity which most buyers quite naturally work to their advantage. Even a temporary storage house, with a fair insulation, will often pay for itself in a single season by affording sufficient protection against sudden changes of weather, which frequently occur shortly after the apples are harvested and annually destroy thousands of dollars worth of fruit.

#### Storing Fruit.

Several gravity-brine systems of cold storage houses here in western New York are giving excellent satisfaction, but it is well to study the matter thoroughly before deciding the question of which is the better type to build. How much an individual or co-operative company can afford to invest in storage facilities depends entirely upon circumstances and conditions. If the grower is situated nearby a large storage house where he can rent space, it is many times better to hire his fruit stored, but if his farm is quite a distance from suitable storage houses the question of investment is a live one. The man who has an annual average crop of two thousand barrels of apples can figure on about \$1.00 cost if he hires his fruit stored. On that basis one can readily see where a cold storage plant costing \$15,000 should prove an excellent investment for ten farmers who raise twenty thousand barrels of apples per year, besides it would enable them to be independent of the interests that seek at certain seasons of the year to depress the value of their fruit. Such a system of storage would afford accommodations for truck crops as well as fruit. Some of the most conservative growers in the country say that storage houses may safely represent thirty per cent of the entire investment of the fruit-growing and trucking industry. As a rule, if a co-operative association is formed it is better to limit the members to as few as possible to insure the success of the undertaking. There must be trust, confidence and a community of interest among the members or owners of the storage plant.

#### Becomes an Independent Seller.

With such facilities the growers are independent of the middlemen. They can listen in the fall to fairy tales told by the traveling buyers, and accept their offers or not, as they choose. If the prices offered are reasonable it is many times advantageous to sell and let the other fellow assume the risks. Some losses are hard to eliminate and must be calculated in figuring the profits from cold storage. It is always good business policy to be independent of the flooded markets and middlemen during the fall and early winter.

#### INSECT DAMAGE.

Insects destroy twenty per cent of the fruit crop of this country every year. This means thirty million dollars yearly taken from the pockets of American fruit growers. Seems as if it would pay one to get acquainted with these bugs, even if he grows only a little fruit for his own use, doesn't it?



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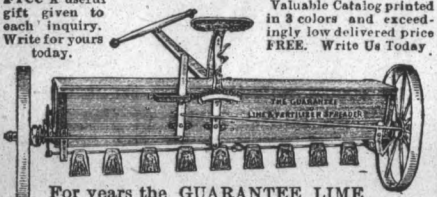
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## The Outlook for Pork Production II.

By W. MILTON KELLY

**G**ROWTH and gains made on forage crops and grasses are almost invariably cheaper than growth and gains made by yard feeding. In many experiments pork has been produced one-third cheaper when pigs had the run of suitable forage crops and grasses. With these green feeds growth will not only be made at a reduced cost per pound, but it will be more quickly made, thus reducing the element of risk that always must be considered a vital factor in pork production.

If the forage and grasses are of good quality they will prove the equal of a maintenance ration, but in order to derive the maximum feeding value of these crops and enable the pig to build them into growth and gains, they must be supplemented with limited quantities of grain or by-product feeds. A light grain ration is necessary even though the feeder wishes to hold the pigs in moderate condition to secure cheap feeds for finishing. A more extensive use of forage and grasses may often be made when grains are high by prolonging the full feeding period so that the pigs will consume more green feed and less grain. By feeding less expensive grain and encouraging the pigs to eat a much larger quantity of green feed it is possible to effect a marked saving. The rations that produce the most rapid growth and gains are not always the most profitable ones; while on the other hand, rations that produce cheap growth and gains may produce such growth and gains so slowly that the profits will be very small.

The kind of grain to feed along with forage crops and grasses will depend

ing season and is too succulent for young pigs, although this shortcoming may be corrected to some extent by feeding more liberal rations of dry grain along with it. Many successful feeders turn their pigs on a field of rape when the ground is too wet to pasture alfalfa without injuring the plants. Red clover is a safe and dependable forage crop, but on account of its shorter growing season it is less valuable than a good stand of alfalfa. Blue grass forms a thick, heavy sod and furnishes splendid feed for early spring and late fall grazing, and if not eaten down too closely in the fall will supply a considerable grazing after the cold weather comes. It furnishes a maximum of grazing before the middle of July and after the rainy season in the fall. More grain is required with blue grass pasturage than with the

above mentioned crops, but very frequently it will thrive on land where the forage crops of greater merit fail, and a blue grass pasture once thoroughly set will stand for years. Rye affords valuable grazing during the winter when the other crops are unavailable. Frequently during an open winter it will furnish a large amount of grazing and at a time when it is of greatest benefit to the animals. It may be pastured up until the time central stalks begin to form in the spring. It is as a food for breeding hogs that rye excels, because it comes at the time when the brood sows need the green feed and exercise. Other forage and grass crops, such as cowpeas, soy beans, oats, sorghum and the like may be used to advantage on soils where the more valuable crops fail to make a good stand, but as a general rule land that is reasonably fertile will yield abundant crops of the more valuable forage and grasses.

(To be continued.)

## Controlling Contagious Diseases

By G. H. CONN, D. V. M.

**W**E always advise the hog-owner to clean up his hog pens and the like to prevent, and also in the control of the contagious diseases of swine, especially hog-cholera. But too many times we do not make our directions plain enough. We do not make the owner feel the real importance attached to the work.

To properly disinfect the place where hogs have been kept, or any of the domestic animals, requires a great deal of hard work. It must not be slighted in the least or all that has been accomplished is lost.

I feel that the word disinfection is

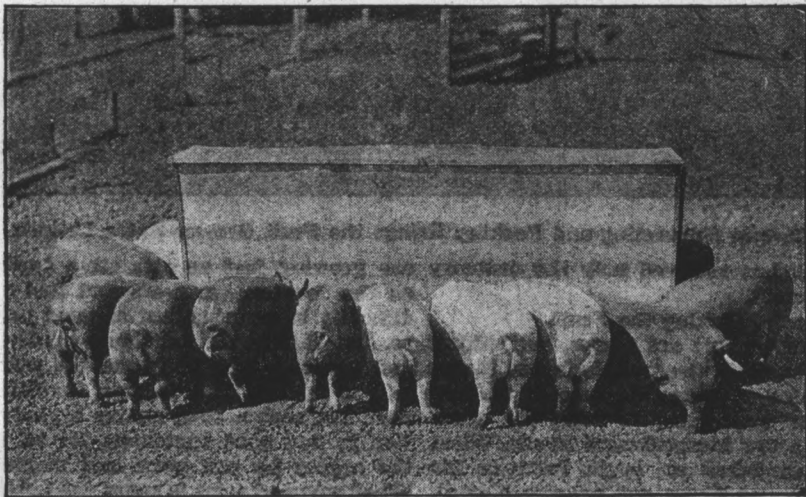
strong antiseptic. If the floors of the hog house are old and rotten, allowing filth to accumulate, it should be removed and likewise the trash under it, and a few inches of the earth. The walls and the ceilings should be swept free from cobwebs and dirt and should be scrubbed with hot water. The troughs should be scalded and also the swill barrels and pails, and then soaked in good strong disinfectant. It is advisable to plow up the hog lots, if the hogs have had any contagious disease, such as cholera, after they have been thoroughly cleaned and disinfected and farm them for a year or so.

In using disinfectants it is always poor policy to use some of the cheaper ones, as they are undoubtedly of a low value as regards their ability to destroy germs of disease. One of the best obtainable is corrosive sublimate or bichloride of mercury, which may be used on the walls and ceilings and cement floors and like, in the following proportions: One ounce to eight gallons of water, will kill all germs, while one ounce to four gallons will kill the spores of the most resistant germs that we have, but it is not necessary to use in as strong solution as the last unless you have had anthrax on the place, which is not a common disease. Great care should be used in employing this agent as it is very poisonous and care should be taken that it does not gain access to the operator's eyes as it might destroy the sight. This solution is best applied with sprinkling can or broom.

The coal tar dips may be employed in five per cent solutions for general disinfection and are very valuable. We would suggest using only those of known value.

Lime makes a very good disinfectant when employed as follows: Take 100 parts of quicklime and 60 parts water and slake it, which forms the hydrate of lime. Of this take one part and four parts of hot water and after straining same apply with spray pump to the sides, ceilings and floors. If it is not desirable to use this hot lime solution the chloride of lime may be employed, using one pound to three gallons of water in the same manner.

Formalin in the proportion of four ounces to the gallon of water makes a very good disinfectant also. If your building is tight or can be made so, you may use 20 ounces of formalin and 16 ounces of permanganate of potash, taking a large galvanized tub and placing water in it and then place the permanganate of potash in a pail and set it in the tub and then pour the formalin in with the potash and close the building and keep it so for 24 hours. The reaction here is quite pronounced and it should be watched for a few seconds as it may take fire.



Experiment Station Trials Indicate Best Results where a Variety of Feeds are Given the Hogs in a Self-Feeder on Pasture.

upon the supply of available feeds, the market prices and the quality of forage and grasses. In the generality of cases when the forage is a legume, such as alfalfa, clover, soy beans, cowpeas, or a non-legume, such as rape, which runs as high in dry protein as alfalfa or clover, corn will probably be the best and most economical feed. But when sorghum, rye, oats and blue grass make up the forage and grass crops such high protein feeds as middlings, oil meal, wheat and tankage may be profitably used in connection with corn. At the Missouri Experiment Station it was found that the amount of grain fed was of more importance than the kind in determining profits when it was fed in small amounts to pigs that had access to an abundance of green feed.

Alfalfa is the most valuable forage crop for it is rich in protein, contains the important mineral elements and is adapted to most farms where other suitable crops are grown successfully. It furnishes a large quantity of grazing from early in the spring until late in the fall and remains seeded for several years. Rape, which is the best non-leguminous crop, ranks next to alfalfa as a valuable feed for hogs. It yields less forage, has a shorter grow-

not plainly understood by all people. It is frequently used in connection with antiseptics. A disinfectant is an agent "that kills" disease germs, while an antiseptic is an agent that "prevents the growth" of disease germs. A deodorizer is an agent "that destroys the odor of anything." So you see a disinfectant may be all three, but a true antiseptic is not disinfectant, because the minute that it becomes strong enough to kill disease germs, it is then a disinfectant.

It is a very difficult matter to disinfect many farm buildings owing to their construction. The walls may contain large cracks and the floors may be loose, with a large quantity of trash, manure and the like under the floor. The ceiling and walls may be covered with cobwebs and dust.

All the trash, manure, straw, cobs and the like should be collected and burned. If you do not care to burn the manure it may be placed in a pile and thoroughly saturated with a strong disinfectant every day or so and be pitched over and over so that it will bring all of it where the disinfectant will reach it. It is safer, however, to burn the manure.

The hog wallows should be drained after receiving a good quantity of a



## Economy In Silo Filling

WITH farmers facing the present labor shortage, and with labor at prevailing high prices, economy is necessary in filling the silo this season. The investigations made by the Department of Agriculture, brings out some very valuable facts on this matter for farmers.

Prof. Lyman Carrier, scientific assistant, visited more than thirty farms. He found that the methods of silo filling employed by the different farmers varied greatly, but three groups have been classified by Mr. Carrier, and the farmer may choose from these according to his help and machinery.

First, the most common practice was to have one man with three horses on a corn harvester cutting corn in the field; two men load the wagons in the field; three to four men with teams, depending on the distance from the field to the silo, to haul the corn to the cutter; one man to run the engine when steam was used for power, and, when gasoline engines were used, one man to feed the cutter and one man in the silo to spread and tramp silage. The teamsters pitched off the corn from their own loads. This demands a crew of eight to nine men, aside from the engine man. It is important that the silage be tramped down, as this is raising the keeping quality, although several men practice the poor economy of not using a man in the silo.

### When Teams Are Scarce.

In instances where there was a shortage of teams, the following method is used: One man, with three horses, cuts the corn; two men load the wagons in the field; two men, or boys, with teams, haul the corn to the cutter; one man unloads wagons; one man feeds and one man works in the silo. As soon as a load arrives at the cutter the teamster changes his team for an empty wagon and goes back to the field for another load. When a wagon is unloaded it is run out of the way by hand. With this method boys who are not strong enough to handle the green corn can be used to drive teams, thus making a crew of six men and two boys, aside from engine man.

There are cases where there are enough horses but a shortage of men. In such cases the following arrangement was found satisfactory: One man, with three horses, runs the harvester in the field; four men with teams hauls the corn to the silo; one man feeds and one spreads the corn in the silo. Low trucks or wagons with racks suspended below the axles should be used, so that the teamsters can put on their own loads. This crew consists of seven men and an engineer.

### The Cost of Filling.

In this investigation it was found that the average acreage yield was 9.01 tons of silage per acre, the average cost being 64 cents. Each man cut on an average 4.9 tons per day, and the average cost per acre for putting the corn in the silo was \$5.98. Although distance from field to silo has a great bearing upon silo filling cost, as would breakage of machinery, it was found that poor arrangement of the workers was due to high cost of filling in most cases. It was found best to place the men in positions so that they will be working all the time. Too many men in the field for the number at the cutter, or vice versa, and too large a crew for the size of the silage cutter are quite common sources of loss. Two or three men and teams with loaded wagons waiting for their turns to unload, a similar condition in the field where they are waiting to be loaded, or a delay owing to lack of teams represents a decided high cost and loss of valuable time. Another important factor is the capacity of the cutter to handle corn, and this must be watched in buying a cutter, as a few sizes larger than needed will soon pay for itself in labor and time.

Farmers were accustomed to harvest their corn only when it was immature

a few years ago, before they became used to silage as a ration. This caused many losses and made the feed unsatisfactory, strange to say. The silage would sour and had a strong odor which affected the milk products. But mature corn, or that nearly so, is satisfactory. But the corn should be harvested before the stalks and leaves have dried out. If the corn is allowed to mature beyond this stage water must be used on the silage, which causes an unnecessary amount of labor. Several experiments show conclusively that the nearer the corn gets to the mature stage the higher the feeding value rises. Mature corn contains less acid and has a sweet, mild odor than does greener corn.

### The Harvester a Labor Saver.

The harvesting machine has come as an economical factor in handling corn, and is a close brother of the silo on practical farmers' places. It is a labor-saving device which must be reckoned with, and if you do not own one, be sure to arrange to hire one. There can not be said to be any greatly lessened cost in handling corn with the binder, but the corn can be handled quicker, which greatly increases the feeding value, and time is money at this time. It takes nearly twice as long to handle hand-cut bundles as a machine bundle. The time saved in handling the corn more than offsets the few cents additional for twine.

The wagon used to haul the corn may be made economical as a labor and time-saver. The Department of Agriculture recommends one as follows: Make a rack as low as possible, using a low, solid-wheel truck if possible. The rack is made of two 4x6 bed pieces, 18 or 20 feet in length, bolted together at one end to form a V. On top of these timbers is built a rack six feet in width. The bottom of this rack is about eight feet long. The end boards are four feet high, built flaring so they do not quite touch the wheels. The apex of the V is suspended below the front axle of an ordinary farm wagon by means of a long kingbolt. The other ends are attached below the hind axle by U-shaped clevises. This rack can be easily made by any farmer in half a day. The materials needed are 89 board feet of 4x6 plank, 96 feet of boards 1x12 inches, 22 feet of lumber 2x4 inches, one long kingbolt, two stirrup rods, and bolts and nails.

When the silo is more than 35 feet high, it is not necessary to have a man distribute and tramp down the silage. If the surface is leveled two or three times a day while filling, the silage will pack sufficiently to keep. But there is one objection to doing this. If the cut corn is allowed to pile up in the form of a cone, the heavier parts will roll to the outside of the pile and the grain and leaves will not be evenly distributed.

### Distributing Devices.

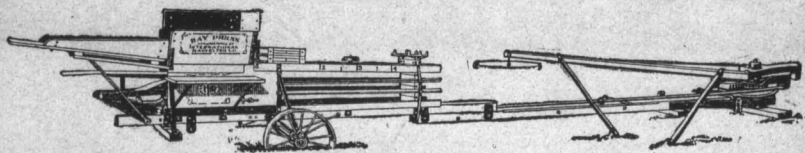
There are several devices which can be used for distributing the cut material in the silo. One of the more satisfactory, whether a blower or slat shoot, is used consists of two boards eight to ten inches wide and about half as long as the diameter of the silo, nailed together at right angles to form a trough. A 12-inch board is nailed over one end of this trough, the other end being left open. For use, the trough is suspended from the roof with the open side downward and the closed end upward and toward the center of the silo. The open end rests above the top of the blower pipe. At the cut material leaves the pipe it follows along this trough until it strikes the closed end when it is scattered about the silo.

Co-operation may be used in neighborhoods by helping each other in the silo filling, and the labor shortage set aside. It is possible for farmers to change work, and thus go from one farm to another until all silos are filled in the co-operative unit.

New York.

EARL W. GAGE.

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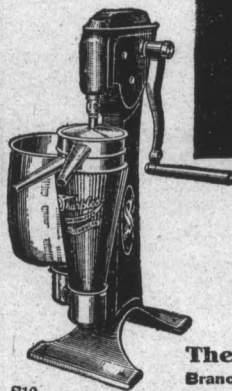
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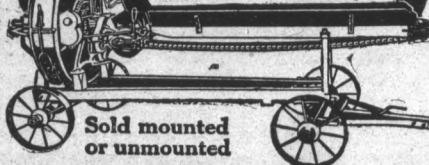
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## Our Foreign Loans

By J. R. MILLIGAN

TO anyone who doubts the fact that the United States is rapidly ascending to the position of world banker, the following list of loans made by us to foreign nations since the outbreak of the war will be a very convincing point.

We have loaned to foreign nations \$1,764,950,000 in the following amounts:

Anglo-French five-year 5's..	\$500,000,000
British gov't two-year 5's	250,000,000
British Bank loan.....	50,000,000
French three-year loan....	100,000,000
French one-year notes.....	30,000,000
French special credit.....	55,000,000
Canadian government .....	120,000,000
Canadian municipalities ..	120,000,000
Italian governm't one-year notes .....	25,000,000
German government notes.	35,000,000
Swiss government notes...	15,000,000
Swedish government notes	5,000,000
Norwegian governm't notes	8,000,000
Argentine governm't notes and bonds.....	75,000,000
Panama, Deluvia and Costa Rica government notes..	4,500,000
Yucatan government bonds	10,000,000
Russian governm't acceptances .....	25,000,000
Russian government credit	50,000,000
Chilian governm't bank loan	10,000,000
Greece .....	7,000,000
Panama .....	3,000,000
Newfoundland notes .....	5,000,000

Total ..... \$1,764,950,000

No estimate has been made of the loans which have been made here privately for the account of the Allies. Some of the individual loans secured by deposit of American securities and subject to call, as any ordinary Wall street call loan, have run as high as \$75,000,000.

Before the war the funds of United States investors and institutions were invested very largely in bonds and stocks of American companies, and in fact, American companies were obliged to resort to Europe for assistance in financing their needs. Not only have we, during the last two years, been obliged to cover our financial needs at home, but in order to supply funds to our customers abroad, to purchase manufacturers' products, we have been obliged to handle the above list of foreign loans, and have changed overnight from a debtor to a creditor nation.

These loans have been brought out at a time when the relative credit of foreign nations is somewhat impaired. The bonds have been usually for a short-time period, bearing attractive rates of interest and sold at rather unusual discounts, providing in this way exceptional investment opportunities for United States investors.

The \$250,000,000 loan to Great Britain announced last week, follows in most respects along the lines of the loan to France made a month ago. It is, like that, a short-term obligation, backed by collateral, and bearing interest at five per cent. The comparative credits of the two governments, and the manner in which Wall street regards the respective collateral behind them, are reflected in their yields. The three-year notes issued for France, offered for public subscription at 98, yielded about 5 3/4 per cent; the British two-year notes to be offered at 99, will yield just a little over 5 1/2 per cent.

When the present British loan was first discussed, it was believed that its chief point of difference with the French issue would be its collateral, consisting entirely of American securities, instead of the securities of neutral countries. The difference between the loans in this respect, however, is one simply of relative quantity. Only one-third of the British collateral consists of American securities. The French loan had a small amount of American corporation securities behind it. What is more important, from the point of view of the prospective investors in the notes is that the securities behind the British loan are more readily saleable in this market.

But the difference between the two issues which invites most speculation

is that the investors in the British loan will hold a direct obligation of the British government, while the investors who ultimately financed the French loan hold only the notes of an American corporation. Why did France choose, or why was it necessary for her, to borrow through a medium in this way, and why did England dispense with this?

Possibly France did not like the idea of admitting that her notes required the additional collateral to make them saleable, and preferred having the notes of an American corporation offered instead; while England was content to take the American investor just as he is, and possibly to consider the need for collateral more a reflection on his judgment than on her credit. It is also possible that it was necessary for France to adopt the medium of an American corporation, backed by the country's best-known bankers, because of the realized difficulty of selling here such collateral as she had to offer, and also, perhaps, because the credit of the French government is not as widely appreciated in this country as that of Great Britain.

### INVESTMENT QUERIES.

I have been offered the seven per cent preferred stock of The Michigan Smelting & Refining Company. Do you regard this as a safe investment for a business man?

Lenawee Co.

S. T. W.

The writer is familiar with the company whose stock you mention. The Michigan Smelting & Refining Company has been in business a long time and has enjoyed uniform prosperity. Its affairs are in the hands of men thoroughly competent to manage it, and I am informed that the recent stock issue which you mention was put out to refund their floating debt and give them additional capital for further expansion.

