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Caring For and Storing Farm Machinery.

It will be conceded by every observing person that some farmers get much longer and more satisfactory service out of farm machinery of all kinds than do others. The machinery and implements required to equip a modern farm represent a very considerable investment, and the economy of their use in the operation of the farm will repay this investment with interest if a degree of care is given them which will insure that their period of usefulness will be of normal length.

But the higher the rate of interest which one can get upon an investment the better, and if, by bestowing upon the farm machinery and implements a degree of care which is not accorded them by the average farmer, the investment may be made still more profitable through an added saving in the lessened depreciation of the value of the farm machinery or implements, it is a source of gain which the business farmer cannot afford to overlook. A careful study of this problem would seem to establish the fact that the average farmer has not given enough consideration to this problem to fully understand or appreciate the meaning of good care as applied to farm machinery or implements in the best sense of the word.

To illustrate this point let us refer to the investigations conducted at the Colorado Experiment Station to arrive at some conclusive data with regard to the influence of housing and other care of the farm machinery upon its life of usefulness. As a result of these investigations some surprising facts were developed. The average man will agree that if the machinery is properly housed as soon as he is through with it in the field it is being given good care. The conclusions reached from these investigations conducted at the Colorado station, however, seem to show that the housing of machinery under any condition and not properly caring for it otherwise constitutes very poor care.

On this point Messrs. Bainer and Bonebright present the following conclusions in a bulletin giving the results of their investigations upon this subject: "To house machinery does not always do as much good as is commonly supposed. In making the investigation, the following question was asked many times, 'How should farm machinery be cared for?' It is usually answered by the farmer: 'Everyone knows that it should be housed.' This is a good answer as far as it goes, but to house machinery under any condition, and not properly care for it otherwise, constitutes very poor care.

"Machinery may be just as well cared for if it is allowed to stand in the shade of a tree as if it is stored in some of the leaky sheds, poorly drained sheds, or combined machine sheds and hen roosts, such as were found during the investigation.

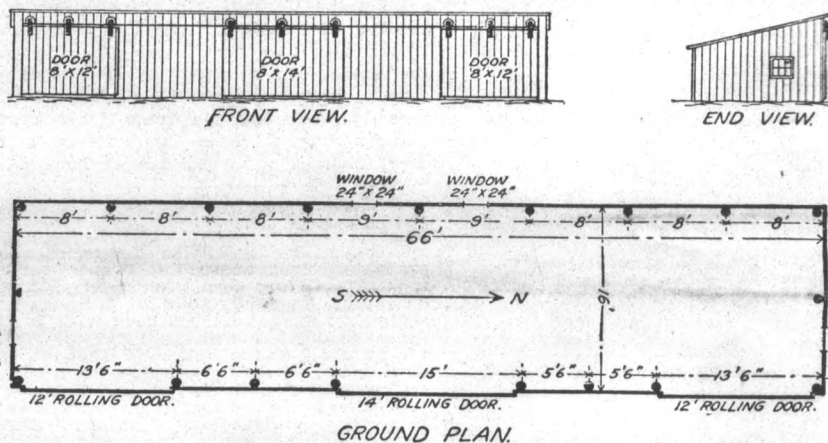
"There is no question but that to properly

house machinery is a great saving, as it not only adds a great deal to the life of machine but it also adds to the general appearance of the farm. It was generally found that where a farmer was interested enough to properly house it, he was also interested enough in it to care for it otherwise.

"The investigation showed that the life of farm machinery depended a great deal upon the owner. Individual farmers were found who took very good care of their machinery and left it in the weather when not in use. A great deal of housed machinery was found which

the importance of its being well selected at the start, kept in good repair and adjustment, oiled thoroughly, cleaned before housing, and have all wearing parts well greased when not in use, and painted when necessary, as well as that it be properly housed. All this in the estimation of the investigators constitutes about half of the proper care of the farm machinery. The other half of the good care, in their estimation, consists in keeping the machinery properly repaired, in good adjustment and thoroughly oiled when in use.

It is apparent from the conclusions



A Cheap But Convenient Type of Tool House, Easily Built with Home Labor.

had done no more work and was no better nor older than some which had not been housed but which had been well cared for otherwise.

"Cultivators, shovels, plowshares, and attachments, which have been removed and greased, should be placed where there is no chance for them to get damp. It is a good plan to place them in a gunny sack and suspend them from the rafters of the shed or barn."