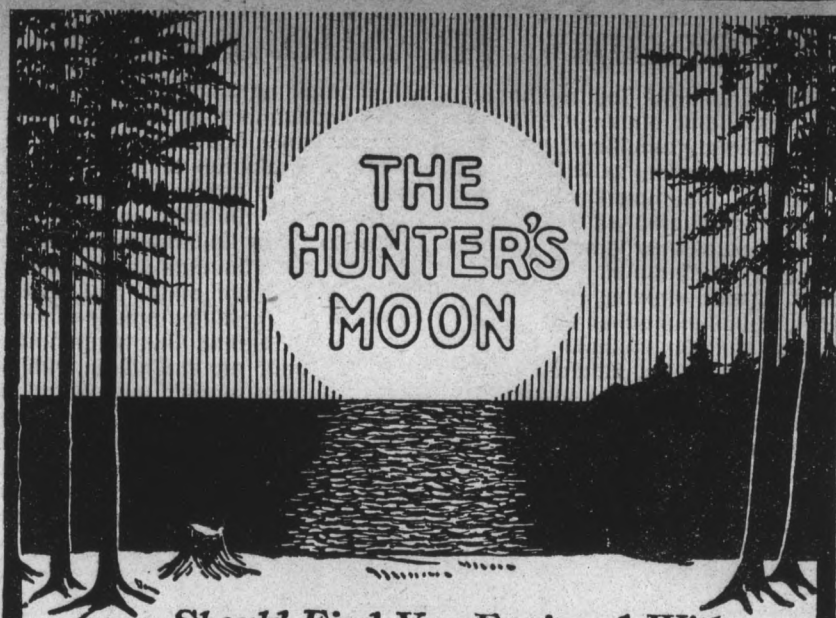
The total assets of the company, excluding good will, are \$1,691,000, or, they are three and one-half times the preferred stock issue. The net quick assets of the company, which consist of raw materials, amount to \$1,418,000, or three to one for each share of preferred stock. I am informed that the earnings for the past five years would average six times the dividend requirements of the issue.

The company has a good business established with automobile and brass manufacturers all over the country and its prosperity should continue in the future.

Every feature of this stock looks very attractive at the present market, which is par and accrued dividend.

### SHEEP BREEDERS MEET.

The thirtieth annual meeting of the Improved Black Top Delaine Merino Sheep Breeders' Association was held on August 16 at "Clay Stock Farm," the home of Mr. and Mrs. Carl Moeckel, of Jackson county. As the noon hour drew near members of the association, together with friends and neighbors to the number of 155, presented themselves. Promptly at 11:30 the guests were invited to the spacious dining-rooms where the hostess served a most elaborate banquet, assisted by a number of ladies in catering. After the wants of the inner man were well taken care of the guests were invited to the shady lawn where the meeting was called to order by the president, L. L. Harsh. The secretary's report was read and stood approved. Next was the election of officers for the ensuing year, which resulted as follows: President, L. L. Harsh; vice-president, Otto D. Luick; secretary-treasurer, O. M. Robertson. An excellent program was given. Mr. Charles Kleckler extended to the association an invitation to hold their next annual meeting at his home, near Oak Grove, which was accepted. Five new members were taken into the association. A vote of thanks was given our host and hostess for their hospitality, everybody voting this one of the most successful meetings ever held.



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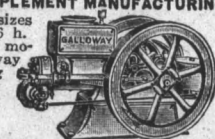
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# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

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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

THE fur season will soon be with us again. Young pelt hunters all over America will get down their traps and start after the valuable pelts which are found in almost every rural community. Those who live in the northern states can place their trap line earlier than those in the southern sections and get good skins; likewise they can continue longer in the spring.

During the last few years, most states have passed laws prohibiting the catching of fur bearers until their skins are at least of fair quality. Generally speaking, the season extends from about the first of November to the last of March. And yet, if the

## Practical Talks on Trapping

By GEORGE J. THIESSEN

weather happens to be warm, some animals do not commence to prime until later and when this is the case they should not be taken. For instance, mink do not get good fur even in the north until about the first week in December.

Then there is a class of pelt hunters who regardless of laws, and I am sorry to say that these are not enforced any too well in many communities, as soon as the first frost comes will start to make their sets. Generally the catch

will be large, due to the activity of the fur bearers in storing up their food and preparing their winter quarters. These beginners hold their furs usually for months and then ship them, expecting the number threes and fours to bring them as much as the prime hides. They discover that early caught furs bring but a fraction as much as those of good quality—and often claim the buyer cheated them. Of course, should they catch any more pelts later and send it to some other house, they will

compare the two returns and arrive at the conclusion that the first to whom they sent their goods were robbers and the last a fair and honest concern.

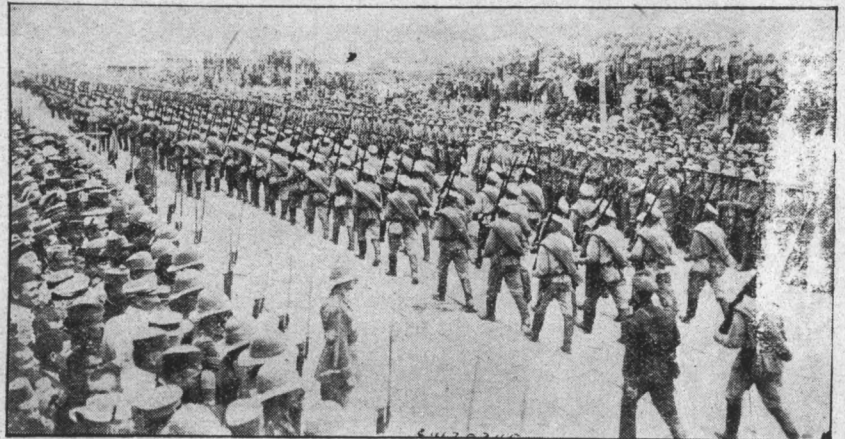
I advise all to select their trapping grounds early. Go over it carefully, locating the dens, runways, etc. When this is done one will know about where all of his sets can be made when the time comes, the number and kind of traps to get.

It is also a good idea to arrange feeding places for the smaller animals, both on land and in the water. Use attractive lures, placing them in such a position that one or more traps can be conveniently arranged later in the season. It is not well to use too much

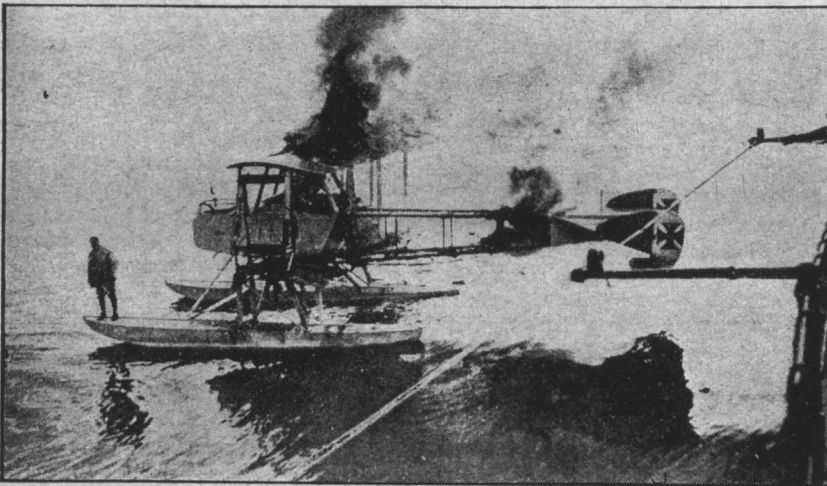
## WORLD EVENTS IN PICTURES



American Members of the International Joint Commission on Mexico: Left, Franklin K. Lane, Secretary of the Interior; Center, Dr. John R. Mott, Sec. World Christian Federation, and Ex-Judge Gray.



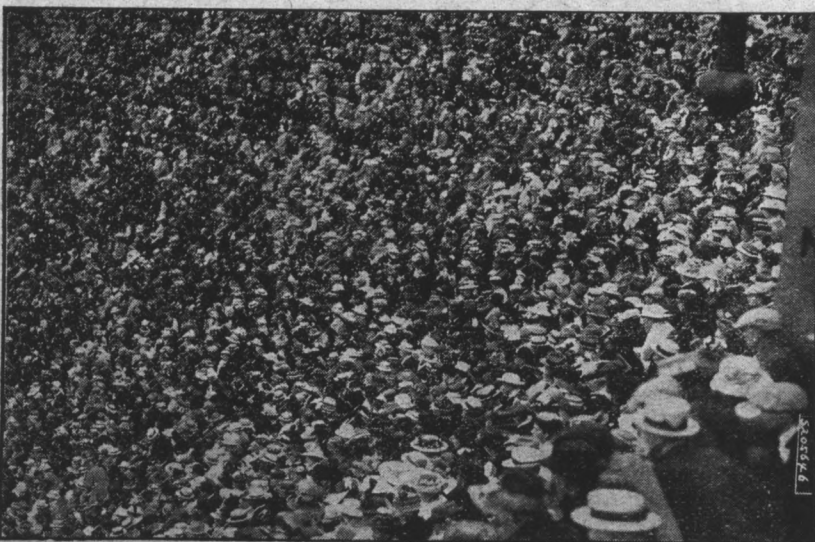
Russian Forces at Calenika are Greeted by Allied Soldiers and the Populace.



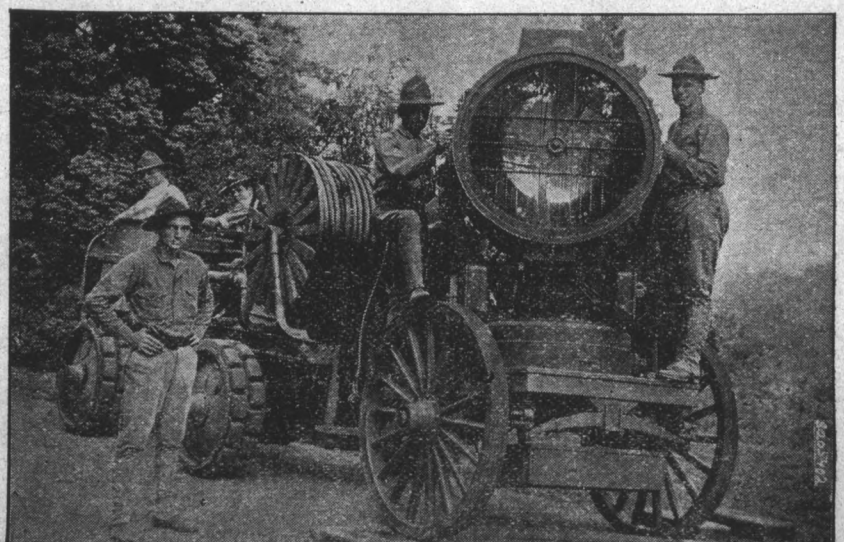
German Aviator Attempts to Burn Seaplane when Captured by the French.



New York Legislative Committee Inquires into Existence of a "Milk Trust."



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meat. This ought to be covered with weeds, brush, etc., so as to be hidden from crows, hawks and similar birds.

In shallow streams, lakes and ponds, not too far from shore, follow the same method of placing attractors. These can be placed above the surface of the water on rocks, etc. Care ought to be taken not to leave signs of the pelt hunter.

When feeding spots are built and maintained the animals get used to coming to them for food. Good catches, especially of skunk, can be had with great frequency at such places.

Go along the banks of small meandering streams and construct artificial dens about eighteen inches deep, near the surface of the water. Do not have these excavations too close together. After completing, dash water around the spot to destroy the human smell. Strange as it may seem, if the dens are made early, many of them will be enlarged and occupied by mink.

Good traps do not necessarily mean large catches, but poor ones—those unsuited—invariably mean few furs. If your bunch contains those which have been used a season or two, carefully test them. Invariably No. 1's which are generally preferred for mink, after a year or longer, will be found scarcely strong enough for muskrat and weasel.

The beginner will want some advice in selecting his traps. While I might say that one should select what the manufacturers recommend for the various animals, it might be worth while for me to give my personal preference in this matter.

In the first place, the boy trappers usually cannot afford to put a great amount of money in their outfit. And for the smaller fur bearers, I think the outlay unnecessary since there are some very good traps which can be had very cheaply—and they will answer the purpose in every way. There is the Hector, built on the same style as the genuine Newhouse, with specially tempered springs which do not break even in the coldest weather. The Hopper is the jump or leap style trap. Another good trap—and I mention it for the benefit of those who hesitate to take the skunk and civet cat because of their odor—is the Sabo which kills these animals with little or no smell.

A few words about sizes: I hesitate to tread on this ground for the reason that even professionals have preferences at variance with what the manufacturers recommend. However, I will discuss this topic briefly in the hopes that some hint may be valuable to the amateur trapper.

Skunk.—Number one and one and a half, Hector, Hopper, Victor, Sabo, etc., etc.

Civet Cat.—Number one—same patterns as skunk.

Mink.—Number one and one and a half, same patterns as skunk.

Muskrat.—Number one, same patterns as skunk. (Owing to the fact that this size often breaks the leg bone and allows the animals to escape, unless the set is fastened in deep water, I invariably use the Number Ought Hopper which catches the fur bearers high and is strong enough to hold them.)

Raccoon.—Number one and a half, same patterns as skunk.

Opossum.—Number one, same patterns as skunk.

Weasel.—Number One Hector, Hopper or Victor. (I prefer the Number Ought Hopper for the reason that it does not cut off or break the leg, allowing the animal to crawl away to die, no doubt, in some hole from loss of blood, where the pelt hunter never finds it.)

If the suggestions I have given are followed, the pelt hunter, as he becomes more experienced, will probably make a definite choice for each of the different animals.

While I am on this subject let me add that new traps do not always work

properly and should be tested before being used. To do this, set them and then spring with a stick wrapped with cloth. If one snaps the jaws empty, they are liable to break.

New traps ought never to be set, as most fur bearers will not enter them. It is best to rust them for a few days and then stain by boiling in a "paint" made of walnut husks and water. Some prefer to wire the bunch together and

bury them in black, slimy mud. Within a week or so, they will be colored as desired.

Do not oil traps with machine oil, etc., as the odor will have a tendency to keep the fur bearers away from the sets made with them.

For snow sets, traps may be whitened by dipping them in lime and water. They must be handled carefully, otherwise the white will rub off.



The Raccoon.

## White Sister of the Pioneer Path

By CAROLINE CRAWFORD DAVIS

(Continued from last week.)

An hour before sunrise the next morning, White Sister was actually on her way to Detroit, the goal of her dreams. Wabenito was to remain at the Atkin's, and in the event of the girl's finding friends he would be returned to his people. So excited was the girl over her adventure that she did not fully realize that she might not see the child again, until his howls of remonstrance brought her back into the cabin. Her new friends persuaded her that it was best to go quickly, so hoping that she might again have him with her, she took her place on the cart.

Tom Fletcher walked beside his team, and guided them with a long lash. Occasionally he would sit beside White Sister to rest himself, but not for long at a time. He hoped to make the journey in two days, so must relieve the animals of his own weight. Their way at first was through such deeply wooded country that the girl, used only to the ponies of the Indians, wondered how the cart would get through the trees; Tom threaded the narrow trail carefully and skillfully. The road was hilly, too, and occasionally there was a stream to ford. It was cool and delightful, this slow trailing through the shaded greenwood, and in her heart, the girl sang a little song of happiness.

When the sun told them it was noon, they stopped by a spring, and ate from the basket that Mistress Atkin had provided. While the oxen browsed for an hour, Tom threw himself on the grass and drew his cap over his eyes. He was so silent that White Sister thought he was asleep, but when she moved very softly for fear of disturbing him, he told her that she had no need to keep quiet. When they went on again he had left his silent mood behind, and chatted gaily and hopefully. He told her of the work he had planned—he was going to work like four men, now that he had an object in view. White Sister was puzzled by that last expression—it had not been in Trapper John's vocabulary. As he sat beside her on the cart, Tom told her tales of his old home across the sea; then, walking again, he sang snatches of the songs of his motherland. Once when he looked back quickly he surprised a tear in the girl's eye.

"Have I said ought to offend you?" he asked gravely. He realized the unconventionality of their situation as she did not, and strove to keep as far from personalities as possible.

"No, no," protested the girl. "It is

only that I am beginning to understand how other girls live. I have had no home—I wonder if I shall have one in Detroit."

"If you do not you shall have one at Ginsagaigan," said the young man so warmly that the girl blushed.

"Tell me more about your sisters—do they really wear hats with flowers or cloth upon them, and moccasins that lift their heels from the ground? Shall I see such things in Detroit? And is it a large town like the places you have been telling me about in England?"

"It is as large as some, but not at all like them. I can hardly explain the difference only that they are older, and more finished; and then, there are no Indians over there."

"How very strange."

"Here is a river that we have to ford—it is called after the Hurons. Some miles below we shall cross it again near the home of a family by the name of Clark. I shall ask for lodging for you there."

"I had as lief sleep in the open."

"It would not be seemly. They have a daughter Phoebe, about your age, whom you will like."

The path, in making a curve around a steep hill, passed a rectangular excavation loosely walled with stones.

"Here is what the settlers speak of as an Indian well. They believe that in an earlier day such pits were used for the burning of white prisoners by the savages. Know you if this be true?" asked Tom.

"It is not so," and the girl hastened to defend her adopted people. "The Indians are very fond of feasts, and in these pits they are wont to roast great quantities of roots. Let me look—yes, there are the stones which they make red-hot, then fill the pit, and cover it for a whole day. The Great Spirit blesses the feasts, for is it not he who supplies the hunting grounds?"

It was now nearly sunset, and giving an anxious glance at the team, Tom, with a "Haw, Bob," and a "Get-up, Bright," to the oxen pushed on without further conversation. An hour later they reached the Clark's home where Tom was welcomed gladly, he having made it his stopping place several times before. Strangely enough, Tom found an old friend there, one Alfred Crawford, who had but lately arrived from England. He was staying at his neighbors while his own cabin was being built. It was soon apparent that when he left there he expected to take the daughter of the house with him as his wife.

She was a pretty girl, and Tom had

fancied her himself; but now here was White Sister who had captivated him by her charm and her mystery, so he was glad to see that Alfred and Phoebe were taken with each other. After supper Mr. Clark and his guests sat outside the door and talked, but the two girls remained within, and White Sister rapidly added to her knowledge of civilized ways. At the same time she told of her own life, and her quest. "Don't search too hard for a home," advised Phoebe laughingly.

"Why not?" asked White Sister, coloring.

"That blush proves that you know. Tom Fletcher never looked at maiden before as he looks at you, I wager," answered Phoebe, wise in her new knowledge.

With many kindly expressions of hope for the success of both Tom's and White Sister's quests, the Clarks sped their guests on their way the following morning. They started even earlier than the day before, for the greater part of the distance was yet to be traveled. The road was better, though, and not so hilly, so Tom hoped to reach his destination before the night fell. They went as rapidly as possible, Tom riding but little, and conversing even less. He was strong and used to walking, besides, he wanted time to think. If he was able to keep his team, and the girl did not find friends, he could take her back with him. She would then remain at the Atkin's until he had time to woo and marry her. But if he lost the team, and she did not find her friends, the situation would be rather difficult. He had told her nothing of his trouble, hoping more than ever that his creditor would prove lenient.

At noon, encouraged by the distance they had come, Tom became more talkative. White Sister, accustomed to the taciturnity of the Indians, had not resented his silence, though now she welcomed his affability, and chattered happily.

"What large houses we have been passing! Many of them must have more than one room; and I have seen women with black shoes of cloth upon their feet instead of moccasins, and others with wooden things like little boats. How can they walk? Shall we be there soon?"

"Before sunset, I hope."

"And are the houses large in Detroit?"

"Much larger than any you have yet seen, and then there are the shops."

"What are shops?"

Tom was about to reply that they were places where one might buy dress fabrics, hose, and such gear, as well as household furnishings, but a glance at the girl's buckskin dress and beaded moccasins stayed his answer. "You will have to visit them to understand," he replied gently.

When they went on again, she entertained him with tales of Indian life. Once they passed an Indian encampment, and the squaws looked curiously at the girl in the buckskin dress who was riding on a white man's cart. Fortunately for Tom, the house of his creditor was upon this road they were traveling, and well before sundown he stopped his tired team in front of a house which was far larger than any they had yet passed.

"I have business to transact within," he said to White Sister. "Will you come with me, or remain here?"

"I would rather stay here, and watch the people pass."

"Very well; I shall be but a few moments," and he entered the room which was used as an office.

"Good-even, Mr. Hamilton," he said to a white-haired man who was bending over a paper at his desk.

At his greeting the man turned and rose. He was younger than his white hair would indicate, but his expression was austere, and of settled melancholy. A scar, as of a deep knife wound, began at his temple and extended down his cheek until it was hidden by his

(Continued on page 228).



## Farm Credits

THE Farm Loan Commissioners appointed by the President to handle the rural credits act, met Michigan people in Representatives' Hall at Lansing on August 25 for a discussion of Michigan needs, and the point of location of one of the twelve regional banks.

Before any of the benefits of this act accrue there must first be located the district bank, which must include no fractional part of a state. The Michigan belief was that Ohio and Indiana would be a proper district with this state, and Lansing the place for the bank. Wisconsin might or might not be included. A glance at the map would show that the radius from Lansing to northern peninsula extremities would include all of Ohio and Indiana and extend as far south as Charleston, West Virginia. Unlike the federal reserve regional banks, there is no necessity of location at great banking and commercial centers. The high interest rates prevailing in the northern portion of the state practically on a line drawn from Bay City to Muskegon was urged as the field of greatest need.

Lansing is a sort of mecca of agricultural and live stock interests, the location of the state capitol with the public domain commissions office and that of the auditor-general for tax and other records, and of the Agricultural College with its connections through county agents, makes that city particularly well situated for the district bank.

Michigan has other favorable features, viz. the New England or township system of government as the unit, with township officers who would be familiar with local conditions of appraisal. In fact, the appraisal of government officials of farm properties for loan purposes is going to be a valuable countercheck on over-valuations. Michigan's mortgage tax law, with a registration for taxing purposes, and no other taxation, is a favorable condition, as federal and state government friction is avoided. Agricultural interests may take a different view of this law under these conditions. Bonds issued by the Land Bank are exempted from federal state and municipal taxation and are legal investment for trust funds. If the mortgages were subject to taxation as property some complications might follow.

An attache of the commission said privately the Michigan meeting was the most satisfactory of any so far held. There was a decided attitude to aid in urging the act and assisting in its initiative.

Secretary of the Treasury McAdoo is quoted as saying that the law cannot be put in operation before next spring. When the regional bank is located anyone can subscribe for stock but the United States government only awaits 30 days and at that time takes all the remaining or unsubscribed stock. A banking institution exists, then, with a minimum of \$150,000 capital, ready to do business. It is then up to local organizations to act, and it was pointed out that the county agents and agricultural organizations already in existence would be strong factors in Michigan in assisting in this work. Any ten or more men who are owners or prospective owners of land are organized into a loan association. The minimum aggregate of loan to any one association must not be less than \$20,000. The individual must subscribe five per cent of his loan to the capital stock of the loan association and be liable to a possible assessment of five per cent additional. These features of the act are pointed out as objectionable by those who would discredit the act. In addition to this reasonableness of safeguarding the bank it makes the mortgagor a partial investor or capitalist whose interest it is to see that the association is conducted squarely. When the mortgage is discharged the liability is automatically released or the stock may supplant a



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similar portion of that originally subscribed by the United States. When the applications for loans are made and passed or the regional bank advances the money and in turn issues bonds against these mortgages. The original capital would soon be exhausted if it were not for these bond issues which will bear not to exceed one per cent interest rate less than the mortgage. The exact interest rate the mortgage will bear will depend on the demand and absorbent power of bond investors. When one reflects that similar bonds in the German Empire sell even in peace times higher than government bonds, and as previously pointed out, are legal investment for trust funds and are not subject to taxation that a net earning power of four and a half, or even four per cent, might seem possible. These figures are conjectures based on net earnings of other high-class bonds. The use of money loaned is restricted to farm improvement and adjuncts essential to farming.

The necessity for drainage in many counties can be met by this law, and, in fact, a most profitable investment which would be repaid often in one season.

The opportunities for the tenant to become an owner are vastly increased. The question was asked by one of the board members as to whether a farmer who sought to retire would accept a small down payments and a second mortgage for the remainder after receiving the possible 50 per cent in payment to be obtained under this law from the purchaser? The natural argument would seem that the possession of an assured income invested in non-taxable bonds and upon which each year's amortization decreased the loan association liability and automatically increased the second mortgage assets would seem good. In addition to this, the partial underwriting of the loan by the local association in its stock subscription and five per cent liability, while directly a guarantee to the regional bank is a guarantee to him in addition. The working of this in Europe is that a worthless character who allows his holding to deteriorate is forced out of the association and another man found deemed to be worthy, assumes the farm. Foreclosers on the continent are rare, but of short process. The reluctance of farmers to sell when no longer desirous to occupy and work their own farms is often based on the uncertainty of a safe investment. The land mortgage bonds answers this heretofore uncertainty.

Former Secretary of Treasury Lyman J. Gage, said an ideal financial system for a nation was available currency to negotiate every needed transaction. The present law attempts this in relation to agriculture in making real property non-mobile in exchange and makes liquid a portion of property whose constant tendency is to become fixed capital.

The small investor who has found himself between the possibilities of a high tax rate on a low interest safe investment, and the allurements of a speculative venture will find the farm mortgage bond attractive, for capital will seek safe investments which are easily convertible. Many well-meaning men feared that this law would result in widespread land speculation and inflation of farm values. Coming at a period of advanced values the law in point of time is opportune. The restrictions placed upon the uses of the loan makes it for purposes of production or reproduction. Speculation assures a gain to be made without this element. The returns of more farm products is basic to other industries, so any possibility of increased values must project itself all the way along in business circles. Basic wealth has by its increase never inflated values of itself alone. No nation has ever experienced a panic from the products of the earth. Some ill-founded criticism has been made because no provision

was made for personal credits. This is a function for local consideration and service. The individual, his needs and ability can only be known to some-

one at close range. The farm mortgage bank, however, will release or allow money heretofore invested in mortgages to be used for personal loans.

## What Wasps and Hornets Do for Us.

By L. H. COBB.

These high tempered little insects command our respect to a certain extent, but they do not have the favor they deserve in return for the service they render us. All we choose to remember about them is their stings and their willingness to use them on occasion. We forget that if we go about our business they will go about theirs, and their business is really our business, for they are working for us in a most effective manner. Many of our most destructive insects are held in check by them.

There are two classes of wasps in their manner of fighting our insect pests. One class captures the insects and their larva and stores them in cells and lays eggs in the same cell. When these eggs hatch the young larva feed on the stored supply until they are grown. The other class lays the eggs directly on the body of the insect or the larva of the same, and when the eggs hatch the little worms, or larva, feed on the living insect, causing its death. In most cases both classes will first sting the insects or larva in such a manner as to paralyze them. These wasps are of varied sizes, and they work on many different insects. The big brown Cicada, or locust, that makes such a harsh noise in the fall has its wasp enemy. There is one wasp that works on the white grub and its beetle form, the May beetle. Another preys on the cabbage worm, another on cockroaches, another on tarantulas, and numerous shade tree pests have their wasp enemies. There is a wasp, also, for the coddling moth. Some wasps gather in the larva of many insects. Probably spiders are a favorite food for more of them than otherwise, and in this case they are not really doing us so much good, although I would hate to think what would happen if the spiders they destroy were permitted to spin webs across our pathways. Spiders serve a good purpose, but they are extremely disagreeable, and it is just as well if they are held in check.

The hornets and wasps all belong to the same family, and about the only difference is in their manner of mak-

ing their homes. They feed their young differently, the hornets preparing a food for the young larva in much the same manner as bees, but using a pulp of vegetable matter and insects instead of pollen and honey.

If you want to get an idea of the number of insects an able bodied wasp will get rid of in a season go to a mud dauber's nest and count the spiders in one cell, and reflect that that mud dauber keeps busy. That supply of spiders is stored there to feed one young dauber until it is ready to come out and begin work on its own hook. It is in their larva state that all insects feed heaviest, and for every wasp you see, dozens of insects have died to rear it, and it is preparing to kill hundreds more to rear its young. Some of these wasps increase very rapidly, and only require a little over a month from the egg to the full grown wasp ready to lay. Others require a season to complete the circle from the egg to insect.

Nature has many provisions to help us in our battle with insect pests, but we are too apt to give them no attention, and sometimes we wage war on the very friends she has provided. We destroy wasp nests, kill wasps, trap moles and shrews, shoot the birds, hunt the skunks, and in these ways positively help to increase the number of pests that prey on our crops. Let us study these things, and find out who our insect, bird, and animal friends are and protect their lives instead of seeking to destroy them.

### HINTS FOR FARM MOTORISTS.

A knowledge of the traffic regulations in your nearest market town may save accidents and embarrassing fines. As the number of motor cars are increasing in farming communities it becomes necessary for every driver to obey the laws to insure his own safety as well as to protect the lives of others.

Two miles from our farm an expensive touring car spent two days in a ditch twenty feet deep. It did not get there because of careful driving and

observance of the road rights of others. Another car skidded off the road and broke an axle and no one blamed slow, sensible driving for that accident. Probably the roads of this state are not modelled after the Indianapolis speedway and it is too bad that many fools may have to die before finding it out.

Heavily loaded milk wagons and hay wagons deserve some consideration from the motorist. Often the horses cannot quickly pull their loads to the side of the road to give passing room and as farm products must be marketed, a little judgment on the part of some drivers is doubtlessly appreciated by the farmers.

There is a state law requiring dimmers on automobile headlights and after stopping by the road in narrow places on many occasions to wait for the dimmers to act, I am inclined to think that the law needs some rigid enforcement in some communities. Some drivers refuse to dim their lights until nearly parallel with a passing car and in that way serious accidents may occur.

When passing another machine it is no reflection on your efficiency as a driver if you slow down and allow the other car plenty of room. This is especially necessary at night when there are deep ditches on each side of the road and careless steering may result fatally.

Steam cars and interurbans demand a wholesome respect from the motorist. They travel many feet per second and it is difficult to calculate how fast they are coming so it pays to wait by the track and only pass when the way is safe.

A loud horn is an asset to a motorist in an emergency such as warning children who are playing in the road, but it can be abused. Don't drive up behind horses and frighten them, or delight in producing shocks on your neighbor's nerves. A moderate pressure on the horn will usually be effective and will not disgust the passing driver.

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### WHITE SISTER OF THE PIONEER PATH.

(Continued from page 226).

stock. "Good-even to you, Thomas Fletcher. You have come to pay me my just due?"

"That I cannot," replied Tom, "but I have come to explain my circumstances, and hope to renew the mortgage."

"It is due," said the older man coldly. "You have not even kept the interest paid. I make it my rule not to renew under such circumstances."

"But you do not understand; I am working hard—no other settler has near the ground ready for cultivation that I have, but I have had naught to sell. Let me have my team for the next year; I shall trap through the winter and pay all of the interest. Then next summer I can raise wheat enough to more than pay the principal, but without the oxen I can do nothing."

It was a strong plea, but the money-lender shook his head. "The security is not good. Already you owe me more than the team is worth."

"That is not so," denied Tom hotly. "My Bob and Bright are the best pair that ever put their heads to yoke. At a hundred dollars you are getting a bargain."

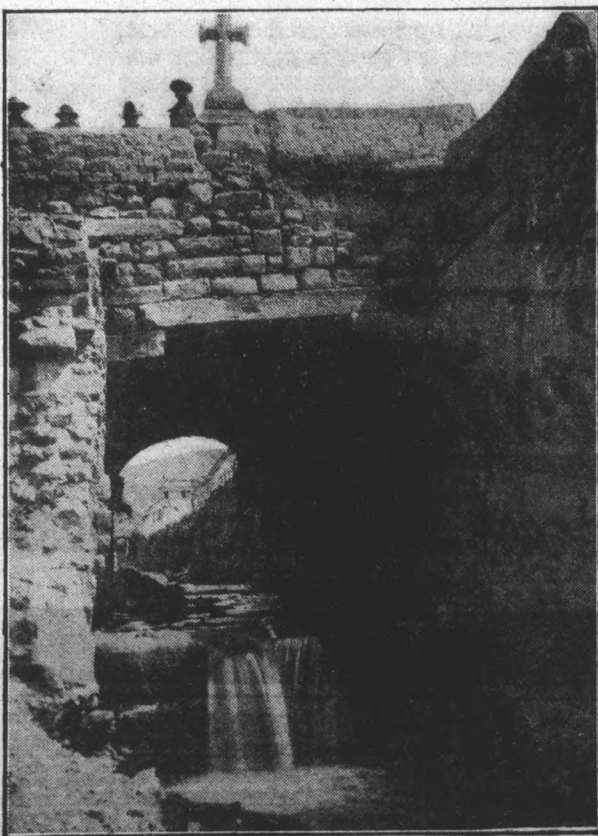
"You must leave the cart, too. Good ox teams may be had any day for sixty dollars."

"I assure you that you will not be the loser if you accommodate me," said Tom, swallowing his pride to make a last plea. Through the open door he saw the beautiful animals, the pride of his pioneer domain.

"I have given my answer," replied Mr. Hamilton, in a slightly wearied tone. "You may put the beasts in my barn, and I will cancel the indenture."

"You are a hard man," asserted Tom bitterly.

### "In Old Mexico"





He went outside to part with his team. For the moment he had forgotten White Sister, but when he saw her feeding wisps of clover to the patient animals, he was roused to greater anger than before. It was monstrous to have his team taken from him when he needed it most—for her. She depended upon him so utterly. He could not fancy leaving her with strangers in this large town; and as for a father—it was impossible.

"Have you asked?" began the girl, then stopped at sight of Tom's troubled face.

At that moment Mr. Hamilton, having stopped to take the paper from his safe, came out of the house. He had not noticed Tom's companion until now, when she turned as she heard him approaching. She faced him accusingly—what had he done to Tom? At sight of her the man's expression became one of wonderment. His pale face became even paler, and he approached close to the girl in a way that awed and frightened her.

"Comfort?" he questioned rather than exclaimed the name. Tom felt the importance of his interest, and watched the older man intently.

"Who is this girl; is she your wife?"

"No," replied Tom.

"Your mother—where is she?" the man turned impatiently to the girl.

"I have no mother, she died when I was very young."

"Your father, then; what is his name?"

"I know not. I have lived with the Indians since I can remember aught."

"What do you know of her?" Mr. Hamilton once more appealed to Tom.

Tom, pitying the man's evident discomposure, related briefly the circumstances of the girl's introduction to the Atkin's and himself.

"But she has naught to identify her?"

"Not that I am aware of, unless it be her resemblance to her kin. But what was the name you cried out when first you saw her? She thinks that once she was called 'Comfort.'"

"Is that true?" Mr. Hamilton asked the girl.

Before answering she turned from them for a moment, and took something from the bosom of her dress. When she turned toward them again, she held out to the agitated man a tiny buckskin bag.

"My Indian mother told me to keep this hidden always until I came to those of authority in Detroit. From the interest you show, I believe you know my people."

But the man shrank from the bag as though it contained some fearsome thing. "If it is a locket—my Comfort had no such thing. We were too poor. You open it," to Tom.

Tom untied the string, and drew out a tightly rolled strip of linen. He held the faded letters so that the trembling man might read.

"Comfort Hamilton," came in awed tones. "How well I remember my wife working that name upon tiny shifts. Ah, but this is proof that you are my daughter, though other proof than your looks is scarce needed."

"How was she lost to you?" asked Tom with sinking heart. To find her the daughter of such a rich man seemed to place her suddenly far away from him.

"My wife and daughter were taken prisoners at the massacre of Frenchtown, which occurred soon after the battle. The Americans had surrendered after having been promised protection by the British from the savages, but the promise was not kept. We were all taken prisoners to Canada, and as soon as the British were gone the Indians returned to kill, and burn and torture the helpless women and children.

"Owing to my wound I was unable to keep up with the prisoners on the march, and fell by the wayside. Many in like case, were scalped by Indians, but I managed to evade them, and hid in the barn of a Frenchman. His family was kind to me, and when I recovered,

they helped me to get to Detroit. I learned that women prisoners were brought there and offered for ransom, so I remained in the town hoping that my wife and child might be among those so offered. One man told me of someone resembling my wife being brought in by a band of Ojibwas, and that kept me from utter despair.

"I went to work, day and night, and as soon as I got a few dollars together I offered a reward, sending word to bands known to have white prisoners. As time went by, my hope grew fainter, but my affairs prospered. I increased the reward, and spent large sums trying to get news of my loved ones, never giving up hope, though no word came. The first sum I offered was a meager fifty dollars; today—when you entered my office in fact—I had prepared this sheet to spread broadcast among the trappers before they go into the wilds for their winter's harvest."

He handed the paper to Tom. It was the offer of a thousand dollars for information that would lead to the finding of one Comfort Anne Hamilton, wife of Joshua Hamilton, or their daughter Comfort, now a young woman of twenty years of age. Tom gazed at the paper with awe. For the day and place, the amount was stupendous.

"That sum," said Mr. Hamilton impressively, "I shall now be glad to pay to you. I feel sure that this girl is my own child. I am deeply grateful to you for bringing her to me safely."

"Your gratitude I scarcely deserve," replied Tom proudly. "Aught that I have done for her has been service gladly rendered; and as for the reward, that I cannot accept. It was accident that brought you together, and not my design."

"But think—" began the older man. "I shall think," interrupted Tom grimly, "but I shall not think myself a cad, as I would if I took money for simply being a gentleman."

"At least let me restore your team."

"I cannot take that either."

"You called me a hard man when I was only dealing as one man of business with another. Now I say that you are hard—cruel hard—to deny me the satisfaction of paying the reward for which I have toiled so long."

(To be continued).

#### A WISE CONCLUSION.

BY M. P. EARL.

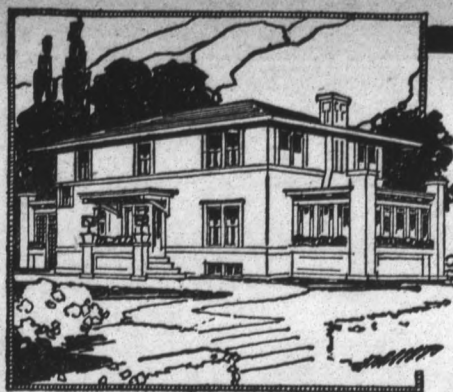
Sometimes I think I'd like to live  
Where the city stores are tall,  
Where they's lots of boys an' lots of noise,  
An' electric lights an' all,  
Where they's alligators, elephants  
An' tigers in a Zoo  
An' a feller kin go to the picture show;  
An' ride on street cars, too.

Where trains on bridges overhead  
All run as fine as silk,  
An' they ain't no churn fer a kid to turn,  
'Cause they ain't no cows to milk,  
An' they's lots of water, most anywhere;  
'Thout having to pump you know,  
An' where a grind-stone is a thing unknown,  
An' they ain't no garden to hoe.

An' they's pavement an' sidewalks everywhere,  
It certainly would be swell,  
All the autos an' trucks an' things, but—Shucks,  
I might get killed—can't tell,  
An' nen they ain't no chance at all  
'Mong the stores an' pavement roads  
Fer climbing trees, er bumble bees  
Er turtles, snakes an' toads,

Ner frogs, I'd get so lonesome  
I guess I'd almost die  
Not to hear "Bob-White" call ev'ry night  
From where the grass grows high,  
So the more I think, the more I believe  
A farm's the place fer me,  
Where they ain't no germs, but they's fishin' worms,  
An' a creek to swim in free.

Talents are absolutely nothing to a man except he have the faculty of work along with them.—Lowell.  
A man cannot speak but he judges himself.—Emerson.  
If I had my way I would give the same education to the child of the collier and to the child of the peer.—Kingsley.



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# Woman and Her Needs

## At Home and Elsewhere



### The Visiting Baby

HERE is a card from Mary saying that she is coming to spend a week with us," said Lucy, as she came back from the letter box. "Do you suppose that means we will have to put under lock and key everything that we care anything about, or will she have trained this baby to let things alone? Jack was such a trial when she brought him here for a visit that it doesn't seem as if I could stand it to have to go through with another one."

"Do you remember how he tore the covers off all the magazines, tied the curtains into knots, and broke that little crystal vase of mine? And these are only samples. I had to be on the watch every minute to see that he didn't tip the plants over or find a hammer and pound the furniture to pieces. And Mary wasn't bothered for one little minute. She could sit and sew, talk, or read, and not get the least bit disturbed. Jack must do just as he pleased and we ought to be delighted to let him do it, she seemed to think. I wonder if she ever thought that we might not care to have the house upset every minute? It wasn't that Jack was naturally any more mischievous than any other child, but simply that she didn't take the pains to direct him any. It really does not seem as if I could undergo such an ordeal again."

Here Lucy sat down to catch her breath and also to think upon the coming visitors and their probable behavior. "Now, when Harriet came to visit us and brought little Florence along, it was a different matter entirely. I don't think I should have minded if they had stayed a month," she said, after a few minutes. "That child certainly was a joy to all of us. She was happy all day long and wasn't a nuisance either. Her mother said she made up her mind when she was a girl that if she was ever blessed with children her friends and neighbors should not feel that they were a nuisance if she could help it. So she began as soon as Florence was old enough to want things, to let her understand that she couldn't have everything she wanted. When Florence began to creep and reach for things, Harriet didn't lock everything up, but gave her things to play with and kept her so busy that she didn't have time to get into mischief. And now she says that when she is going away for a little visit as she did last week, she puts into her grip some favorite toys and picture books, so that the child can amuse herself and not be a pest. Her plan certainly works well, too."

Naturally my sympathies went out to Lucy, for I had had similar experiences and no doubt you, too, have been visited by children of both types. We don't like to tell prospective guests that we would rather they would postpone their visits until they could come without the children, but often we wish we could do so. Why should children be allowed to be such nuisances? Surely a mother knows her hostess doesn't really enjoy having her house torn to pieces by a spoiled child. Children have to have something to do or they will get into mischief; the bright child is always investigating the new and strange. If he had no such tendencies we would fear that he was not of normal intelligence. But it doesn't take much time or trouble to put into your grip a picture book, favorite doll, or

some new toy with which to amuse the child, and, if you should forget to do so, watch him yourself: don't put his care onto your hostess.

The child who is constantly asking questions is another problem. If the child wants to understand, he must ask questions for we elders don't realize how easy it is for the child to misunderstand that which is perfectly obvious. Don't be unwilling to answer questions, but even little children can be taught not to interrupt the conversation of older people. Children have their rights as much as "grown-ups" do, but it does seem sometimes, in these days, that mothers forget that children have a right to be taught self-control. We hear so much about developing the individuality of the child that we lose sight of the fact that he must grow up to be a citizen of the world, with due regard for the rights and liberties of other citizens. We are so afraid that we will spoil his good time that we do not realize the injustice we are doing him and the community by not teaching him at home this most important fact. It must be learned some time and, if the mother is wise, it can be learned at home much easier and with less bitterness than any other place. C. R. H.

#### CAN FRUIT WITHOUT SUGAR.

Fruit for use in pies or salads or as stewed fruit can be put up or canned without the use of any sugar at all, according to the canning specialists of the department. They, therefore, advise those who, because of the high price of sugar, have been thinking of reducing the amount of fruit they put up, to can as much of their surplus as possible by the use of boiling water when sugar syrup is beyond their means. Any fruit, they say, may be successfully sterilized and retained in the pack by simply adding boiling water instead of the hot syrup. The use of sugar, of course, is desirable in the canning of all kinds of fruits and makes a better and ready sweetened product. Moreover, most of the fruits when canned in water alone do not retain their natural flavor, texture, and color as well as fruit put up in syrup. Fruit canned without sugar to be used for sauces or desserts must be sweetened.

#### Canning Fruits without Syrup.

Can the product the same day it is picked. Cull, stem, or seed, and clean the fruit by placing it in a strainer and pouring water over it until it is clean. Pack the product thoroughly in glass jars or tin cans until they are full; use the handle of a tablespoon, wooden ladle, or table knife for packing purposes. Pour over the fruit boiling water from a kettle, place rubbers and caps in position, partially seal if using glass jars, seal completely if using tin cans. Place the containers in a sterilizing vat, such as a wash boiler with false bottom, or other receptacle improvised for the purpose. If using a hot-water bath outfit, process for 30 minutes; count time after the water has reached the boiling point; the water must cover the highest jar in container. After sterilizing remove packs, seal glass jars, wrap in paper to prevent bleaching, and store in a dry, cool place.