Regarding the proper care of farm machinery these investigators emphasize

reached by these investigators, that most of us could profitably pay more attention to the care given all farm machinery other than its proper storage during the season of the year when not in use. This proper storage, however, is an item in the care of farm machinery which we cannot afford to neglect, and if there is no available place for the convenient storage of all the farm machinery upon the reader's farm, he would do well at this time to consider the advisability of providing a cheap tool house for this

purpose before the arrival of winter. One frequent trouble with the available storage for tools, when there is such storage available upon the farm, is that it is not as conveniently arranged as would be possible. Where new storage room is to be provided this difficulty should be avoided, although, of course, where there is plenty of available room it will often be necessary or expedient to get along with the inconvenience of its poor arrangement, provide it cannot be so remodeled as to be more convenient.

A tool house to which one has access only from doors at the end is bound to be more or less inconvenient. But where this condition prevails this inconvenience can be reduced to the minimum by the arrangement of tools as they are stored away for winter, placing those which will be needed first nearer the doors, and those which will not be needed until later in the season, in the less accessible portion of the shed. But, where a tool shed is to be constructed to provide room for the storage of tools, it is a far better plan to arrange it with the doors at the side.

For those who desire cheap storage for machinery, a shed built on the plan of the accompanying drawing or some variation of it, which can be easily arranged to suit the conditions or needs of the builder, will be found inexpensive and satisfactory in use. But where this, or any similar form of tool shed is used the space inside of the foundation of same should be filled with dirt to raise it several inches higher than the level of the ground adjacent to it, so that the floor may be dry. Sufficient windows should also be provided to give a good light in all parts of the shed.

Where a little more elaborate building is desired and where there are more machines or implements to be stored than a building of this type will house, it may be found desirable to build it wider and cover it with an ordinary double pitch roof, and then by making the posts a little higher and putting a floor overhead, space will be available for a convenient workshop, storage for small tools, seed grain, etc.

In fact, there are many uses to which room of this kind can be put, and this is probably the most desirable type of tool house to build where the cost must not be too carefully considered. But the cheaper building, such as is illustrated in the accompanying cut, will protect the farm machinery and implements, and is certainly within the reach of every farmer. If we have heretofore been negligent in this matter of the proper care of farm machinery and tools it is a good time now to turn over a new leaf, provide room for their proper storage, and give them the proper care before the arrival of the winter season. Next to the farm itself this equipment represents our largest investment and it should be cared for accordingly.



Annual Picnic of the Western Michigan Holstein Breeders' Association at Long Beach Farm. (See Page 155).

FARM NOTES.

Eradicating Dodder.

I would like to ask how to get rid of clover dodder without destroying the clover. I seeded a field last spring and there is a lot of dodder all over it. I would like to cut the field for hay next year. Will the dodder live over winter or does it come from seed each year?

Lake Co.

G. S.

Dodder is a parasitic plant which seeds liberally and reproduces itself from the seeds the following year. Soon after the seeds have germinated and the plant entwines itself about the clover or other host plant, its connection with the ground is severed, and from that time on it is merely a parasitic plant, drawing its nourishment from the plant around which it twines and spreading from this center as the tendrils reach out and attach themselves to other plants. As noted, it seeds liberally and where a field is badly infested with dodder it would be the better plan to plow it up, returning any manure made from the dodder-infested hay to the field, in order that the whole farm may not be seeded to this pest.

There are some varieties of dodder which, under favorable conditions, will live near the ground on low plants all winter, among which is the lesser clover dodder, so-called. Where a field is infested the practice of clipping it early, before much growth has been made, and burning the clippings on the ground has sometimes proven successful. If the plants are not too numerous they should be cut with a sickle or scythe and burned. The best method of procedure will depend upon how thoroughly the dodder is distributed over the field, and it will pay to watch it closely next spring and act in accordance with conditions as they are found.

Liming in Fall vs. Spring.

Last spring I bought a piece of sandy land, 10 acres of which is in beans at the present time and the crop is doing fairly well. Now I wish to sow this field to oats next spring and seed to clover. In this neighborhood clover does not catch good. The seed seems to be all right but the clover dies after it is up. This ground in question is acid, according to the litmus test. I sowed broadcast 170 lbs. of 10 per cent phosphoric acid and 8 per cent potash fertilizer per acre when I planted the beans and expect to put on ground limestone before I plant it again. Now which would be best, to put limestone on this fall or wait until spring before I put it on? What do you think of my chances for a catch of clover? I do not intend to plow it for oats. When I plowed it this spring it was nearly all meadow eight or 10 years old.

Saginaw Co.

D. E. E.

There is no doubt in the writer's mind that very much of the land of Michigan upon which clover does not catch well is in need of an application of lime and that the chances of getting a good seedling would be greatly improved by making such an application.