If you are canning in tin cans it will

improve the product to plunge the cans quickly into cold water immediately after sterilization. When using a steam pressure canner instead of the hot-water bath, sterilize for ten minutes with five pounds of steam pressure. Never allow the pressure to go over ten pounds.

#### MEAT SUBSTITUTES.

Meat furnishes protein which is an important muscle builder and source of energy, but it has two objections. (1) it costs more and more each year, and (2) it is very likely to putrefy in the process of digestion and form objectionable acids and other products which are injurious to the health. Muscle-building foods of other kinds can be substituted for that furnished by meat if we will use eggs, nuts, peas, beans and similar things instead of meat for one or two of the daily meals. Fish is not a good substitute for meat from this standpoint as it has the same kind of protein which forms objectionable acids.

The extent to which other foods can be substituted for meat depends in part upon the character of the work being done. Less meat and a greater proportion of meat substitutes should be used by those who work indoors than by those who are in the open air most of the time, but even those who are working hard in the open air often get along well with little meat after they have been accustomed to the substitutes if the better half has learned to prepare them in an appetizing way.

**Pecan Nut Loaf.**—Mix together one cup of bread crumbs, one cup pecans, one cup of milk, one cup of boiled rice, two eggs, two tablespoons of butter; season with salt and paprika and bake in a buttered dish. Serve with a cream sauce.

**Omelette.**—Beat yolks and whites of four eggs separately. Add to the yolks a thick cream sauce made of one cup of milk, three tablespoons of flour, two tablespoons of butter, pepper and salt. Fold in the stiffly beaten whites and cook in a buttered frying pan. Omelettes may be cooked on top of the stove or in the oven. Small pieces of ham, bacon or green pepper added to an omelette give an excellent flavor. Cheese is used extensively in omelettes. It should be melted in the cream sauce and then added to the yolks.

**Macaroni and Cheese.**—Break one cup of macaroni into uniform pieces. Drop into boiling water and cook until tender. Drain and rinse in cold water. Place in a buttered baking dish. Make a cream sauce, using two tablespoons of flour, two tablespoons of butter, one cup of milk, salt and pepper. Melt one cup of grated cheese in the cream sauce and pour it over the macaroni. Sprinkle with bread crumbs and bake.

#### HUMAN DIET LACKS MINERAL NUTRIENTS.

Dr. E. B. Forbes, of the Ohio Experiment Station, is authority for the statement that many American diets today consist too largely of meats and cereal foods which lack the outer seed coats. Such diets are deficient in minerals. Those most commonly lacking are calcium, phosphorous and iron.

Calcium is abundant in milk, eggs, vegetables and fruits. Phosphorous is found in large amounts in milk, eggs, nuts, peas, beans and cereal foods con-

taining the outer seed coats. Iron is contained in abundance in beef, eggs, prunes, beans, peas, and green vegetables (especially spinach). Foods poor in minerals are polished rice, pearl hominy, white flour, bolted corn meal, and other cereal foods lacking the outer seed coats. Such foods are likely to be constipating. More liberal use should be made of milk and vegetables, especially for children.

In artificial feeding of infants, Dr. Forbes says whey should be used instead of water for diluting cow's milk, because whey does not reduce the mineral content. Whey can be prepared from skim-milk by the use of rennet, or from whey powder, which is simply evaporated whey. If whey is made with rennet it must be heated to 154 degrees F. before mixing with milk. Sodium citrate (one grain per ounce of milk), prepares the casein for digestion and furnishes an alkali element needed by infants lacking capacity to digest fat. Whey is especially valuable in cases of fever in children beyond the age of infancy. It can be used with egg white or orange juice.

#### CANNED SOUPS.

A supply of canned soups is frequently of great convenience to the housewife, as such soup may be prepared ready for serving at almost a moment's notice. Many economical and palatable soups may be put up in the summer and early fall, and in this way the odds and ends of vegetables and cereals may be utilized as well as meat scraps, bones, and ligaments that are often wasted.

The following recipes, in which the soup stock is made from beef, are prepared for the use of home canning clubs, and the products are intended for home consumption. When these products are intended to be sold, those undertaking this work are cautioned to inform themselves as to the requirements of state and federal food laws and meat-inspection regulations.

**Soup Stock.**—Secure 25 pounds of beef hocks, joints, and bones containing marrow. Strip off the fat and meat and crack the bones with a hatchet or cleaver. Put the broken bones in a thin cloth sack and place them in a large kettle containing five gallons of cold water. Simmer (do not boil), for six or seven hours. Do not salt while simmering. Skim off all fat. This should make about five gallons of stock. Pack hot in glass jars, bottles, or enamel or lacquered tin cans. Partially seal glass jars. (Cap and tip tin cans). Sterilize 40 minutes if using a hot-water bath outfit; 30 minutes if using a water-seal or five-pound steam-pressure outfit; 25 minutes if using a pressure-cooker outfit.

**Vegetable Soup.**—Soak one-fourth of a pound of lima beans and one pound of rice for 12 hours. Cook one-half pound of pearl barley for two hours. Blanch one pound carrots, one pound of onions, one medium-sized potato, and one red pepper for three minutes and cold dip. Prepare the vegetables and cut into small cubes. Mix thoroughly lima beans, rice, barley, carrots, onions, potato, red pepper. Fill glass jars or the enameled tin cans three-fourths full of the above mixture of vegetables and cereals. Make a smooth paste of one-half pound of wheat flour and blend in five gallons of soup stock. Boil three minutes and add four ounces of salt. Pour this



stock over vegetables and fill cans. Partially seal glass jars. (Cap and tip tin cans). Sterilize 90 minutes if using hot-water bath outfit; 75 minutes if using a water-seal or five-pound steam-pressure outfit; 45 minutes if using a pressure-cooker outfit.

**Cream of Pea Soup.**—Soak eight pounds of dry peas over night. Cook until soft. Mash fine. Add the mashed peas to five and a half gallons of soup stock and bring to boil. Pass the boiling liquid through a fine sieve. Make a smooth paste of one-half pound of flour and add paste, 10 ounces of sugar, and three ounces of salt to the soup stock. Cook until soup begins to thicken. Pack in glass jars or tin cans. Partially seal glass jars. (Cap and tip tin cans). Process 90 minutes if using a hot-water bath outfit; 80 minutes if using a water-seal outfit; 70 minutes if using a five-pound steam-pressure outfit; 45 minutes if using a pressure-cooker outfit.

**Cream of Potato Soup.**—Boil one and one-half pounds of potatoes, sliced thin, and five gallons of soup stock for ten minutes. Add three ounces of salt, one-fourth teaspoonful of pepper, and one-half pound of butter, and boil slowly for five minutes. Make three tablespoonfuls of flour into smooth paste and add to the above. Cook three minutes and pack in glass jars or tin cans while hot. Partially seal glass jars. (Cap and tip tin cans). Sterilize 90 minutes if using a hot-water bath outfit; 75 minutes if using a water-seal outfit; 65 minutes if using a five-pound steam-pressure outfit; 45 minutes if using a pressure-cooker outfit.

**Bean Soup.**—Soak three pounds of beans 12 hours in cold water. Cut two pounds of ham meat into quarter-inch cubes and place in a small sack. Place the beans, ham, and four gallons of water in a kettle and boil slowly until the beans are very soft. Remove the ham and beans from the liquor and mash the beans fine. Return the ham and mashed beans to the liquor and add five gallons of soup stock and seasoning, and bring to a boil. Fill into glass jars and tin cans while hot. Partially seal glass jars. (Cap and tip tin cans). Process two hours if using a hot-water bath outfit; 90 minutes if using a water-seal outfit; 75 minutes if using a five-pound steam-pressure outfit; 60 minutes if using a pressure-cooker outfit.

#### HONEY BREADS.

**Brown Bread.**—Mix one-half cup of honey and one and a half cups of sour milk or buttermilk, add three cups of graham flour and one teaspoon of soda. Beat well and turn into a well greased pan and bake in a moderate oven. Nuts and raisins may be added if desired.

**Soft Gingerbread.**—Cream one-half cup of butter, add gradually one-half cup of sugar and beat until it is very creamy; then add one cup of extracted honey, and two teaspoons of soda dissolved in one cup of boiling water. Mix and sift one teaspoon each of cloves, ginger, cinnamon, and two and one-half cups of flour; combine with first mixture, then add two well-beaten eggs. Pour into shallow pans and bake in a moderate oven.

**Honey Muffins.**—Sift together four times, two teaspoons of baking-powder, one-half teaspoon of salt, and two cups of flour; add the yolks of two eggs well-beaten and one and one-fourth cups of cream. Beat well, then fold in lightly the stiffly beaten whites of two eggs. Bake in well-greased muffin pans and serve hot with butter.

A sharp-pointed stick, a wooden skewer or orange stick will do nicely, will be found convenient during the cherry season. Puncture the end of the fruit opposite the stem end and press gently. Pits will be dislodged easily with little loss of juice and the meat of the cherry will not be torn to pieces.—M. P. W.

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# Farm Commerce.

## Standardizing Farm Grain

THE cost of marketing grains should be reduced through the standardization of these products. For this reason the act recently passed by Congress which provides for the standardizing of grain shipped in interstate or foreign commerce should have the careful attention of all producers of cereal crops.

The act authorizes the Secretary of Agriculture to investigate the handling and grading of grain and to establish, as soon as may be, standards for corn, wheat, rye, oats, barley, flaxseed and other grains. Not less than 90 days' public notice must be given in advance of the date on which any such standard becomes effective.

Whenever such standards are established for any grain, the act forbids the shipment or delivery for shipment, in interstate or foreign commerce originating in the United States, of any such grain which is sold, offered for sale, or consigned for sale by grade, unless it is inspected and graded by a licensed inspector, either at the place of shipment, at a point in transit, or at the destination. In case no licensed inspector is located either at the point of shipment or at the point of destination, the grain may be shipped without inspection, in which event either party to the transaction may refer any dispute as to the grade to the Secretary of Agriculture.

When grain shipped or delivered for shipment in interstate or foreign commerce is required to be inspected and graded by a licensed inspector, it is made unlawful for any person to represent that it is of a grade other than that stated in a certificate issued in compliance with the act.

### Shipment by Sample Permitted.

The act permits the shipment in interstate or foreign commerce of grain sold by sample or by type, or under any description which is not false and misleading and does not include any of the terms of the official grain standards.

The Secretary of Agriculture is authorized to examine grain that has been certified to conform to any grade of the official grain standards, or that has been shipped in interstate or foreign commerce. If, after an opportunity for hearing has been given to the interested parties it is determined that any such grain has been incorrectly certified or has been sold under a name, description, or designation which is false or misleading, he may publish his findings.

### Right of Appeal.

When grain shipped in interstate or foreign commerce has been inspected as required by the act, any interested party may, either with or without reinspection, appeal the question of its grade to the Secretary of Agriculture. The Secretary of Agriculture is authorized to determine the true grade of the grain, and his findings are made prima facie evidence of that fact in suits between the parties in federal courts. Reasonable fees may be charged for hearing disputes and appeals. When appeals are sustained, such fees are to be refunded. Every person employed to inspect and grade grain for shipment in interstate or foreign commerce is prohibited from certifying the grain according to the official grain standards, unless he holds an unsuspended and unrevoked license issued by the Secretary of Agriculture.

### Licensing Inspectors.

Any person who presents satisfactory evidence of competency may be licensed as an inspector under the act. In states which have, or may hereafter, have state grain inspection depart-

ments, the Secretary of Agriculture is required to issue licenses to persons authorized and employed to inspect and grade grain under the laws of such states. Licensed inspectors and persons employed by the Secretary of Agriculture for carrying out the provisions of the act are prohibited from having any interest in any grain elevator or warehouse, or in the merchandising of grain, or from being employed by any person owning or operating any grain elevator or warehouse. Licensed inspectors are required to keep records of all grain inspected by them and to make detailed reports to the Secretary of Agriculture. The licensed of any inspector found to be incompetent, or to have issued any false certificate of grade, or otherwise to have violated any provision of the act, may be suspended or revoked by the Secretary of Agriculture.

### Penalties.

Any licensed inspector who knowingly inspects or grades improperly grain shipped in interstate or foreign commerce, or knowingly gives any false certificate of grade, or accepts a bribe

product of inferior quality will receive a lower return.

"The beneficial influences upon agriculture of a uniform system of grading staple crop products will be very great through the financial incentive afforded the farmer to improve the quality of his product by the careful selection of varieties, skillful culture, and adequate and effective methods of harvesting, handling, and protecting it while in his hands."

### FARMERS' CO-OPERATIVE BUSINESS ENTERPRISES.

"When the local dealers were asking \$12 a bushel for clover seed, we sold it to the farmers for \$9.50, and then cleared a profit of \$1 on each bushel," said Stephen Everson, president of one of the numerous northwestern grain elevators. "We bought binder twine at the state prison and sold it to the farmers at a reduced price, and gave work to the convicts." The co-operative spirit is bearing fruit in this section of the country.

Just over the state line, in St. Croix county, Wis., the farmers have recently organized a co-operative wool house, in addition to several successful community plans. While wool was bringing 20½ cents on the open market, the organization sold it at 24 cents. At some points where the farmers were not working together, as low as 18 cents was offered and paid.

There is only one privately owned

young, and a community center furnished at each principal town in St. Croix county.

New York.

EARL W. GAGE.

### THE MARKETING PROBLEM.

The city retail market at Ludington, after a few days' trial, has been closed. The city market at Jackson, with its new buildings and stalls, is not proving a great success. Other places have tried it out and failed. It is a big problem that the United States, the states, many organizations and individuals are struggling to solve.

Meantime the food problem in cities is growing more acute all the time and city consumers are suffering as much or even more, than are the producers, through a faulty and expensive marketing system. Some day the big city must help to feed its people by opening free terminal depots for all farm supplies, making the road from farm to table short.

Why would not something of this sort work out: Let the farmers of a community—not too large—get together. Let this association open a central depot in the nearest city, placing in charge a specialist, a successful commission man perhaps, one skilled in grading, packing and shipping, and posted on local and outside prices.

This depot ought to handle almost everything that grows on the farm and be open every business day of the year. It is true that farm stuff is miscellaneous and farmers raise a dab of this and a dab of that. Possibly it would take a genius to assemble and handle this stuff satisfactorily but with the swift growth of cities there ought to be a quick market for everything that is grown, with gluts rare.

Trade seems to be growing more localized, with each section supplying its own people and fewer long and overlapping and expensive shipments. One sees this among the greenhouse people here. Formerly Grand Rapids sent large quantities of lettuce and other stuff to Cincinnati and elsewhere, but now these sections are raising their own stuff largely and Grand Rapids must find new markets in the smaller towns near home.

The marketing problem has not and perhaps never will be fully solved. It may be one of the teasing things, like poverty, that is always with us to provoke us to effort and keep our muscles supple.

Kent Co.

ALMOND GRIFFEN.



Clean Land Reduces Cost of Production.

for neglect or improper performance of duty, may also be punished by fine or imprisonment or both.

Similar punishment may be imposed upon other persons who violate certain portions of the act, particularly those with reference to the inspection by licensed inspectors of grain shipped in interstate or foreign commerce.

An appropriation of \$250,000 is made for the enforcement of the act.

The necessary rules and regulations will be prepared and published at the earliest possible date, in order that persons interested may have an opportunity to become familiar with them before any of the standards become effective.

### Objects Sought in the Act.

The benefits which the act seeks to confer are described in the language used in the annual report of 1914 of the Secretary of Agriculture with particular reference to the establishment of standards for corn:

" \* \* \* Grades for that grain \* \* \* if generally adopted and uniformly applied throughout the country, will simplify the relations between producers, dealers, and consumers. Under these grades, fairly used, the grower or shipper of a superior quality of grain will be in a position to demand from the buyer the fair value to which the quality of his product entitles him. On the other hand, the producer of a

creamery and one cheese factory in this county. One-half of the grain elevators are owned by the farmers, and have a great influence over prices paid by independent companies. The farm business is carried on through local and county societies, the creameries and cheese factories having been organized and taken over, as well as the elevators. The Baldwin Farmers' Creamery Company, owned by the county society, is second largest in the world, doing an annual business of approximately \$260,000.

Hudson is the county seat, and here is located the new packing house. The co-operative plant at La Crosse, Wis., was formerly selling bacon to the butchers here for 19 cents, for which the Hudson farmers later paid 30 cents. For this reason the packing plant was built. Many of the farmers take their meat to the packing house for butchering, and buy it as cheaply already dressed as they could perform the work themselves. The product is also uniform so that it can be sold to the larger markets.

The county organization is upon a business basis. No one controls the management; the farmer holding a single share has as much voice as the one with ten shares. An initiation fee of \$2 is charged to join the social society, and the dues are \$2 per year. Social affairs include lecture courses, exhibitions, fairs, prize contests for old and

### CO-OPERATION IN MICHIGAN.

The recently organized Millburg Fruit Growers' Association has been brought into existence for the express purpose of marketing the 1916 peach crop in the northern part of Berrien county. The association already has a membership of fifty, and among the fifty are some of the best fruit men in the section. The motto of the organization is "Better Fruit for Better Money, and a Square Deal for All." The peaches of the members will be delivered at a central packing house where the fruit will be graded and packed in a manner that will be above question.

The Ludington Milk Dealers' Association has been formed under the leadership of the Mason County Agricultural Agent. The membership of the organization includes all the men producing milk for city use. The object of the association is to standardize the product and to get the milk distributing business on a basis that will yield satisfaction to all concerned. The president of the organization is C. A. Adams, and secretary, Frank Urban.

Shares of stock are being sold by the Tri-State Co-operative Association, located at Montgomery in Hillsdale county, to secure the funds with which to erect a creamery. The Tri-State was organized nearly two years ago for the purpose of marketing the live stock of the farmers in the Montgomery section. Last year it did business to the amount of \$120,000 and the business was so well done and at such a small expense that a policy of expansion is being adopted. Farm supplies are being bought in quantity at a great saving. Among the commodities that have been handled are feed, salt, fertilizer, fence posts, seeds, coal, binder twine, etc. The association owns land



adjoining the railway right of way, which land with building upon same is valued at \$1,000. This property is free from debt. It is now planned to erect a creamery by the side of the warehouse and take up the manufacture of butter. Already better than a thousand dollars has been subscribed toward the enterprise and over a thousand cows have been pledged.

The managers of four of the fruit exchanges in the southwestern Michigan section met at Hartford the other day and adopted grading rules for peaches for the current season. There are to be but two grades, namely those ranging in size from one and three-fourths to two and one-fourth inches in diameter and those larger than two and one-fourth inches. The managers also decided to spend a little money advertising their high-grade peaches.

The Mason County Fruit & Produce Exchange, with headquarters at Ludington, is considering setting aside a penny a bushel on peaches sold as an advertising fund to use in the future in extending the fame of the Mason county product.

The Wolverine Co-operative Nursery Co., which is one of the big carlot fruit shippers of the state, is completing the details for putting certified grapes on the market next month. The specifications for this grade of grapes are as follows: "Fancy Table: Grapes that the mature, sound, clean, of ripe color, practically free from rot, mildew, mold, diseases and insects, true to name for variety indicated, medium to large berries, bunches well formed and compact. Packages of legal size and full weight." Certificates will be issued for each carload of this top-notch fruit."

Ingham Co. R. H. ELSWORTH.

#### WITH THE MICHIGAN FRUIT GROWERS.

The four co-operative exchanges of Van Buren county fruit growers and farmers, located at South Haven, Bangor, Covert and Hartford, were represented at a recent meeting held at the packing house of the Hartford exchange, and the presidents of the four associations were appointed as a committee to form plans for an extensive advertising campaign to push the sale of Van Buren county fruit. The expense of this publicity will be borne equally by the associations and through co-operating advertising it is expected that the demand for the superior fruit of that section, especially peaches and apples, will be greatly stimulated. This advertising campaign will probably open the way for a federation of the county associations, with a central agency for packing and marketing the crop.

Peaches are beginning to move in the Hartford district and the yield this year is estimated at 60 per cent of normal. There is a fair showing of the early varieties and the Elbertas may do a little better than 60 per cent. Duchess apples have brought an average of around \$4 a barrel. There are 34 local growers in the Hartford exchange.

A number of the apple growers in the Bangor territory have sold their fruit to Chicago houses at prices around \$2.40 per barrel for winter varieties. Some orchards of choice varieties brought a little more money and some growers are holding for \$2.75. Some pears have been contracted for at \$1 to \$1.40 per bushel and peaches at 90 cents to \$1.

The grape crop in the Lawton district is estimated at 1,200 cars, against over 3,000 cars some years. Prospects indicate higher prices and it is predicted that wine grapes will bring as high as \$35 per ton f. o. b. Michigan. The quality of the fruit is excellent.

The Summit Growers' and Shippers' Association of Mason county expects to ship 25,000 bushels of peaches from the Ludington warehouse this season and market prospects are excellent. Oscar Hawley will have charge of the grading and packing and the high standard of Blue Brand peaches will be maintained. The flavor of Mason county peaches is fine this year.

Cherry shipments from Traverse City alone will probably reach at least 225 solid cars, which hangs up a new record there. In 1913 240 cars were shipped from that region, but the figures included shipments from Frankfort and other points. And the growers are getting more money for their cherries than they did in 1913. More of the fruit is being used at home by the canneries so that the total yield is safely ahead of any previous year.

#### HAVE YOU A PARCEL POST MARKET?

Many small farmers are finding the parcel post route a good marketing avenue for their surplus eggs, butter,

poultry and other products. The Michigan Farmer is anxious to help any of its subscribers in this direction. Should you desire to undertake marketing by parcel post in the city of Detroit and have no customers, send us your name and address stating products you have for sale, and we will see that the information is put before well-to-do families with the request that they write to you about prices, arrangements for shipping, etc. This service is free to both our new and old subscribers. Address your communication to the Farm Commerce Dept., Michigan Farmer, Detroit.

#### Crop and Market Notes.

##### Michigan.

**Eaton Co., Aug. 31.**—The hot dry weather still prevails. Grain threshing is about two-thirds done and wheat is yielding around 20 bushels per acre and oats 40 bushels. The bean situation it is estimated will yield from two to six bushels per acre. The high price being offered will overcome much of this handicap. There will not be enough potatoes raised here for local use. Sugar beets are poor on account of dry weather at the crucial time in their growth. Corn is looking fair. There is no fruit to speak of. Wheat \$1.45; rye \$1.12; oats 42c; beans \$5; potatoes \$1.25; hay \$10@12; eggs 22c; butter 24c.

**Lapeer Co., Aug. 28.**—We had a large yield of hay that was secured in first-class condition. Threshing is in progress and wheat yields range up to 25 bushels per acre. The condition of corn varies, some fields are excellent while others will mature little corn. The outlook for potatoes is not very encouraging, but few fields estimated up to 100 bushels. There is only occasionally a good field of beans. Sugar beets are a fair crop. Rain has been scarce here since June 26. Pastures have dried up and farmers are feeding their stock. Fruit prospects are fair. Milk 5c per quart; butter-fat 30c; eggs 23c; butter 26c; potatoes \$1.50.

**Saginaw Co., Aug. 28.**—Hay was a fair crop in this locality, yielding around one ton per acre for timothy with clover and alfalfa somewhat heavier. The second crop of alfalfa is poor but ready to cut. Wheat, oats and rye are being threshed with wheat yielding around 20 bushels per acre. Pastures are poor. The fruit crop is light. Wheat \$1.46; oats 49c; corn 80c; beans \$4.50; eggs 26c; butter-fat 32½c; potatoes \$1.25 per bushel.

**Kalkaska Co., Aug. 25.**—After the hottest and driest July and August on record, the temperature has fallen to 65 degrees, and we have had rains which have benefited crops considerably. Both corn and beans are promising in this county. Potatoes are not doing well. Wheat was a normal crop and oats are light. A heavy crop of hay was secured. Cattle 5@7c; hogs 8c; butter-fat 32c.

##### Pennsylvania.

**Lancaster Co., Aug. 24.**—The yield of hay, clover and alfalfa especially was large. There were also good wheat and oat crops. Threshing is now in progress. Corn is in excellent condition, and potatoes have attained splendid growth. The fruit yield will be fair. Prices generally are good. Eggs are selling at 27c.

##### Missouri.

**Phelps Co., Aug. 23.**—While scattering showers have brought relief, practically the entire county is in need of rain, with the exception of the low land. Hay has proven the best crop in the history of the county and no doubt but what it will go a long way toward making up the shortage that there will be in the corn crop this year. Clover and alfalfa are also good. Oats was the best grain crop raised and is yielding around 25 bushels. Wheat and rye were short and corn will be about a two-thirds crop. Wheat is averaging about seven to nine bushels per acre and rye is a little better than wheat. Potatoes are very few. Early potatoes were very good. Beans are a good crop and other garden products are only fair, due to the fact that we have had very little rain. Apples are very small, but it seems that there will be a good yield. Very few peaches and other fruit, with the exception of grapes and they are plentiful. No plowing has been done for wheat on account of the ground being so dry and then they are trying to prevent the Hessian fly this fall. Wheat \$1.12; potatoes \$1; hogs \$9.50; butter 19c; hens 13c; spring chickens 14c; roosters 8c; turkeys, old 20c; young 30c; ducks 8@10c; geese 5@7c; guineas 25c each; hides per pound 9@16c; wool 14@35c.

Energetic men whether they work or whether they play put their strength into the work and their strength into the play.—Ruskin.



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This illustrated book shows the improved method of clearing land, subsoiling, draining, tree-planting, etc. It explains how any farmer can grow bigger and better crops, and how Atlas Farm Powder can be made to replace expensive labor for many farm operations.

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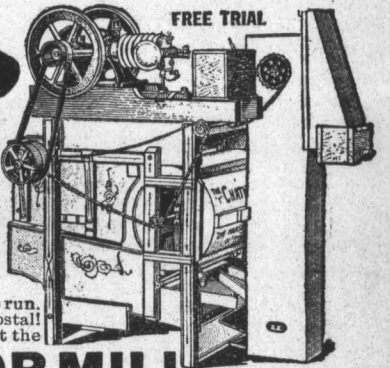
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Easiest terms you ever saw. Free trial—no money down. Not a cent till it makes good. That's it! Clean and grade your Fall wheat seed, your market grain, your grass seed. Increase your crops, your profits. Cut out docking. Thousands are doing it!

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The Appleton was the first successful husker. Appletons made years ago are giving good service today. Few parts, made extra strong, mean long life, few repairs and positive dependability.

#### GUARANTEED TO DO MORE WORK WITH LESS POWER

than any husker of equal size. Appleton husks cleanest, shells least; has most efficient corn saver. Cuts or shreds leaves and stalks while husking ears. Fodder value saved from small acreage pays its cost. Easiest, safest to operate. Works in all conditions of corn.

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#### Husker book free!

Describes four sizes for engines of 4 h.p. and up. Shows why it pays to handle corn this way. Write today.



#### BOYS WATCH.

Every boy, young or old, would be proud to carry one of these watches. It is 16 size, with a nickel case. Stem set and wind. Regular watch movement with hair spring. Guaranteed by the makers and repaired free of charge for one year, if given ordinary care. Any boy who really wants a watch can easily earn one in one afternoon.

The watch alone free for sending three subscriptions to the Michigan Farmer at 50c each.



# Markets.

## GRAINS AND SEEDS.

September 5, 1916.

**Wheat.**—Following the season's new high record in wheat prices made a week ago, values declined and now rule on a lower basis. Political affairs in Europe and the threatened railroad strike in this country were largely responsible for the weakness. Now that the railway strike has at least been deferred by the action of Congress, and a better understanding is had of the problems still confronting the Allies in Europe before they can open up the Russian wheat stores for use in the western countries, prices have already regained some of the loss. Notwithstanding the high prices ruling, primary receipts are scarcely as large as they were a year ago. European countries are also buying liberally, which with the almost complete failure of the spring wheat crop, ought to hold prices near or above the present basis. A year ago No. 2 red wheat was quoted locally at \$1.07½ per bushel. Last week's Detroit quotations were:

	No. 2	No. 1	Dec.
Wednesday	1.43½	1.38½	1.50½
Thursday	1.46½	1.41½	1.53
Friday	1.44½	1.39½	1.49½
Saturday	1.48	1.43	1.53
Monday			
Tuesday	1.52½	1.47½	1.57½

Chicago.—Sept. wheat \$1.51¼; Dec. \$1.53; May \$1.54.

**Corn.**—Corn values have not suffered in the same proportion as wheat, due in part to the broad general demand for this grain. Some export business is also being done and there is considerable commission house buying. The crop is developing under moderately favorable circumstances. One year ago No. 3 corn was quoted at 79c per bushel. Detroit's last week's quotations were:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	88½	90
Thursday	88½	90
Friday	88½	90
Saturday	88½	90
Monday		
Tuesday	89	90½

Chicago.—September corn 88c; Dec. 76c; May 79¼c.

**Oats.**—An announcement that the British government had taken a million bushels from the American continent developed independent strength in the oat deal and aided this market in advancing prices in the face of lower values for wheat and corn. A year ago standard oats were quoted at 38c per bushel. Detroit's quotations last week were:

	Standard.	No. 3
		White.
Wednesday	49	48½
Thursday	49	48½
Friday	49	48½
Saturday	49	48½
Monday	49	48½
Tuesday	49½	49

Chicago.—September oats 46¾c per bushel; Dec. 49½c; May 52¾c.

**Rye.**—A further advance of three cents was made for rye, placing the price for No. 2 spot at \$1.23 per bu.

**Beans.**—The possibility of an unprecedented short yield of beans in Michigan and other bean producing states has urged dealers to bid up for the legume. The price now being offered for October delivery is \$5 per bushel, while immediate shipment is quoted at \$5.75. The Chicago market quotes Michigan hand-picked pea beans at \$6; red kidneys \$5@5.50.

**Seeds.**—Prime spot clover seed at \$8.75; do. alsike \$9.40; prime timothy \$2.50 per bushel.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$7.70; seconds \$7.50; straight \$7.80; spring patent \$8.10; rye flour \$6.30 per bbl.

**Feed.**—In 100-lb. sacks, jobbing lots are: Bran \$25; standard middlings \$26; fine middlings \$30; cracked corn \$36; corn and oat crop \$32 per ton.

**Hay.**—(New) No. 1 timothy \$14@15; standard timothy \$13.50@14; light mixed \$13@14; No. 2 timothy \$12@13; No. 1 mixed \$11@12; No. 1 clover \$8@10 per ton.

**Straw.**—Rye straw \$7.50@8; wheat and oat straw \$6.50@7 per ton.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Higher values are ruling in this trade and the market is very firm at the new schedule. Price changes are likely to be in the upward direc-

tion. Creamery extras 31c; firsts 30c; packing stock 22½c; dairy 23c.

Elgin.—Prices are 1c higher with the market ruling firm at 31½c.

Chicago.—Although the market here is suffering somewhat from the interruption caused by the threatened railroad strike, the trade is firm with quotations a fraction higher. Extra creameries 31½c; extra firsts 31c; firsts 28@30c; seconds 26@27½c.

**Eggs.**—Receipts are only fair and prices are higher. Fresh receipts, firsts, cases included, 27c; current receipts 24c.

Chicago.—The market is steady to firm with prices above those of last week. Fresh firsts 25½@26c; ordinary do. 24@24½c; miscellaneous lots cases included 20@25c.

New York.—Prices higher and market firm. Fresh gathered extra fine 35@36c; extra firsts 34c; firsts 31@33c.

**Poultry.**—All poultry values are higher with the market active. No. 1 broilers 23@24c; No. 2 do 21@22c; fancy hens 18@19c; medium do 17½@18c; No. 2 do 16@17c; ducks 15@18c; geese 12@18c.

Chicago.—Although the trade here was easier on Saturday, prices ruled above those of a week ago. Roosters 12c; small to good weight fowls 14@17c; spring turkeys 30c; fair to good turkeys 25c; thin and poor do 15c; geese 12c; ducks 13@15c.

## FRUITS AND VEGETABLES.

**Apples.**—The bulk of apple receipts at Detroit are quoted on the wholesale market at \$2.50@3.50 per bbl. or 75c@1.25 per bushel with the trade fairly active. At Chicago business is fairly good with the best grades quoted as steady. Barrel stuff rules from \$2.75@4.50 for No. 1 stock, and \$1.50@2 for No. 2. Fancy apples in baskets range from 85c@1.25; ordinary and No. 2 quality 50@75c.

**Peaches.**—Detroit prices \$1.50@2.50 per bushel. At Chicago offerings are small with the trade fairly well supplied. Michigan white peaches are selling in six-basket cases at 75c@1.25; Elbertas \$1@1.25; Champions \$1.50. One-third bushel round baskets Michigan stock 60c; one-fifth bushel do. 15@25c.

**Pears.**—The Chicago market is easy and supply ample. Barreled stock, No. 1 Bartletts \$4@4.50; other stock \$2.75@4. At Detroit Bartletts are quoted at \$1.75@1.85 per bushel; Clapp's Favorite \$1.25@1.50 per bushel.

**Plums.**—There is a fair supply here with offerings going at \$2@2.50 per bushel. Chicago also reports a good stock of this fruit and Michigan offerings are quoted at \$1 in bushel baskets.

## WOOL AND HIDES.

With dealers in woolen goods looking for a large business this fall, there is little chance for prices to work below the present basis. But few manufacturing concerns have large stocks on hand which will necessitate their going into the market for supplies which will keep up wool values. Unfortunately most of the clip has been sold out of farmers' hands, and the advance from now on will accrue to the dealers. Unwashed delaines sold last week at 36c; do three-eighths blood at 42c per lb.

**Hides.**—No. 1 cured 19c; No. 1 green 16c; No. 1 cured bulls 14c; No. 1 green bulls 12c; No. 1 cured veal kip 23c; No. 1 green veal kip 18c; No. 1 cured murrain 18c; No. 1 green murrain 16c; No. 1 cured calf 29c; No. 1 green calf 27c; No. 1 horsehides \$5.50; No. 2 horsehides \$4; No. 2 hides 1c and No. 2 kip and calf 1½c lower than the above; sheepskins, as to amount of wool, 50c@1.25.

## LIVE STOCK MARKETS.

### Buffalo.

September 4, 1916.

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

Receipts here today as follows: Cattle 139 cars; hogs 48 d. d.; sheep 10 d. d.; calves 350 head.

With 139 cars of cattle here today, the trade was absolutely rotten on everything except a few extra good yearlings and a few cows, the bulk of the cattle selling 50c per cwt. lower than a week ago today. The big packers did not have anybody here at all to buy any shipping cattle and they had a heavy run in Jersey, making it impossible to get any orders from there. We look for a very mean trade the balance of the week and will have to have a very light run here next Monday if we get any improvement in this trade.

Our receipts of hogs today were very light, footing up about 48 double decks including practically all of Saturday's supply. Owing to that fact that one load of hogs was sold here Saturday at \$11.35, the bulk all went over until today and prices were full strong with

Saturday bids. Best grades of hogs sold at \$11.50, and then down to \$11.25, as to weight and quality, the stronger weight hogs taking the lead in price. Pigs and lights, as to weight and quality, \$10.50@10.75. Roughs generally \$9.75; stags \$7.50@8.50. All the good grades of hogs sold at the close, but some pigs going over unsold.

Sheep receipts were light again today, and prices were about steady with the close of last week. Prospects lower last of week. We quote: Best spg lambs \$11.50@11.75; cull to common lambs \$9@11; yearlings \$7@9; bucks \$5.50@6.50; ewes \$7@7.50; cull sheep \$3.50@5.50; wethers \$7.75@8; top veals \$13.75@14; heavy \$9@11.50; common and light \$10@12; grassers \$5.50@7.

### Chicago.

September 4, 1916.

Cattle. Hogs. Sheep.

Receipts today.. 6,000 13,000 12,000  
Same day 1915.. 17,289 28,086 8,601  
Last week..... 67,711 167,543 107,928  
Same wk 1915.. 43,517 108,758 85,599

Shipments from here last week embraced 17,118 hogs and 31,837 sheep, comparing with 16,257 hogs and 21,488 sheep a week earlier and 25,117 hogs and 4,863 sheep a year ago. Hogs received last week averaged in weight 234 lbs. At the week's close from 12,000 to 14,000 cattle were left over in the stock yards and 21,577 hogs by exact count. That made good supplies of cattle and hogs for today, although fresh supplies of both were unusually small. The cattle market was not very active for the greater part of the offerings, with no particular improvement in prices, but choice beefs were very scarce and much higher. The best sale reported consisted of two cars of fancy steers averaging 1,754 lbs. at \$11.50. Hogs had a liberal advance, with sales at \$10@11.30. Fat sheep and lambs were higher, some prime native lambs fetching \$10.40, an advance of 15c. The best range lambs offered brought \$10.50, but prime lots would probably have sold as high as \$10.75, at which price a sale was made late Friday of 1,289 head of Wyoming 79-lb. lambs, while late the same day 2,746 head of Idaho lambs brought \$10.50.

Cattle prices shot up last week from \$1 to \$1.50 per 100 pounds, because of unusually small receipts, following the bad breaks in values a week earlier and an uncommonly animated general demand brought out by fears that the great railroad strike would take place on Labor Day. Prices climbed so fast that it was difficult to send out reports giving reliable figures. Quotations for cattle were the highest seen this year, with choice beefs salable at \$11 and upward, while any good lots brought \$10 and over. Medium grade steers were purchased at \$9 and upward, fair light-weight killers \$8 and over, ordinary thin grass-fed lots \$6.50 and upward. Shippers were fair buyers until Thursday as no live stock would be accepted for shipment east thereafter until the railway strike was settled. Butcher stock participated in the boom in prices, with cows taken at \$5.75@8.50 and heifers at \$5.50@10.35. Cutters sold at \$5.10@5.70, canners at \$4@5.05 and bulls at \$5@8.25. Stocker and feeder prices ruled firm at \$5.25@8. There was an active calf trade, especially in the good to prime light vealers, which brought \$11.60@12.50 per 100 lbs., the heavier calves going at \$5 and upward. Western range steers were offered in fair numbers on the big days and sold mainly at \$6.75@8.60, quality being only fair as a rule. The week closed with many cattle left unsold, the Saturday receipts being about 11,000 head, instead of the usual receipts of a few hundred head. They were largely consigned direct to the packers, and prices were mostly nominal, with \$11.25 the top price for the prime heavy steers, which was paid the day before.

Hogs were in extremely lively demand last week. Increasing receipts failed to check the growing strength in the market, and values made new high records for the year. Prime light and butcher weights topped the market, and choice heavy hogs sold at a marked discount, or about 20c below top quotations. At the week's high time prime hogs made the highest record in history by selling at \$11.55 per 100 lbs., but the following day a sensational decline took place, because of expected settlement of the threatened strike, and the best sold before noon down to around \$11.10. The commonest hogs have sold about \$1.30 below top prices. Top Saturday was \$11.

Lambs, yearlings and sheep showed substantial advances in prices last week under the influence of an active general demand. Within a short time the ranges have been marketing fat lambs and feeding lambs much more freely, and both kinds have met with a lively demand, with not enough of the latter to go around. The same is

true of breeding ewes, which have brought record prices. Lambs sold at \$8@11.25, feeding range lambs at \$9@10, yearlings at \$6.50@8.50, wethers at \$6.75@7.75, ewes at \$3.50@7.75, breeding ewes at \$7.50@10.50 and bucks at \$5@5.50. On Friday the market experienced a sensational decline in prices along with cattle and hogs. At the week's close top lambs brought \$10.50.

Horses were marketed much more liberally last week than usual but prices were maintained firmly. Inferior horses sold as low as \$50@75, while drivers with any quality sold at \$100@200. Wagon horses sold at \$75@200, the best expressers at \$200@210 and feeders of quality at \$165@240. Desirable weighty drafters sold on the basis of \$240@285.

## IMPORTANT TO BEAN GROWERS.

The second annual meeting of the Michigan Bean Growers' Association will be held at Grand Rapids, Wednesday and Thursday, September 13-14, 1916, probably at the Court House, where notice will be posted if any change is made.

The recent spectacular collapse in cattle prices was due to suddenly unexpected vastly increased receipts, there being more than the Chicago packers could care for on such short notice. If country shippers take warning from the recent bad breaks, following a glutted market, values may be expected to return to their previous high levels, but a repetition of 65,000 receipts of cattle in a week would be fatal.

## Farms and Farm Lands For Sale

**PROSPERITY IN CANADA**—\$900,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average \$24 and will not exceed \$35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from \$11 to \$30 per acre; irrigated lands from \$35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privileges of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to \$2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready-made farms for sale. Special easy terms. Loans for livestock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of \$1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 125 Ninth Ave., Calgary, Alberta, Canada.

## FOR SALE BIG FARM BARGAIN FLINT, MICH.

For sale 80 acre farm. Splendid soil, 70 acres under cultivation, 8 room house, 2 large barns, silo, cow barn has cement floor and steel stanchions for 16 head. Everything in good condition, price \$150 acre, this farm is likely to double in value in a few years as it is within 6 miles of Flint. Good reason for selling, no trades, must be cash. Address F. W. 305, Bowles Bldg., Detroit, Mich.

## McClure-Stevens Land CO.

Successors to A. J. Stevens & Co. Established 1883. Farm, Fruit and Stock Lands. We own 18000 acres of choice unimproved land in Gladwin and Clare counties. Sold on easy payments. Interest 6 per cent. Write for information.

## Gladwin, Michigan

## New Land,

In Gladwin and Midland Counties, Michigan. Well located, low prices and easy terms. Staffed Bros. (owners), 15 Merrill Bldg., Saginaw, (westside), Mich.

## "ACRES OF OPPORTUNITIES."

An illustrated booklet FREE. Michigan has hundreds of thousands of acres of virgin land. \$5 an acre up. Healthful climate. Growing season for all crops. Ample rainfall. Write, W. P. HARTMAN, A. & I. Agent, Room 332, Grand Rapids & Indiana Railway, Grand Rapids, Michigan.

**FOR SALE**—Farm of 150 acres of clay loam soil. 2 houses, 2 large basement barns, hog and hen house shop and ice house, tool shed, 2 wells, 6 miles from Ann Arbor, ½ mile from R. R. stop. A splendid stock farm. Cheap at \$70 acre. E. O. Outwater, Ann Arbor, Mich., R. T.

**FOR SALE** I am offering my farm 150 acres Broome Co., N. Y. \$4500 easy terms. Excellent location, very desirable for ambitious young couple. Particulars address Edd. C. Kirk, Harpursville, Broome Co., N. Y., R. D. 1.

**For Sale:** Fruit farm and Summer home at Bower's Harbor. Ideal location on Grand Traverse Bay, 11 miles from Traverse City, with 1500 fruit trees, 1000 in bearing. New barn and garage. Full equipment, stock and implements. H. J. BUTTS, Traverse City, R. F. D. 1.

**200 Acres:** Fertile loam soil, good buildings & etc, state roads. Near station and city, low price, easy terms. Dr. D. A. MacLachlan, 1301 Majestic Bldg., Detroit, Mich.

**FOR SALE** 140-Acre Farm—2 miles from Coldwater, Mich. House and barn, good land. Carmel R. Smith, Niles, Mich.



## THIS IS THE LAST EDITION.

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

## DETROIT LIVE STOCK MARKET.

## Thursday's Market.

September 7, 1916.

## Cattle.

Receipts 2028. The threatened railway strike of last week did not seem to make any great difference in the receipts of cattle this week and they were about normal for the first week in September. The quality was common, there being a large number of cows and thin butchers in the receipts and some that would not weigh 500 and should never have been marketed in their present condition. Pasture must be scarce to send such cattle from the farm.

The market was more active than last week but prices were no higher than the close, a few more buyers were on hand for stockers and some went back to the farm. Good milch cows are bringing good prices here at present and are wanted, as high as \$90 being paid this week. The close was steady as follows: Best heavy steers \$8@8.50; best handy weight butcher steers \$7.25@7.75; mixed steers and heifers \$6.75@7; handy light butchers \$6@6.50; light butchers \$5.75@6; best cows \$6@6.50; butcher cows \$5.50@5.75; common cows \$4.50@5; canners \$3.50@4.25; best heavy bulls \$6@6.50; bologna bulls \$5.50@5.75; stock bulls \$4.50@5; feeders \$6.50@7; stockers \$5.50@6.50; milkers and springers \$50@90.