In a case like the one cited in this inquiry where lime is to be applied, the bean ground to be sown to oats the following spring without plowing, it would undoubtedly be better to apply the ground limestone in the fall than to wait until spring, since it would afford it a better opportunity to neutralize the acid condition of the soil than if applied just before the clover seed is sown. If applied soon after the beans are harvested and harrowed or disked into the soil so as to become well incorporated with the surface soil, its action in this respect would be facilitated.

Fall Seeding of Alfalfa.

I have a field of six acres that I wish to get seeded to alfalfa. This field was sown to oats and peas for hay the first of May, it being too wet to get in shape earlier. I have recently harvested my crops and, owing to the recent rains, I think a good seed bed could be obtained by discing it a number of times with a good disc harrow. I want to know if you recommend sowing this time of year; if so, how much should be sown per acre? Should lime be sown and if so, how much should be applied and how should it be applied? The soil is of clay gravel loam, well drained and in good shape.

Ingham Co.

F. R.

As before noted, the sum of our knowledge with regard to alfalfa culture in Michigan would make a small book as compared with that which we do not yet know. As to time of seeding, however, the writer would prefer early spring or midsummer seeding to seeding in September, although when conditions are particularly favorable, as they are at this time so far as moisture is concerned, and as the prospects of a late warm fall would seem to be better than usual, owing to the fact that the season has been cold and late, and that in view of nature's law of compensation we might reasonably expect a late fall, late seeding may prove entirely satisfactory. Of

course, no one can prophecy with any degree of accuracy with regard to what the weather may be like, but it is certain that present conditions are more favorable for the sowing of alfalfa than is ordinarily the case at this season of the year. Hence, it would, in the writer's opinion, be well worthy of a trial to seed the field to alfalfa.

Now, as to whether lime should be sowed or not. This will depend altogether on the condition of the soil. If the soil is acid in its reaction by the litmus paper test, or if it has been difficult to get a stand of clover upon it, it would be a wise precaution to sow lime, using either ground limestone at the rate of about two tons per acre, or using a lighter application of caustic lime. The application may be made in any way which will insure thorough distribution, although a lime distributor, manufactured for the purpose is the most convenient method of distributing it.

As to the amount of alfalfa seed which should be sown per acre opinions vary considerably. Formerly 25 or 30 pounds per acre was recommended by good authorities. Now few sow more than 10 to 15 pounds per acre, and the writer has seen excellent stands of alfalfa seeded at the rate of six pounds per acre, but probably 10 pounds per acre would be sufficient for fall seeding if a good seed bed is prepared and good seed is sown.

Commercial Fertilizer for Clover.

I have a piece of sandy loam soil, that I am about to seed to clover and I would like to know if 500 lbs. of good commercial fertilizer per acre would insure me a good seeding. A year ago a light clover sod was turned down for corn and produced a fair crop. This season the sod was turned up and the field was sown to oats, which were a very poor crop. It is not low land, but a gently rolling piece at least 20 feet above the creek bottom. Now my plan is to plow this again early in August and let the volunteer oats come up to shade the young clover plants, applying, as I said, fertilizer at the rate of 500 lbs. per acre. Do you think this will insure me a seeding of clover?

Newargo Co.

F. J. A.

There is no doubt that the use of 500 pounds of commercial fertilizer per acre would materially better the prospect for getting a good stand of clover on this land. It would give the clover a good start, and it cannot start any too quickly or grow any too rapidly, sown at this season of the year to get sufficient size to withstand the winter. It would be a rash statement, however, to say that the use of this fertilizer would insure a stand of clover. It would undoubtedly supply the needed plant food to give the clover a good start and rapid growth as above stated. But there are other factors essential to getting a good stand of clover aside from the presence of plant food. For instance, if the soil is in an acid condition which makes it an unsuitable home for the bacteria which find a home in the clover roots, and which are essential to its best development by providing it with nitrogen which is appropriated from the air, the stand of clover may fail with plenty of plant food. This could be determined by making a litmus paper test for acidity, but inasmuch as a partial seeding of clover was plowed down for corn in the rotation this acid condition is not probable. In the event that the soil has an acid reaction lime should be applied to correct this condition the same as is often necessary for success with alfalfa.

SEEDING CLOVER ALONE.

Could I get a good stand of clover by seeding it now? Would it make seed for next year? I would disk and harrow it and could top-dress some of it. Would you sow it before disking it or would you disk, then sow it, then harrow? I would like to seed and not sow any wheat if I was sure of a good stand, or could one sow timothy and have it seed? Don't want to sow timothy if I can get along without it, as clover is the thing. Which would you sow, alsike or June clover? I have about half an acre of alfalfa sowed on June 6. It is blossoming—has been for two weeks. Should it be cut now? It is very thick, also very weedy.