Bishop, B. & H. sold Fineman 10 butchers av 715 at \$5; to Golden 7 do av 523 at \$5.35; to Parker, W. & Co. 11 cows av 875 at \$4.50, 9 do av 925 at \$4.25; to Hammond, S. & Co. 16 steers av 977 at \$7.40, 3 do av 783 at \$6, 2 cow and bull av 890 at \$5, 2 bulls av 1300 at \$6.25, 2 do av 1150 at \$6.25; to Ratner 4 cows av 917 at \$5.40; to Nagle P. Co. 1 do wgh 1080 at \$5, 2 butchers av 825 at \$7, 4 do av 1030 at \$6.25; to Ratner 9 do av 561 at \$5.40; to Rattkowsky 4 do av 915 at \$5.50; to Goose 5 cows av 840 at \$5; to Nagle P. Co. 20 steers av 1162 at \$7.65; to Parker, W. & Co. 23 butchers av 455 at \$5.50, 18 do av 775 at \$5.75, 3 do av 950 at \$4; to Bernfeldt 10 do av 687 at \$5.40; to Denton 26 do av 975 at \$6.70; to Mason B. Co. 8 steers av 986 at \$7.50; to Nagle P. Co. 1 bull wgh 1770 at \$6.50, 1 do wgh 1070 at \$5.75, 1 do wgh 1350 at \$6.40, 1 do wgh 1350 at \$6.25; to Hammond, S. & Co. 4 do av 1350 at \$6.25, 2 steers av 1250 at \$7.50, 4 do av 887 at \$6.25; to Sullivan P. Co. 3 cows av 1113 at \$5.60, 4 butchers av 855 at \$5.75; to Schlack 5 steers av 902 at \$7.35, 6 do av 880 at \$6.90.

Haley & M. sold Mason B. Co. 9 butchers av 741 at \$6.10, 2 heifers av 660 at \$5.50; to Brighton D. M. Co. 3 steers av 847 at \$6.40, 3 cows av 1037 at \$6.10, 1 do wgh 940 at \$6; to Mich. B. Co. 28 steers av 1080 at \$7.25; to Resnick 5 do av 780 at \$6.70; to Mason B. Co. 17 butchers av 611 at \$5.25, 9 do av 752 at \$6.10, 2 do av 660 at \$5.50; Veal Calves.

Receipts 640. The veal calf trade was active at last week's prices for good grades bringing \$12@13; heavy \$6@8.50. Quite a large number of heavy coarse grades were in the receipts and are slow sellers.

Haley & M. sold Parker, W. & Co. 5 av 165 at \$13, 16 av 155 at \$13, 8 av 225 at \$12.25, 7 av 180 at \$12.50, 5 av 185 at \$12.50; to Rattkowsky 2 av 165 at \$13.50; to Goose 7 av 350 at \$6; to Kastner 7 av 250 at \$10; to Rattkowsky 2 av 170 at \$13.

## Sheep and Lambs.

Receipts. 4061. The sheep and lamb trade was steady with Wednesday. Lambs a trifle higher than they were a week ago. The best brought \$10.50; sheep steady; the close was a trifle slow but steady. Best lambs \$10.50; fair lambs \$9.50@10; light to common lambs \$8@9; fair to good sheep \$6@6.50; culls and common \$4@5.

Erwin, S. & J. sold Thompson 32 lambs av 75 at \$10.35, 39 do av 65 at \$10.25, 9 do av 75 at \$10; to Mich. B. Co. 13 do av 55 at \$6.50; to Nagle P. Co. 17 sheep av 100 at \$5.75; to Mich. B. Co. 47 lambs av 75 at \$10.35, 29 do av 75 at \$10; to Greene 30 do av 73 at \$10.50, 14 sheep av 115 at \$6.25; to Thompson 15 lambs av 55 at \$8, 42 do av 70 at \$10.25.

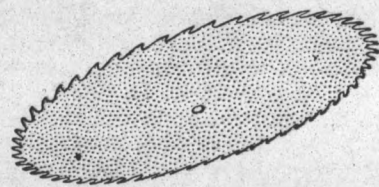
## Hogs.

Receipts 5810. In the hog division the quality was badly mixed, there being a large number of light pigs in the Sandel, S. B. & G. sold Thompson 91 lambs av 65 at \$9.75, 4 sheep av 105 at \$5.75.

The Market was steady at Wednesday's prices but trifle slow. Prices are so high that packers use great care in sorting. Pigs \$8@9.50; yorkers and heavy \$10.50@11.



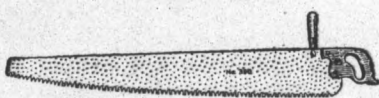
**Cross-Cut Saws** bearing the Atkins name cut 25% faster than others because "Segment-Ground" Blades are thicker on tooth-edge than back—thinnest at center of back. Cut at top shows our No. 5 "Perfection" Four cutting teeth and raker. A famous saw for hardwoods. Cut at bottom shows No. 540 "Rex." Two cutting teeth and raker. Known wherever quality is appreciated.



**Circular Saws**—made either with solid or inserted teeth, any size—all of Silver Steel. Atkins circular saws are best for the small mill—they do not need refiling so often. Silver Steel files easily, but is exceedingly hard and tough. Almost impossible to crack it unless the saw is improperly set or adjusted.



**Hand Saws.** Atkins Silver Steel hand saws are the only kind giving you choice of two handles on the same blade. "Perfection" handle is most scientifically hung—balance is thrown on toothed edge. "Old Style" is the same your grandfather used. Blades are Silver Steel—the best made. We make hand saws for any purpose, any length or size of tooth.



**One-Man Saws.** Cut shows No. 390. This is fully as fine in quality of steel and finish as our very best cross-cuts. Tuttle Tooth pattern, two cutting teeth and raker. Blades carefully ground, producing uniform thickness so it runs free and easy.



**Butcher Saws.** No. 77 shown. Frame has a flat back, square edge, made of fine spring steel. Beech handle with sanded sides and varnished edges. It is a revelation to see how this saw works in comparison to the cheap inferior kind.

**EFFICIENCY** is the order of the day. Fast, clean work with the best of tools is the mark of the successful farmer. Of all the time-wasters and muscle-killers ever invented, the worst is a cheap, worthless saw. It pays to get a good saw—it is like money in the bank. The best saws for every purpose are

## Atkins Silver Steel Saws

Each one is sold under this broad and positive guaranty: "If you buy an Atkins saw and it does not prove thoroughly satisfactory—in every respect—take it to your dealer and get a new saw or your money back—every red cent of it back if you want it."

It is an unlimited guaranty. We have unlimited confidence in our product. For over sixty years we have been making saws—nothing but saws and saw tools—and they are truly "the finest on earth." Made of steel as fine as razor steel, tempered by a process that makes the saw hold its perfect edge under the most trying conditions. Ground so that they will not stick even in wet lumber, and cut smoothly and easily in all kinds of wood.

In this ad we show some popular saws for the farm. If the kind of saw you want is not shown, remember we make a saw for every purpose—and it's the best of its kind. Demand the genuine Atkins Silver Steel Saws of your dealer. Atkins Saws are never sold under any other brand. Our name, E. C. Atkins & Co., is on every blade. If your dealer hasn't them, and won't get them for you promptly, please write us and we will see that you are supplied.

## Repairs

Many times you have discarded cross-cut saws or circular saws because teeth were broken or some other minor accident has occurred which you could not fix. At each of our factory branches we have facilities for repairs. Thousands of Atkins saw owners take advantage of our repair shops. It is part of the Atkins idea—to give not only the best saw for the money, but also unlimited service at a fair price.

## Free

We have valuable information on the care of saws and practical time and money saving short cuts in farm carpentry in our booklet "The Saw on the Farm." We will send this to you free. For fifteen cents in stamps we will include a handy canvas carpenter's apron with double stitched nail pockets. Send for Free Offer "J" to receive the apron and the book—a most complete showing of saws for farm usage.

Branches at Memphis, Atlanta, New Orleans, Chicago, New York, Seattle, Minneapolis, Vancouver, San Francisco, Portland and Hamilton, Canada.

## E. C. Atkins & Company, Inc.

World's Largest Saw Company, Indianapolis, Ind.

### Poland China Spring Pigs

Our herd sire was Champion and Grand Champion at the State Fair last fall. Our sows are great big, stretchy, splendid individuals, with best breeding. Pigs from such matings will please you. Get our prices.

#### HILLCREST FARM

KALAMAZOO, MICH.

FOR SALE, P. C. Sows, "Big Type" bred for Sept. farrow. Extra good 7 months bore. March and April pigs. S. O. B. Minorcas. R. W. Mills, Saline, Mich.

**Large Type P. C.** Glits and sows. Bred for Mar. and Apr. farrow. Sired by Big Des Moines, Big Knox Jr., and Giant Defender. Bred to Big Knox Jr. Smooth W under 3 and Big Jumbo, four great best boars in state. Come or write. W. E. Livingston, Farms, Mich.

**Big Type P. C.**—100 pigs of Mar. and Apr. farrow. B either sex, sired by Big Type King Tesemeyer A. Wonder Jr. and Mow's Big Bone. We pay exp. charges and record free. W. Brewbaker & Sons, Elsie, Mich.

**For Sale Poland Chinas** either sex, all ages. Something good at a low price. P. D. Long, R. F. D. No. 8, Grand Rapids, Mich.

**Large Type P. C. Sows & Glits** all sold. Have 3 extra good spring boars. Sired by Big Defender. W. J. HAGELSHAW, Augusta, Michigan.

**BIG TYPE POLAND CHINA** Spring boars that will please you, priced right. G. W. HOLTON, Route 11, Kalamazoo Michigan.

**Large Stiled** Poland China Pigs, either sex, pairs not akin. Oxford sheep, both sex and Short-horn Bulls. ROBERT NEVE, Pierson, Michigan.

**GROWTHY THE DISEASE PROLIFIC "MULEFOOT" RESIST- PROFITABLE HOG ING**

FOUNDATION STOCK FROM BEST BLOOD OF BREED

**THE CAHILL FARMS**

KALAMAZOO - - - MICHIGAN

**HAMPSHIRE SWINE** Spring Pigs, registered. John W. Snyder, R. 4, St. Johns, Mich.

H. H. Halladay O. H. Halladay & Son  
Breeder of Hampshire Swine.  
Write your wants. Clinton, Mich.

**Hampshire Swine** Bred sows and glits for August and September farrows. Spring pigs, both sex. FLOYD MYERS, R. No. 9, Decatur, Ind.

#### HAMPSHIRE

Boars, sows, glits and pigs. Choice stock. A. E. BACON & SON, Sheridan, Michigan.

## SHEEP.

#### SHROPSHIRE

I will be at the State Fair with 20 field rams. All are for sale and are a better bunch than has been seen in Detroit in recent years. KOPE-KON Farms. S. L. WING, Prop'r. Kinderhook, Mich.

**The Ingleside Farm** will not make a show of Shropshires at the fairs this fall but has a good supply of registered rams and breeding ewes for sale. If you are in need of any Shropshires, let us know. H. E. POWELL, Ionia, Mich.

**For Registered Shropshire** Rams, Yearling or Lambs write or call on Armstrong Bros., R. No. 3, Fowlerville, Mich.

**Shropshires,** Ram Lambs and Yearling Rams, also a few good ewes to offer. M. A. BRAY, OKEMOS, (Ingham Co.) Mich.

**Oxford Down Sheep.** Good yearling field Rams and ewes of all ages for sale. M. F. GANSSLEY, Lennon, Michigan.

**Leicesters**—Yearling and ram lambs from Champion flock of Thumb of Mich. Also select Berkshire swine. Elmhurst Stock Farm, Almont, Mich.

## HORSES

**Percherons, Holsteins, Angus, Shropshires, Durocs** DORR D. BUELL, Elmira, Michigan.

**FOR SALE**—Registered Percheron Stallions, Mares and Fillies at reasonable prices. Inspection invited. F. L. KING & SON, Charlotte, Mich.

**PERCHERONS** Yearling and weanling stud colts. Duroc pigs, either sex. E. J. ALDRICH, Tekonsha, Cal. Co., Mich., Bell Phone.

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Poultry, Live or Dressed, Dressed Hogs, Calves, Sheep and Eggs. Reference, Peninsular Savings Bank, Sullivan Packing Co. Shipments Solicited. Satisfaction Guaranteed.

**Farmers:** We are now paying from three to nine cts. above the highest Official Detroit Market Quotation for eggs, shipped to us by express. Write us for information. It will pay you. AMERICAN BUTTER & CHEESE CO., Detroit, Mich.

**HAY** Ship To The Old Reliable House Daniel McCaffrey's Sons Co., 623-625 Wabash Bldg., Pittsburgh Pa.

**FRUIT** HIGHEST MARKET PRICE Quick Returns. Write for Stencil. Ship Direct to E. L. RICHMOND CO., Detroit.

**TIMOTHY A. ALSYKE** \$3.50 Per bu. 45 lbs. Bags extra at 29c each. Send us your order. Young-Randolph Seed Co. Owosso, Michigan.

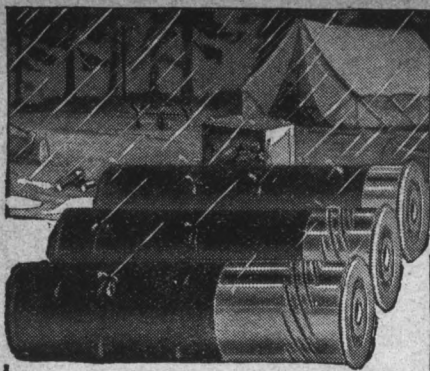
**WHEAT** No. 1 Red Champion, the wonder wheat from the east, guaranteed to increase your yields. For prices and samples write W. J. MERRIAM, Almont, Michigan.

**RED WAVE** and Red Prize, Red American, Banner White, 1 bu. \$1.80, ten bu. \$17.50, cleaned, sacked free on board cars Dryden, Mich. Frank Bartlett.

**CIDER** Canvas and rubber belting, ho. c. tanks and oils. Catalog 85 B. NATIONAL SUPPLY CO., CLEVELAND, OHIO

**RATS** They cannot resist eating Maxline Rat Killer. After eating they die outside. Sold in collapsible tube. No danger in handling. Ask your dealer for it or send 25c in stamps to MAXLINE PRODUCTS CO., City Mills, Mass.





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When out hunting you always run a chance of getting your shells wet. Before starting out this year, test the waterproofing of

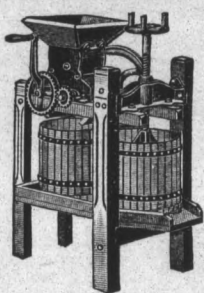


You can have sample Black Shells free for this test and for other tests we will tell you about.

Write your name and address and also that of your ammunition dealer on the margin of this advertisement. Tear out the advertisement and send it to us. We will send you directions for making the test and an order on your dealer for 3 shells, free, from his stock. The information you will get will make your next hunt a better one.

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Made in Four Sizes and Prices. Hand and Power

FORCE FEED	JUNIOR
\$7.15	\$9.63
2 Barrels per Day.	4 Barrels per Day.
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\$12.58	\$17.25
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Red Cross Mfg. Co., Bluffton, Ind.  
Satisfaction Guaranteed or Money Refunded.



## Stop Crop Destruction

Solve the drainage problem. Write for free book and letters from hundreds of farmers telling what they do with the Martin.



**Farm Ditcher and Road Grader**  
cuts ditches, throws up terraces, levels bumps, fills gullies, makes levees, builds roads. All-steel, adjustable and reversible for wide and narrow cutting. 10 days' trial. Money back guarantee.

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Most economical and satisfactory way of handling your corn crop. No delay, no extra help. Do it in your own spare time. Two sizes for individual use, 6 to 15 h. p. Also make three larger sizes for custom work. Over 20 years in the field. Write for catalog and Free Farmers Account Book. State h. p. of your engine.

**SOLD ON TRIAL** YOU TAKE NO RISK  
ROSENTHAL CORN HUSKER CO. Box 2 Milwaukee, Wis.  
Also Makers of Feed Cutters and Silo Fillers

## Beans at \$6 Per Bushel

Must all be saved. "The Original Miller Bean Harvester" has led all other makes for 40 years. See your dealer or write

**LE ROY PLOW COMPANY,**  
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**A Good Opportunity** for a number of young men to work on Drill-Presses, Drilling Machines and also to learn operating Screw Machines. Good wages and permanent positions for live wires. Address **General Aluminum & Brass Mfg. Co.** Detroit, Michigan.

When Writing to Advertisers Please Mention The Michigan Farmer.

# Net Weight Requirements

By FLOYD W. ROBISON

AT the time of the passage of the federal food and drugs act—the act of June 30, 1906—there were certain developments which had not been anticipated. No provision was made in this act for a statement on the label of packages of the net weight content. In fact, it was scarcely considered at that time the province of a food law to require the manufacturer to place upon his packages the statement of their net contents.

### Special Size Packages.

It was early observed, however, that a far-reaching abuse was the creation by the manufacturer of special size packages—packages which were not the standard size in weight or in the measure of their contents. The standard sizes for liquid had been gallons and half gallons, quarts and pints and in the case of extracts, etc., liquid ounce packages. Certain manufacturers began putting on the market packages which were not gallon and half-gallon, quarts and pints, but which were several ounces under the gallon and one or two ounces under the quart, claiming that they were selling these products by the package and not by weight or measure.

Nevertheless, frequent investigations have shown that when consumers would go into stores to buy packages of these commodities they would call for a gallon of syrup for instance, and get a package which was several ounces short of a true gallon, and when they called for a quart or a pint, the product furnished them did not measure up to the full capacity demanded. The defense of the dealer would, in this case, be the same as the defense of the manufacturer, namely, that he was selling an approximate package without any definite content. To remedy this evil it became necessary for Congress to pass a net weight law which required the manufacturer to stamp upon the package, the exact net contents by weight or measure of the product he was selling. In this way when a consumer went to the market to purchase this commodity she would know at once by the weight stamped upon the label whether she was getting the quantity she had demanded.

### Is a Slab of Bacon Wrapped in Paper a Package,

It seems that this would be sufficient in so far as acquainting the consumer with information about the product bought but certain manufacturers have not been willing to consider the consumer's right to have this information consequently the net weight law has not been as fully enforced along the lines contemplated by Congress in passing the act, as was to be hoped. One of the abuses which official interpretation has permitted has been the exemption of certain types of packages because there has been an opportunity to exempt them on the technicality of the definition of the word "package."

### Technical Law Enforcement is Wrong in Principle.

We do not believe in the technical enforcement of law. We are not interested in the prosecution of technical violations of the law and on the other hand, we do not believe in the permitting of an abuse which a law has been created to correct simply because some legal interpretation declares that the law technically does not cover that product. It is impossible to provide any machinery for law enforcement which eliminates the responsibility and intelligence of the executive vested with the enforcement of that law. Officials have tried to make law enforcement automatic in this respect. It cannot be done and deal justly with our people. Law enforcement must always be, to secure justice, tempered by reason and thus in a sense discretionary with the executive vested with its enforcement.

We appreciate that this is not an easy thing to contemplate and it is not at all in line with some reformers' ideas of law enforcement and dealing with food products and their accessories. We believe we are absolutely right in our statement that much discretion must be left to the dairy and food commissioner in charge of the enforcement of the law and with other executive officials so charged. The officials in charge of the enforcement of the net weight provision, guided, no doubt, by judicial interpretation, decided that a ham wrapped in paper or in a cloth sack, as it is wrapped by the packer, is not a package under the net weight law which requires a statement as to its net weight content. It seems to us that a decision on this matter should have been governed not by a court opinion as to what constitutes a package, but by a consideration of the evil which the law was created to correct. There is no inherent difficulty in the way of stamping the net weight on a ham or upon the package containing the ham. It is no greater difficulty than is involved in the stamping of the net weight on a bottle of tomato soup or on a bottle of pickles or on any other container, likewise, it is just as important that the consumer should know how much real meat is contained in a package of ham as how much real food is contained in a can of corn. The only possible excuse for viewing it otherwise, is technical law enforcement. In this case we believe a commissioner's duty to be to rule that all packages are packages under the law and to consider the thing uppermost in the mind of the legislature at the time of passing the act.

### An Official Should Ask Himself the Question, Has Injustice been Done?

There is no law which can govern the technical cases if technicalities are permitted to be introduced, and this works just as well on the other side and it is just as much, in our opinion, the duty of the commissioner to inquire into whether an injustice has been perpetrated when he is asked to prosecute an individual, even though that individual is guilty of a technical violation of law. For instance, the law plainly states that no milk shall be sold which is below three per cent in milk fat. Now there is plenty of milk which is absolutely pure milk which does not contain three per cent of fat, and technically that milk cannot be legally sold in the markets of the state. But it will make good butter, and when bought on a butter-fat basis no one is injured, and we contend that a sensible public official will appreciate that the law did not contemplate the prosecution of any such case.

### Net Weight Should be the Commonly Understood Measure.

Another provision which those vested in the enforcement of the net weight law permitted was that syrup manufacturers might print the net contents of their packages in terms of pounds and ounces instead of gallons and fractions of gallons. It seems to us that here is another ruling which practically amounts to permitting a real violation of law. We agree with Commissioner Helme when he says: "From time immemorial consumers have bought syrup by the quart and gallon. Did you ever hear of a consumer going into a store and asking for two pounds of molasses? How many consumers know how many pounds in a gallon of syrup? We believe that the net weight law was intended and created to correct a real abuse and that it was expected that when the net weight was placed upon the label it should be the net weight or measure which custom has provided, and therefore on a can of syrup or a can of molasses or a bottle of vinegar, substances which are commonly purchas-

ed by volume, not by weight, the net contents should be printed in pints, quarts or gallons and not in pounds and ounces.

In our opinion it is just as absurd to print on a gallon can of syrup its contents in pounds and ounces, as it would be to print on a ham its contents in quarts and gallons. The purpose of the law is to furnish real information to the consumer or buyer and any system devised by the manufacturer and permitted by official sanction which is foreign to accepted customs and with which the consumer is not familiar in connection with that commodity, in our opinion is not conforming to the purpose of the act. In all these laws let the official ask himself every time the question: "What evil is this law created to correct and then act according to the answer which he himself can give."

### The Michigan Law.

An Act to provide for the weight per bushel, of certain grain, dried fruit, coal, vegetables and products.

(4900) Sec. 1. The People of the State of Michigan Enact, that whenever wheat, rye, shelled corn, corn on the cob, corn meal, oats, buckwheat, beans, cloverseed, timothy seed, flax seed, hemp seed, millet seed, blue grass seed, red-top seed, barley, dried apples, dried peaches, potatoes, potatoes (sweet), onions, turnips, peas, cranberries, dried plums, castor beans, salt, mineral coal, Hungarian grass seed, orchard grass seed, osage orange seed, shall be sold by the bushel, and no special agreement as to the measure or weight thereof shall be made by the parties, the measure thereof shall be ascertained by weight and shall be computed as follows, viz.:

- Sixty pounds for a bushel of wheat.
- Fifty-six pounds for a bushel of rye.
- Fifty-six pounds for a bushel of shelled corn.
- Seventy pounds for a bushel of corn on the cob.
- Fifty pounds for a bushel of corn meal.
- Thirty-two pounds for a bushel of oats.
- Forty-eight pounds for a bushel of buckwheat.
- Sixty pounds for a bushel of beans.
- Sixty pounds for a bushel of clover seed.
- Forty-five pounds for a bushel of timothy seed.
- Fifty-six pounds for a bushel of flax seed.
- Forty-four pounds for a bushel of hemp seed.
- Fifty pounds for a bushel of millet or Hungarian grass seed.
- Fourteen pounds for a bushel of blue grass seed.
- Fourteen pounds for a bushel of red-top seed.
- Forty-eight pounds for a bushel of barley.
- Twenty-two pounds for a bushel of dried apples.
- Twenty-eight pounds for a bushel of dried peaches.
- Sixty pounds for a bushel of potatoes.
- Fifty-six pounds for a bushel of sweet potatoes.
- Fifty-four pounds for a bushel of onions.
- Fifty-eight pounds for a bushel of turnips.
- Sixty pounds for a bushel of peas.
- Forty pounds for a bushel of cranberries.
- Twenty-eight pounds for a bushel of dried plums.
- Forty-six pounds for a bushel of castor beans.
- Fifty-six pounds for a bushel of Michigan salt.
- Eighty pounds for a bushel of mineral coal.
- Fourteen pounds for a bushel of orchard grass seed.
- Thirty-three pounds for a bushel of osage orange seed.



## Farmers' Clubs

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

President—R. J. Robb, Mason.  
Vice-president—C. B. Scully, Almont.  
Secretary and Treasurer—Mrs. J. S. Brown, Howell.

Directors—Alfred Allen, Mason; C. T. Hainline, Alma; W. K. Crafts, Grass Lake; Edward Burke, St. Johns; Mrs. C. J. Reed, Spring Arbor; Roy E. Moore, Bellevue.

Address all communications relative to the organization of new Clubs to Mrs. J. S. Brown, Howell, Mich.

### PURE-BRED VS. NATIVE STOCK.

Paper read before the Tuscola County Association of Farmers' Clubs by B. B. Reavey.

At first I considered this question rather one-sided but as 90 per cent of the farmers practice the negative side of this question I thought it might be well for me to write a few lines in favor of the affirmative side or the other 10 per cent of farmers.

In order to make a success of any vocation we should have an ideal in view and work for that ideal. Our success will depend on how high we set our ideal and how near we reach it.

If we wish to raise any kind of stock we should have in mind an ideal type of horse, cow, sheep or hog of some recognized breed. If you wish to raise horses, select the breed that nearest meets your ideal and stick to the one breed. If defects are found in any breed select individuals to overcome these defects in the breed and never cross with any other breed to overcome defects or improve.

The fact that an animal is pure-bred denotes that for many generations back there has been no intermingling of foreign blood. It denotes purity of blood but not degree of quality. By the intentional mating of poor individuals for a number of generations it would be possible to develop ill-formed individuals. Anyone who will take the time and trouble to study the pedigree of famous families in almost any line of stock breeding, will find that the foundation blood is intensely line bred or inbred. When a certain family or strain is developed by judicious line breeding for a few generations it becomes fixed in its characteristics to a certain degree and becomes as it were, almost a breed within a breed. It is evident, then, that it is not sufficient to confine our selections to the limits of the breed, but we must draw the line closer and make our selections from certain families or strains that come nearest to meeting our ideal or needs. To cross two well defined families may be almost like crossing two breeds and while there is a chance of their nicking well and producing something of superior excellence the chances are very much against it. A violent outcross of this kind is always more or less of a gamble; the results cannot be predicted with any degree of certainty. The great advantage of pure-bred line breeding is that the results can be predicted almost with certainty, and when improvement is secured, it is backed up by the most powerful hereditary influence obtainable, because of the strength and simplicity of the ancestry, which, if the selection has been good all pulls in the same direction. The records of all breeds will show the pronounced results that have been obtained by pure-bred line breeding. Most of the breeds have been bred more than a century with a definite purpose in view and how near the ideal has been attained is shown by the distinguished individuals that stand as milestones along the line of the history of the respective breeds.

While grading is far better and more profitable than clinging to the natives, the act of substituting a grade for one that is pure-bred, would be like taking

an uncertainty for the equal of a known certainty.

### Advantages of Community Breeding.

If 50 per cent of the farmers in this county had selected one breed of horses 20 years ago and stuck to that breed until now, they would have been known the world over and buyers would have known where to come to find this particular breed. Today it is almost impossible to find two horses that resemble each other, either for size, color, conformation or disposition. An ideal team of either registered Percherons, Belgians or Clydes perfectly mated would sell today for \$1000 quicker than most of our native teams at \$200. Therefore there must be some difference in registered and native grade horses.

With cattle it can be proved beyond a doubt that there is a vast difference.

Ohio Experiment Station Herd (circular No. 135) increased by use of a pure-bred sire the average production of seven daughters, 1,299 pounds of milk and 40 pounds of butter-fat per year above their dams, 40 pounds of butter-fat per year above that of their lams for six years, average productive period) for cows would be 1,680 pounds of fat at 30 cents would be \$504. Seven daughters from the same cows and a grade sire of different breeding showed a decrease of 45 pounds of butter and 700 pounds of milk per year below that of their dams, or a decrease of \$567, making the immediate difference in money value of these two sires \$1,071 just on the offspring from seven cows in two years.

Twenty years ago it was thought impossible for a cow to make 30 pounds of butter in seven days but today there are hundreds of cows that have made this, and there are now seven cows that have made over 40 pounds of butter in seven days and given as high as 7.29 pounds of butter and 138 pounds of milk in one day. The world's yearly record now is over 1,500 pounds of butter and 30,000 pounds of milk for one year.

These records are all beyond the reach of the average farmer but they show what can be done by persistent pure-bred line breeding, just for production, but that is not the real value of a pure-bred animal; the real value of a pure-bred animal is its transmitting qualities or the power to transmit its good qualities to its offspring. This is what puts degree in pedigree and is being considered more today by intelligent breeders, than fine looking individuals.

I would like to mention a few of the individuals with degree in their pedigree and show what they have done and what they sell for, but you might think I was promoting some particular breed. I have said nothing but what would apply to all breeds. The only thing to remember is that we can not make a success of two things at the same time. It does not make much difference what you decide on doing, only make a success of it and do it a little better than someone else and the world will soon know it.

A large corporation recently advertised for an expert in a certain line at \$2,500 per year but received no reply. They then advertised for a man that could do several things, including the job they wanted the expert for, at \$40 per month and they received over a dozen applications.

Success in any vocation comes to those who put energy and work into it and remember:

'Tis the coward who quits to misfortune,

'Tis the knave who changes each day,

'Tis the fool who wins half the battle, Then throws all his chances away.

There is little in life but labor, And tomorrow may find that a dream;

Success is the bride of Endeavor, And luck—but a meteor's gleam.

The time to succeed is when others, Discouraged, show traces of tire; The battle is fought on the home-stretch—

And won—twixt the flag and the wire!

## Grange.

### STATE GRANGE OFFICERS.

Master—John C. Ketcham, Hastings.  
Overseer—C. H. Bramble, Tecumseh.  
Lecturer—Dora H. Stockman, Lansing.

Secretary—Jennie Buell, Ann Arbor.  
Treasurer—Frank Coward, Bronson.  
Executive Committee—C. S. Bartlett, Pontiac; Geo. B. Horton, Fruit Ridge; J. W. Hutchins, Hanover; W. F. Taylor, Shelby; Wm. H. Welsh, Sault Ste. Marie; N. P. Hull, Dimondale; Burr Lincoln, Harbor Beach.

### GRATIOT COUNTY POMONA MEETING.

Gratiot County Pomona Grange met with Pleasant Valley Grange on August 12. The morning dawned bright and pleasant and a goodly number from different parts of the county were in attendance. A short business session was held in the forenoon, after which an excellent dinner was served by the Pleasant Valley Aid Society. The public exercises of the day were opened with recitations by Doris Muscott and Ruth Edmunds.

Grant M. Morse, of Portland, then spoke on "Conservation of Our Natural Resources." This was a plea for the protection of the birds, fish, timber and other natural resources of Michigan. A song by Pleasant Valley Grange and music by Mr. and Mrs. Converse and son, were greatly enjoyed.

We then listened to a short and to-the-point paper by Mrs. Nichols, of Riverdale, whose subject was "In what way are we not an ideal nation?" Because of the evils we tolerate and because woman is not given her rightful place in politics.

Mrs. Dora Stockman, of Lansing, speaker of the day, now arrived and was given a most hearty welcome. Having only a short time to be with us she was given the floor and gave a stirring address in which, among other things, she said the Grange should have four wheels, economy, efficiency.

Along the lines of economy and efficiency she spoke of securing better marketing facilities that the farmer may get more for producing the product and not the middleman so much more in proportion for the selling of it.

The farmer should take more time for recreation, and mix in lots of fun with the hard work on the farm which will tend to keep the boys and girls on the farm.

The Grange should have a good steering wheel, which means good leaders, and a body large enough to take everybody along with us will provide for the success of the Grange in the future.

Mr. Converse sang, "I Am Just as Young as I Used to be," in a most pleasing manner and responded to an encore by telling a little story.

B. F. Muscott gave some good points on "Preparedness" of many kinds, such as tiling of land and the thorough preparation of soil before planting the seed.

The program closed with a dialogue given by Pleasant Valley Grange, "The Golden Wedding," which was greatly enjoyed by the audience.

The November meeting will be held at Riverdale and the outlook is for a large and interesting meeting.

### AMONG THE LIVE GRANGES.

**Children's Day.**—Plymouth Grange met August 4 for an all-day meeting, especially for the children. At noon about 50 children marched down to the dining-room and were served an excellent dinner. This was the annual meeting for the children. The entertainment which was given by them, consisted of songs, instrumental music and recitations, and was presented in a very creditable manner. It was enjoyed by old as well as young. The children's day meeting makes them feel as if they had a part to perform to help make life worth living, and the old made young again. There were about 100 members present.



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## The Laying Capacity of Fowls

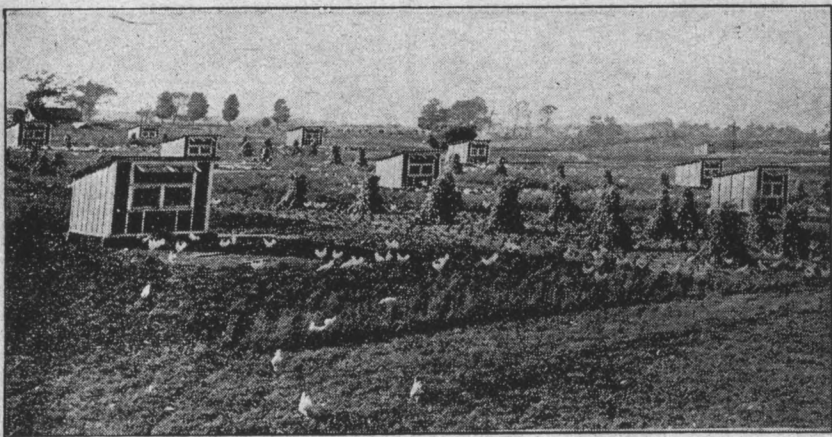
It has frequently been said that a reliable standard by which to judge the laying capacity of fowls, would be most welcome.

Many have scoffed at the idea that the width of certain bones, the location of certain bones, with respect to each other, or in other words, the "Hogan" system, should be a reliable means of selecting laying hens or aid in judging the laying capacity of fowls. Lately, however, reliable information appears to come close to substantiating this method. I expect to later report more definitely in regard to this.

What we want is a reliable standard by which to judge the laying capacity of fowls. At present it is needless to say, we have no such standard. However, work is now in progress at the Cornell University Poultry Department which is certainly leading in that direction. They have already paved the way for such a standard, by some of the following interesting facts established by thorough and reliable experiments. What we need, is more, just

can well be considered good layers, and undoubtedly deserve place in the breeding pen. This fact makes it possible to use the trap nest for a few months, and thus make it possible to select the good or best layers without going to the heavy expense of trap-nesting for a whole year.

Perhaps one of the safest and most reliable ways of judging the laying capacity of a fowl, is by trap-nesting for two years. The first year's production is very reliable as an indication of the productiveness of an individual. However in a few cases individuals, though low producers the first year, make good records the second year. These cases, however, are not very frequent. Sometimes it also happens that high producers the first year make a poor showing the second year, these also are exceptional cases. No doubt when possible it is advisable to get the average production for the first two years. The first two years' production is a better standard for the judging for the laying capacity of a fowl, than either



Making Good Use of the Land About the Colony Houses.

such work. It is work that cannot help but do an infinitely great amount of good.

### The Indications of a Good Layer.

By careful experimentation, but without yet having been subjected to the breed test, the following standards of measurement for judging the laying capacity of fowls were established:

The pullet commencing to lay early, shows a natural tendency towards egg production. She is a better layer than those commencing to lay very late. In other words, a Leghorn pullet beginning to lay at the age of six months, is a much better layer, than one beginning to produce at the age of eight months. Even those beginning to lay at seven months appear to be better layers than those commencing to lay at eight months. According to their experiments the average difference in production between a six and eight months beginning to lay pullet was 25 eggs in favor of the early layer per year.

The individuals with the highest egg production up to March 1, are considered the best layers, especially when this standard can be employed, upon pullets hatched at the same time. By this it apparently appears clear, that in selecting and breeding for egg production it is good practice to place in individuals laying regularly during November, December, January and February in the breeding pen. The November, December and January layers unquestionably are the ones you want in your breeding pen, if you are breeding for increased egg production. Not only will these lay the largest number of eggs in a year, but they lay them at a time of the year when one egg is worth two in the spring and summer. The winter egg production is a factor we should keep in mind when breeding for egg production.

### Early Layers Best.

Another very reliable standard by which to judge the laying capacity of fowls is the productivity up to ten months of age. Pullets laying well during the first ten months of their age,

the first or second year's production alone. I, however, doubt the advisability of doing this on account of the heavy expense.

### The Use of the Trap-nest.

The farmer, no doubt, cannot afford to trap-nest his layers for two years. It is too expensive. He can, however, bear in mind the few facts brought out in this article by which he can judge the laying capacity of an individual. He can use this information to advantage.

The professional poultryman, I believe, can well afford to trap-nest his layers for at least one year, and to pedigree hatch his chicks, and, in turn, trap-nest these. This will enable him to select the reproducers of high producers; and that, in reality, is what we want.

I should, however, make this statement; that the hen laying the largest number of eggs, is not always the most profitable. The hen that produces a dozen of eggs at the lowest possible cost, and produces at least a fair number during the fall and winter, when eggs are high in price, is the most preferable.

New York. F. W. KAZMEIER.

### A HEN THAT CROWED.

It is reported that the government hen which crowed has come to an untimely end. This Buff Orpington hen, hatched at the government experimental farm at Beltsville, Md., got herself into prominence by laying 110 eggs in her pullet year and then beginning to molt in August. Following the molt she began to develop the secondary sexual characters of the male; the tail feathers changed in appearance, the comb increased in size, the head came to look more like that of a cock, and the legs took on the redness characteristic of the male Buff Orpington. She was observed to crow several times; she occasionally visited the nest but never laid an egg. Later she was killed and dissection showed a large tumor which caused this change.

## Want Winter Eggs? Then Get Busy Now

Egg prices are rising—will soon reach the high point of the year. Winter eggs pay big profits, but you can't get them by wishing for them. Act! Have your hens laying well when eggs mean money. At this time every bird in your flock needs

### Pratts Poultry Regulator

the *Guaranteed Poultry Tonic and Conditioner*. A natural egg-maker—makes hens want to lay. It tones them up—increases appetite—assists digestion—stirs up the sluggish egg-producing organs—drives the hens to the nest—insures profits for you.

Pratts Poultry Regulator will keep your old hens laying steadily until they molt, then shorten the molt and hurry them back to work. It will push your pullets to early maturity, start them laying sooner than usual and keep them at it all winter.

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Pens of this 200 egg quality will cost as follows:

1 cockerel, 2 hens or pullets	\$9.00
1 cockerel, 4 hens or pullets	13.50
1 cockerel, 8 hens or pullets	22.50
1 cockerel, 12 hens or pullets	30.00
2 cockerels, 25 hens or pullets	60.00
3 cockerels, 50 hens or pullets	112.00
6 cockerels, 100 hens or pullets	210.00

These pens are properly mated. The cockerels are early hatched, the hens are laying and the pullets are ready to lay. Prices quoted are for September only, to reduce flock before placing in winter quarters. Regular prices are 25% higher. See page 8 of our catalog for particulars, or order direct from this ad.

All stock is shipped on approval. You can return within three days any birds not satisfactory and money will be refunded. We guarantee safe arrival any distance. (We will ship C. O. D. if you want to see the birds before paying for them. Send only \$1.50 for a pen of five and 20 cents each for large numbers to guarantee express charges.)

Free 32-page catalog gives more information than is possible in this ad. Contains photos showing 35 acres of White Leghorns; describes our methods of feed and care; how we improve laying qualities; list of winnings at 20 big shows; many letters from customers; prices of exhibition, breeding and laying stock, eggs for hatching and day-old chicks. Even if you are not now in the market for stock we will be glad to send you a copy. Mail a postal now while you have the matter in mind.

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BARRED Rocks Parks 200 Egg Strain with records to B 200 eggs a year—\$1.50 per 15 delivered. By Parcel post. Fred Astling, Constantine, Mich.

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GET YOUR ORDER IN EARLY FOR Cockerels from Cousins Northern King Strain Barred Rocks. Write David W. Cousins, North Port, Mich.

Buff Leghorns Exclusively. Now is the time to buy pure bred stock at a big reduction in price. Dr. William A. Smith, Petersburg, Michigan

JOHN'S Big Beautiful Barred Rocks are all hatched, developed quick, good layers, each \$3; pair \$5; sold on approval. Circulars, photos. John Northon, Clare, Mich.

FOR SALE Pure bred S. C. Buff Leghorns and white Plymouth Rock cockerels. Kletzen & Webster, Bath, Mich.

Fowlers' Buff Rocks: Prices reduced one on. Utility eggs \$3.75 for 15, \$1.50 for 30, \$2 for 50, \$3.50 for 100. R. B. FOWLER, Hartford, Mich.

Breeding Cockerels White, Brown, Buff and Black Leghorn, Barred Rocks, Rhode Island Reds. Prices Reasonable. Sunnybrook Poultry Farms, Hillsdale, Michigan.

ORPINGTONS: —White, Single-Comb Kellerstrass 8 wks. old chix Cockerels 75c., pullets \$1. up. M. E. THOMPSON, Redford, Mich

Pine Crest, S. C. White Orpingtons. Bargain 4 yearling hens and cock, \$8, \$12 and \$15, just one half what they will cost next spring. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Michigan.

300 R. I. RED HENS. Rose and Single Comb. Write for Price List. Sell your mongrels and buy pure bred R. I. Reds. INTERLAKES FARM, BOX 39, LAWRENCE, MICH.

Rose and Single Comb Reds, young and old, for sale. Correspondence as to your Red needs invited. JENNIE BUELL, Ann Arbor, R. 8, Michigan.

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Kulp and Gale strains \$2.50 per 100 eggs. Cockerels 50c each. CLAUDIA BETTS, Hillsdale, Mich.

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S. S. Hamburg Eggs reduced prices, balance of season. Free delivery. R. O. white Leghorn hens \$1.00, Belgian Hare Bucks \$5.00 with Pedigree. RIVERVIEW FARM, Vassar, Mich.

SILVER GOLDEN AND WHITE WYANDOTTES. Eggs from all matings, 150 per 15, \$2.50 per 30 until July 1st. C. W. Browning, R. 2, Portland, Mich.

White Wyandotte Cock & Cockerels. Eggs \$1.25, \$3, per 15, \$4 per 50, \$7 per 100. DAVID RAY, 202 Forest Ave., Ypsilanti, Michigan.

WHITE WYANDOTTES Eggs \$1.50 per 15, \$2.50 per 30, \$7.00 per 100. From choice stock. A. FRANKLIN SMITH, Ann Arbor, Michigan.

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#### FOX, COON, SKUNK, HOUNDS

Broke to gun and field, and guaranteed. Fox, coon & rabbit hound pups, from the best of stock—\$5.00 each. Stamp for photos. H. C. Lytle, Fredericksburg, Ohio.

PURE BRED SCOTCH COLLIE PUPS, Belgian Hares and R. and S. O. R. I. Reds for sale. Good quality, prices reasonable. O. E. Hawley, Ludington, Mich.

Fox Hounds of all ages, Skunk and Rabbit dogs, 500 Ferrets, send stamp. W. E. LECKY, Holmesville, Ohio.

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We have a choice lot of Bull-Calves, that are 6 to 12 months old and another crop coming. I will be pleased to have you visit our farm, where we have a stock show every day; we will also have a show herd at the Michigan State Fair. U. L. OLARK, Hunters Creek, Mich. SIDNEY SMITH, Manager.