Barry Co.

C. G. B.

The best way to sow clover is to sow it alone. We sow it with wheat, using wheat as a nurse crop, but really it is a robber crop instead of a nurse crop. We sow it in this way so that we can get the land back to clover and make the wheat pay the expense of getting it back. If you will prepare this stubble ground thoroughly, put it in just as good shape as you would if you sowed it to wheat, and then seed the clover alone, there isn't any question but what you will get a better stand of clover and the clover will do better in a given length of time than it will if you sow it with the wheat. There is this much about it. On certain

kinds of land if the clover is sown in August or early September, if the fall is cold and not very favorable for plant growth, the clover may not get a sufficient root to stand the winter and may winter-kill, largely by heaving. On rather light sandy soil this rarely occurs but on our heavier soils it does. Usually it is better to seed the clover early in the spring. Then it gets a foothold which will enable it to stand the winter. But on all ordinary soils if you would prepare the bed in August and sow it the clover would get a sufficient growth so that I don't think there would be any danger of winter-killing. As a matter of fact, alfalfa sown at this time gets a foothold, and that is a much more tender plant to get started than common red clover.

You could also sow timothy in this way if you choose, and the timothy would do much better than it would if it were sown in connection with the wheat plant which will crowd it out and rob the soil of both plant food and moisture. The only reason that can be given for not sowing grass seed alone is that we want to get all we can out of the soil and don't like to wait to allow the grass to grow alone, but we want to get a wheat crop and take what we can of the grass. Clover sown in August, as intimated above, will probably cut a good crop of clover hay late next season. Certainly if the land was rich and in good condition, and the same with timothy.

When to Cut Alfalfa.

This alfalfa ought to be cut just as soon as the second growth starts from the crown. If the second growth didn't start I wouldn't clip it. I am of the opinion that I practically ruined a young seeding of alfalfa by clipping it before it ought to be clipped, and even though the weeds are crowding it at this late season, unless the alfalfa started out a second growth at the roots I wouldn't clip it. I would leave it on the ground for mulch.

COLON C. LILLIE.

WINTER VETCH.

Will you kindly advise me as to the probable result of sowing winter vetch now in standing corn, that is clean and on rather low sandy soil? It is no doubt somewhat sour, but sows over with June grass readily. I wish to build this soil up as soon as possible and thought of sowing the vetch now to plow down next spring. Do you think it would be likely to make much of any growth sown in this way without any fertilizer? The corn on this soil is small and rather puny, and of course, I feel sure it would be of no use to sow it to clover in the condition it is now in, and I am anxious to know if vetch will thrive on sour, cold, sandy soil without a lot of doctoring.

Wayne Co.

J. H.

Winter vetch produces wonderful results as a cover crop on the lighter, sandier soils in the state. In fact, it will grow well on almost any soil. One trouble is that people don't sow it early enough in the year. You don't want to put off sowing vetch until too late. It ought to be sown as soon after the middle of August as you possibly can. Sow it in the last cultivation of the corn.

Vetch wants a warm soil. A cold, sour wet soil will not grow good vetch or any other leguminous crop. If a man has a wet, cold soil the preparation for any leguminous crop, including vetch or clover or alfalfa, or anything else, the first thing to do is to tile drain it, and money expended in trying to get a good growth of any leguminous crop of this kind of soil is practically wasted.

Tile draining it will draw off the surplus water at the bottom and the air can strain through with a tendency to sweeten the soil, but if it is acid in reaction by the litmus paper test then in addition there ought to be lime upon it. Then you can get hairy vetch to grow, or any other legume as well. If you seed this field with vetch I would sow it in connection with rye. Sow about a bushel of rye to the acre and sow it just as soon as you can. Get it in early. Vetch seed is pretty expensive and if you are a little bit skeptical about its success you could simply get a half bushel of it and start it on this soil and then you would know more about it than anybody can tell you.

COLON C. LILLIE.

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The best hired man or farm superintendent is a college educated man, having a home on the farm. Many who have employed students of agricultural colleges say they are the best help. If I could not get one of these students to work for me, I would hire one of the most intelligent men having good habits I could find, and try to make a student of him. I would furnish him with good literature, and ask him to read it, and not to read the low-class newspapers and fiction. I would insist on his being temperate and not using profane or unchaste language.