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Guernsey Bulls of service age and calves from choice. Adv. reg. breeding. T. V. HICKS, Route 1, Battle Creek, Mich.

Guernsey (May Rose) Bull for sale, born Sept. 5, 1913. Splendid animal in every respect. Dam 520 lbs. fat class F. J. K. Blatchford, Auditorium Tower, Chicago, Ill.

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Average yearly production 422.3 lbs. of fat, three fourths of them making their records as two year olds. By the use of a pure bred sire, a big improvement can soon be attained if the right selection is made. The breeding of the Beach Farm Herd is as good as can be found, and we guarantee them to be free from contagious diseases and to be satisfactory in every way or money refunded. Write and let us tell you about them.

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## Veterinary.

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

**Rheumatism—Garget.**—Have a cow that freshened October 29, which has been stiff and seemingly rheumatic all summer. I also have another cow that has a mild attack of garget, but her udder is not in very good condition. C. E. G., Kalamazoo, Mich.—Give your cow a teaspoonful of powdered nitrate of potash at a dose once a day. Give your other cow a teaspoonful of hypophosphite of soda in feed or water twice a day. It is possible that the milk becomes loaded with bacteria after it is milked. Thorough cleanliness at milking time and the care of milk afterward will doubtless improve the condition of milk.

**Cows Cough.**—Some of my cows are inclined to cough and a few of them are growing worse, but all of them are in good condition. R. A. W., Akron, Mich.—Mix together equal parts powdered licorice, ginger, bicarbonate of soda, ground gentian and give them a tablespoonful or two at a dose in feed twice a day.

**Inflammation of Bowels.**—I am anxious to know what caused the death of my two calves. I first noticed them dumpish, refused to eat and would wobble when obliged to walk. First they were constipated, but later had scours. I might add that one of them drank milk 12 hours before it died. F. B., Manton, Mich.—Doubtless your calves died the result of inflammation of the bowels following constipation, scours and later an inflammation of the mucus membranes of the bowels. You failed to state the age of your calves; however, they were perhaps both incurable cases. By more careful feeding you will doubtless be able to prevent others getting sick. Furthermore, I would suggest that you clean and thoroughly disinfect your calf stable, or else you may expect just such results.

**Nodular Disease.**—Some time ago we had a flock of 50 sheep; they were all in good condition until a week ago when we found one dead; after that day they kept dying until now we have only 40 left. The only symptoms I can give you are there: The sheep act sick for a day or two, then become very thirsty, then drink lots of water and die. J. L. D., Dowagiac, Mich.—Mix together equal parts of salt, cooking soda, powdered charcoal and ground gentian and give each ewe or full grown sheep a teaspoonful at a dose once or twice a day.

**Rheumatism.**—I have a five-year-old mare that started to give milk about eight weeks ago and for one week she was quite stiff in one hind leg, unable to lift foot off the floor. Whatever the soreness was, it appeared to shift from one leg to the other about every 24 hours. Her legs are swollen. This mare has never had a colt and is not with foal. F. M. W., Gaylord, Mich.—Give your mare 1 dr. of powdered sulphate iron, 1 dr. ground nuxvomica and 1 dr. acetate of potash at a dose in feed three times a day. Hand-rub swollen legs, bandage them in cotton, leaving bandages on for a few hours every day, and be sure that she has exercise, either by allowing her to run on grass or walking her.

**Hernia—Piles.**—I have a bunch of shoats ranging in weight from 60 to 80 pounds each; when one of them was castrated a bunch appeared which is perhaps a rupture and two of the others are troubled with piles. E. K., Mendon, Mich.—I am inclined to believe that if the hernia is producing no pain, you had better leave him alone until it does, then there would be time enough to treat the case surgically, which is not a difficult operation and usually successful. Dissolve 1 oz. of sugar of lead, 1 oz. of powdered alum and 1 oz. of tannic acid in three pints of clean water and apply to piles twice a day. In many cases piles can only be relieved or remedied by a surgical operation.

**Indigestion.**—I have three young horses which I have fed corn, oats and mixed hay; they have done hard work all summer up to four weeks ago; since then they have done very little work. However, they fail to lay on flesh. S. B., Plainwell, Mich.—It is possible that their grinder teeth require floating and if you do it yourself, don't file off too much of the teeth, only remove the sharp cutting points off outside of upper grinders and inside of lower rows. Mix together equal parts of cooking soda, salt, ginger, gentian and charcoal; give each of them two tablespoonfuls at a dose in feed two or three times a day.

## GUERNSEYS—REGISTERED BULL CALVES

Containing blood of world champions. HICKS' GUERNSEY FARM, Saginaw, W. S., Mich.

Guernsey Bulls sold three last 10 days—One left Gr. 8 son Pauline Spotswood. He is a beauty—and you can buy him. J. M. Williams, No. Adams, Michigan

**Herefords—One Bull Calf.**  
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**HEREFORDS:** 4 Bulls, 4 Heifers.  
EARL C. McCARTY, Bad Axe, Michigan.

**WANTED:** 3 or 4 bred Hereford heifers, State age, condition and price. W. H. Wade, Grand Junction, Mich.

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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 1/4 % 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.

## HOLSTEIN BULLS FOR SALE

3 of them 1 year old in Nov. 1 By 31 lb. sire. Dams above 21 lbs. as heifers. Price \$100. Younger bulls by son of Johanna McKinley Segis \$50. up.

BLISSVELDT FARMS, Jenison, Michigan

## FOR SALE

**SOME VERY FINE YOUNG BULLS**  
Whose sires have as high as 31 lbs. of butter behind them. As they are young, will make a low price on them. BIGELOW'S HOLSTEIN FARMS, BREEDSVILLE, MICH.

**HOLSTEINS,** a nice straight deep bodied, blocky built bull calf, born Oct. 5th, 1915. His 7 nearest dams have A. R. O. records that average butter 7 days 23.86 lbs., milk 53.36 lbs. W. B. READER, Howell, Mich.

**30 lb.** bull for sale, 2 years old, by a son of King of the Pontiacs. Dam sold for \$1000 in Detroit sale. Ferd. J. Lange, Sebewald, Mich.

**I Have Holstein Bulls,** Bull Calves and Cows. I can show breeding records, individuality and attractive prices. L. E. CONNELL, Fayette, Ohio.

## "TOPNOTCH" Holsteins

By careful retention, for many years, of largest producing females, and use of superior sires, a breeding herd of wonderful quality has been established. We are selling young bulls of this "TOP NOTCH" quality, of serviceable age, at moderate prices. Information, pedigrees, etc., on application. McPHERSON FARMS CO., Howell, Michigan.

**FOR SALE Two Holstein Bull Calves**  
6 months old from 20 lb. dams.  
FREEMAN J. FISHBEEK, Howell, Michigan.

**Grade up your herd with one of our Holstein bulls.** Their six nearest dams on the sire's side average 24 lb butter in 7 da. The semi-official yearly record of three of these dams, including two two-year old heifers, average 42 lb. of butter and 18,000 lb. of milk. Six to nine months of age and from A. R. O. dams. Peacock Stock Farm, Three Rivers, Mich. Chas. Peters, Herdsman. C. L. Brody, Owner, Port Huron, Mich.

**Registered Holstein** cow and her heifer calf. Cow was born Sept. 21, 1911, made 14.32 lbs. of butter in 7 days at 23 months old. She is half sister to 3 cows with records of 30 lbs. to 39.56 lbs., and 17 others from 20 lbs. to 25 lbs. Her dam made 27.16 lb. of butter in 7 days. The sire of the calf has a 32 lb. dam and 32 A. R. O. daughters, 8 with records of 30 lbs. to 36 lbs., 12 others from 20 lbs. to 28 lbs. of butter in 7 days. \$350 for both delivered, safe arrival guaranteed. Write for pedigree.  
HOBART W. FAY, MASON, MICH.

**CHOICE HOLSTEIN BULLS**—all from A. R. O. dams. Entire herd on Semi. of test for yearly work. 2-yr.-old just finished year's record of over 15,000 lb. milk, over 1000 lbs. butter record in mature class. Cherry Creek Stock Farm, M. E. Farmelle, Prop., Hillsdale, Mich.

**Reg Holstein Bull Calf.** 2 nearest dams average 90 lb milk per day Pontiac Korndyke and Hengerveld DeKol breeding. Prices right. John A. Rinke, Warren, Mich.

**Holstein Calves, 10 heifers, and 2 bulls 15-16ths pure.** 5 weeks old, beautifully marked, \$200.00 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

## FIRST \$100 CHECK

Gets 15 month old, Handsome Thoroughbred Holstein Bull. World record sire. Dam 26 lb. 3 year old. Have three as good, same age. C. E. Winters, Augusta, Mich.

**\$50** gets a 15-16 white 2 mo. Hazel-Jet grandson of Maplecrest DeKol Parthena and Pontiac Maid 30.2 lb. Dam Triplet shown at State Fair 1913. Her dam A. R. O. sister to dam of Pontiac DeNlander 35.43 lb. M. L. McLAULIN, REDFORD, MICH.

**ONLY \$50 DELIVERED:** Handsome Holstein bull calf, 4 white; size 25 lb. butter bull; dam 16.39 lbs. A. R. O. Large and heavily boned. ROUGE MONT FARMS, Detroit.

**Registered Holsteins.** Young bull ready for service. 30 lb. breeding. Satisfaction guaranteed. W. B. Jones and J. F. Lutz, Cohoctah, Mich.

**Lillie Farmstead Jersey Cattle.** Bull calves from R. of M. Cows, also heifer calves and several bred heifers for sale. Colon O. Lillie, Coopersville, Mich.

**Jersey Bulls for Sale** from high-producing dams, with semi-official test. C. B. Wehner, R. 6, Allegan, Mich.

## THE WILDWOOD JERSEY FARM

offers for sale choice young Bulls by Majesty's Wonder and R. of M. cows, or cows on R. of M. tests. Will also offer a few cows for sale this fall. Write for pedigree and full particulars. Satisfaction guaranteed. ALVIN BALDEN, CAPAC, MICH.

**Hillside Farm Jerseys** A 10 mos. old, solid color bull now offered for sale. Dam is a R. of M. cow with record of 546 lbs. of butter as a 3 yr. old. He is a fine individual. Price right. C. O. Deake, Tiptonville, Mich.

**Maple Lane** R. of M. JERSEY HERD offers for sale, tuberculin tested cows, heifers, bulls, and bull calves backed by several generations of R. of M. breeding. IRVIN FOX, Allegan, Michigan.

**J Jerseys For Sale** Bull calves ready for service and cows and heifers soon to freshen. Meadowland Farm, Waterman & Waterman, Ann Arbor, Mich.

**REGISTERED JERSEY BULLS FOR SALE**  
1 yearling, and Bull calves from 8 to 10 months old. Also 3 cows. Write your wants.  
SMITH-PARKER, R. D. No. 4, Howell, Michigan.

## Duroc Jersey Herd Boars

Special Offering of High Class Fall Boar Pigs. Breeding and individuality good enough for breeders who appreciate the best.

Also some good farmer's boars. This is the best lot of fall pigs we have ever had to offer. A cordial invitation is extended to visit the farm and inspect the stock. If you wish one of the best young Jersey bulls in Michigan we have him for sale. For further particulars, address,

**Brookwater Farm, Swine Dept., Ann Arbor, Mich.**

**For Sale** Jersey Bull Calf. Choice breeding such as Golden Fern's Ladd, Golden Jolly male side Rogis family mother's side. Calf is now 3 weeks old. \$75 takes him crated and delivered at station. D. Ogden, Mount Pleasant Farm, South Haven, Mich.

## BIDWELL SHORTHORNS

**For "Beef and Milk"**  
Registered bulls, Scotch-topped roans, reds and white for sale. Farm at N.Y.C. Depot; also D. T. & I. R.'y.  
Address 6. S. Schroder Mgr. BIDWELL STOCK FARM Box B. Tecumseh, Mich.

**Shorthorn Cattle of both Sex for Sale**  
W. W. KNAPP, Howell, Michigan.

**DAIRY BRED** Shorthorns of best Bates strains, young bull 8 months old for sale, price \$150.  
J. B. HUMMELL, MASON, MICHIGAN.

**FOR Sale—Reg. Short Horn Bulls** by Maxwellton Monarch 2nd, a son of Avondale, from 8 to 10 mos. old John Schmidt, Reed City, R. No. 5., Michigan.

**SHORTHORN COWS FOR SALE:** No Bulls at present.  
R. R. Station, Elsie. H. B. PETERS, Carland, Mich.

**Shorthorn AND POLLED DURHAMS FOR SALE.** Have red roan and white. Have over 100 head in herd. C. Carlson, Leroy, Mich.

**Shorthorns**—Dairy or beef bred. Breeding stock all ages for sale at farmers prices. C. W. Crum Secy. Cent. Mich. Shorthorn Breeders' Assn., McBride, Mich.

**Registered** Shorthorn Cattle, young bulls and heifers \$100.00, bred cows and heifers \$150.00. Write.  
W. J. BELL, ROSE CITY, MICHIGAN.

**Milking** Shorthorns, roan 3 year old, Bates bred herd bull \$250. Young bulls and heifers.  
DAVIDSON & HALL, TECUMSEH, MICHIGAN.

**SHORTHORNS FOR SALE**  
8 Bulls, also females. W. B. McQuillan, Howell, Mich.

**Red Polled Cattle.** Have a fine young bull and O. I. C. pigs for sale.  
John Berner and Son, Grand Ledge, Mich.

## HOGS.

**Berkshires** of best breeding, of various ages, either sex, all registered stock, no akin, special reduced price. Write your wants quick.  
Mitchell's Lakeside Farms, R. 2, Bloomingdale, Mich.

## SWIGARTDALE FARM HOLSTEINS.

Several choice Bull Calves, from A. R. O. Dams, with the best of Long Distance backing at Farmers' prices.

**BERKSHIRES**  
with size, breeding, and individuality that is hard to beat. See our exhibit at the State Fair. Prices reasonable; satisfaction guaranteed.  
Swigartdale Farm, Petersburg, Mich.

**The Very Finest Berkshire Pigs Cheap**  
C. S. BARTLETT, Propr. Pontiac, Michigan

**Berkshires.** I have 5 choice fall gilts bred for Sept. farrowing at \$25 each for immediate delivery.  
A. A. PATULLO, R. 4, Deckerville Mich.

**BERKSHIRE SOW** and yearling gilt bred to farrow early in September. Boars ready for service. Also open gilts. Chase Stock Farm, R. 1, Marlette, Mich.

**ROYALTON Bred Berkshires.** Extraordinary offer. Bred sows, boars ready for service and pigs both sexes, selling out all registered stock with papers.  
D. F. VALENTINE, Supt., Temperance, Mich.

## DUROC JERSEYS

A choice lot of spring pigs, both sex, pairs and trios, not akin. Prices reasonable. Send for pedigrees.  
THE JENNING'S FARMS, R. F. D. 1, Bailey, Mich.

**J. W. KEENEY, Erie, Mich.** Males, good ones for Dec. Swine. D. M. & T. local from Monroe or Toledo, Keeney Stop.

**Duroc Jerseys** Booking orders for fall pigs at weaning time, also spring boars ready for service. J. ROBERT HICKS, St. Johns, Mich.

**Duroc Jersey Boars** Two June 1915; 12 April 1916. Write for description. I guarantee satisfaction. J. H. Banghart, East Lansing, Mich.

**Duroc Jerseys.** Some yearling & Spring boars good enough to head your herd. Will sell Eureka Cherry King 67145. Ask about him. W. C. Taylor, Milan, Mich.

**Duroc Jerseys**—Fall and spring pigs either sex, from choice strains, 8, C. STAHLMAN, CHERRY LAWN FARM, Shepherd, Michigan.

**For Sale,** Duroc Jerseys, choice breeding spring pigs either sex. Prices right.  
John McNicol, Station A, R. 4, Bay City, Mich.

**DUROC Jerseys.** Apr. pigs either sex, boars ready for service and a few bred sows for Sept. and Oct. Some Holstein cows bred for fall. E. H. Morris, Monroe, Mich.

**DUROC JERSEYS**—all sold out for the present. Wm. W. Kennedy, Grass Lake, Michigan.

**Duroc Jerseys** I have some good last September Boars and gilts. Gilts will be bred for September farrow.  
H. G. Keesler, R. No. 5, Cassopolis, Michigan

**Dobson's Durocs** Combined, size, quality, breeding. Herd boars, spring boars, spring sows for sale. Orlo L. Dobson, Quincy, Michigan.

**DUROC Jerseys** Gilts of the large heavy boned type bred to a son of Orion Cherry King the greatest boar of his breed. Bred for early Sept. farrow.  
F. J. DRODT, R. 1, Monroe, Michigan

**FOR SALE** Three Duroc Jersey Red Boars, four months old, from Registered Stock, each \$18.00 for the next two weeks, also 80 acres land in Ogemaw Co. Easily cleared. Write to Jose Lake Fruit Farm, South Branch, Mich.

**Duroc Jersey** Spring and Summer Boars and Gilts, Ohio Chief breeding \$10 to \$25. NEWTON BARNHART, St. Johns, Mich.

**Duroc Jersey Boars** of the large, smooth big boned type.  
E. D. Heydenberk, Wayland, Michigan.

**CHESTER WHITES** Sows bred for Sept. farrow, spring pigs in pairs, not akin.  
F. W. ALEXANDER, Vassar, Mich.

**Raise Chester Whites**  
Like This  
the original big producers



I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers—ready for market at six months old. Write for my plan—More Money from Hogs.  
G. B. BENJAMIN, R. F. D. 10 Portland, Michigan

**Big Type Boars:**  
O. I. C.'s ready for service Bred Gilts—Fall Pigs. Registered in buyers name, shipped O. O. D. Prices very reasonable. J. Carl Jewett, Mason, Mich.

**Registered O. I. C. Swine**  
Stock For Sale—All Ages  
Correspondence Solicited, Visitors Always Welcome



Brightside Farm  
Grand Ledge, Mich.

**O. I. C. Swine**—A nice lot of spring pigs. Write your wants. Meadow View Stock Farm, Holland, Michigan. R. R. No. 5.

**400 Big Type O. I. C. and Chester White Pigs** From Feb. Mar. and Apr. farrow sired by the five best boars in the state. School Master 52707 who won more champions, defeated more champions than any boar show 1915. Abo 2nd, sire to our undefeated breeders young herd at 7 state fairs, Allen junior champion at Wis. State fair 1914, and Captain Jim 3516, under 6 months boar and Junior champion at every state fair show 1915. Then we have Le Dux model 29015, first in class at Sioux City, Iowa, 1914. Get our catalogue, its free. We Register Free; Guarantee satisfaction in every way.  
ROLLING VIEW STOCK FARM, Cass City, Mich.

**O. I. C.** October boars weighing 200 lbs. at \$25 each for April shipment.  
C. J. THOMPSON, Rockford, Michigan.

**O. I. C.'s.** Send me your order for choice spring boars, shipped O. O. D. and registered in purchaser's name. G. P. ANDREWS, Dansville, Mich.

**O. I. C.** Swine. If you are in the market for a Spring boar, of April farrow write to H. W. Mann, Dansville, Mich.

**O. I. C.** Spring pigs either sex, large bone and good growth. Prices right.  
A. J. BARKER, R. R. 1, Belmont, Michigan

**O. I. C.'s** Some extra good fall boars; also gilts. Satisfaction guaranteed.  
A. E. GRAHAM, Flint, Michigan.

**O. I. C. Stock all Sold**  
JULIAN P. CLAXTON, Swartz Creek, Mich.

**O. I. C. And Chester White Swine.** Strictly Big Type. Spring pigs, now ready to ship. Can furnish in pairs not akin. These pigs are sired by Lengthy Prince and Model 1st. Two as good big type boars as there is in the breed. I will ship O. O. D. and record them free. NEWMAN'S STOCK FARM, MARLETTE, MICHIGAN, R. No. 1.

**O. I. C. and Chester White Swine.** Spring pigs, of kin. E. B. MILETT, Fowlerville, Michigan.

**O. I. C. SWINE:** If you are interested in you with a choice pair or trio, not akin, or a gilt, due to farrow about September first.  
A. J. GORDEN, R. No. 2, Dor, Mich.

**O. I. C.'s** Pairs and Trios not akin. 2 Reg Holstein bulls 6 and 8 months old. Cloverleaf Stock Farm, Monroe, Mich., R. No. 1.

**O. I. C.** Choice Gilts bred for fall Farrow and Spring Pigs. Prize Winning Stock. Write for low price. A. V. HATT, Grass Lake, Michigan.

**O. I. C.** Swine and Reg. Holsteins, few boar pigs of May farrow at a reasonable price, quality considered. ELMER E. SMITH, Redford, Michigan.

**O. I. C.'s.** 4 last fall sows to farrow in Sept. and Oct. 5 last fall boars, big strong growthy ones, last spring pigs not akin. Good stock, order now. Farm 1/4 mile west of depot. Otto B. Schulze, Nashville, Mich.

**O. I. C. HOGS**  
Fine April Gilts and Males. Pairs no relation. At a bargain if taken at once. J. R. Way, Three Rivers, Mich.

**AT HALF PRICE**  
Genuine big type Poland China Hogs, Bred Sows, Spring Pigs, Boars ready for service. Special, the best big type fall yearling boar in Michigan. Also registered Percheron Stallions and Mares.  
J. C. BUTLER, Portland, Mich., Bell Phone.

**Big Type Poland Chinas**—Boars of August farrow, booking orders for spring pigs. A. A. WOOD & SON, Salline, Michigan.

**Large Strain P. C.**—Two nice fall Gilts to farrow in Aug., Sept. and Oct., get one of these sows with pigs by side.  
H. O. SWARTZ, Schoolcraft, Michigan.

Breeders' Directory—Continued on page 235.





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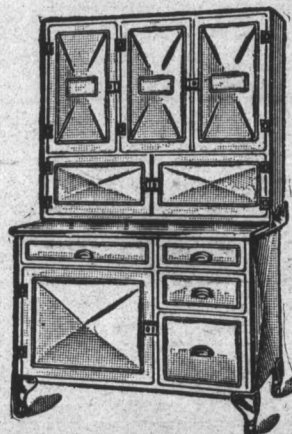
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