There are certain conditions that on any farm will enable one to hire good men. Everyone wants a home, or a home-like place to live, and the better home one can make for a man, the more interest he will have in the work and the longer one can keep him. If an unmarried man is employed on the farm, let his room be made so nice and comfortable that he will enjoy staying in it. See that the bedding is good and clean, and that there is a comfortable chair and stand or table, on which there are good books, magazines and papers. All men appreciate cleanliness and tidiness, and a nice room is a help and education to the uncultured.

I would provide the married man with a good tenant house. Generally, if a married man is employed, and he has a good, comfortable house, garden, poultry, etc., and the prospect of retaining these for some time, he is more contented, and it is the best thing a farmer can do to provide a house on the farm.

Many do not like to work on the farm because of the long day's work and the isolation of the country and lack of recreations. These are questions which many farmers need to see differently. They can get better help, and more and better work done, by bringing the working days as near to ten hours as possible. Unless there is some special work to be done, the farmer who asks his help to work longer is making a mistake. If an emergency calls for extra hours, consider it as a favor and not an obligation for the hired man to help you, and reciprocate by giving him a few hours off sometime when especially desirable.

The fact should be fully appreciated that when a better class of employers are developed, we should have a better class of employees. In this way the problem of obtaining better help can be solved. I know that I shall receive from my hired help the best service in proportion to the way in which I respect their rights. If I see him as a man having good qualities that can be brought out by right treatment, and do my duty, I know he will respond by doing good work for me. This point I would bring out, that I myself must possess the good qualities I desire in those who work with me, and this is the ideal relationship that a man shall work with me and not for me, and it shall be more in the way of a partnership in business.

A playground on the farm is a good investment from a financial point of view. It pays to furnish our employees time and opportunities for recreation, tennis, croquet, etc. We do not want the man who seeks for his recreation at the saloon. Farmers owe a moral duty to their help. To make a better man morally is to make a man who will serve you better.

I remember seeing one hired man who worked on a farm in New York, who was typical of a large class. This man had worked for several years on a farm. He reminded me of some horses kept for what their owner could get out of them. This hired man's disposition had been ruined, like the horse which has always received unkind treatment, and for self defense has become a biter or kicker. This man had lost faith in man, and had come to look on every man as his enemy, to whom he did not purpose to render any more service than was due for compensation received. He was not a good hired man, but he was just what

the kind of treatment he had received had made him.

New York.

W. H. JENKINS.

SOD GROUND FOR WHEAT.

Kindly let me know through your valued paper as to the advisability of putting a timothy, clover and red-top meadow into winter wheat. The soil is a medium heavy sand, fairly well drained. How much seed should be drilled to the acre and what would be the best variety for this land? Just when is the best time to sow for best results? I have a field of corn on mealy muck that I wish to seed to timothy and alsike. Would it be better to sow the seed before or after the last cultivation and how much of each to the acre?

Van Buren Co.

L. W. A.

Sod ground is not considered an ideal location for winter wheat. The principal reason is because it is difficult to get it plowed early enough and work it enough so that it makes a good firm seed bed, that is all the trouble. There is no reason why you can't get a good crop of wheat on sod ground if it is plowed early. It ought to be plowed as soon after haying as possible, and worked thoroughly during the summer time, well worked down and rolled down with a heavy roller to pack the soil. You want to get this sod packed down to the subsoil so that there will not be air spaces between the furrow and the subsoil, and it should be well worked up and a good seed bed made. Most people, however, plow the ground the first of September and harrow it over a couple of times and sow the wheat. This is no condition for wheat. A proper seed bed has not been made.

Seeding Corn Ground to Grass.

I take it, from the way this question is asked, is, whether the seed shall be sown and then the ground cultivated or whether it shall be cultivated and then the seed sown on top without being covered. If this is what is meant then I would say, by all means sow the grass seed before you cultivate the ground. In dry weather in the summer time, by sowing the grass seed on top, much of it never would germinate at all, and it ought not to be very deep. This should be done with spring-tooth cultivators and set the teeth so that they will just nicely stir up the surface soil, or you can put sweeps on your five-tooth cultivators so that you can gauge the depth and not cultivate it very deep. If you cultivate it too deep you are liable to do so much root pruning that it will do as much harm to the corn as it does good, and by shallow cultivation in this way the grass seed will be none too well covered.

If the corn would come off the last of August and the first of September I would certainly cut the corn and go to work and fit the ground with a disk harrow and cultivate the corn stubble up and level off the field and then seed to grass, but probably the corn will not come off early enough to do this. Otherwise, unless some pains are taken to roll this land down with a heavy roller when it is somewhat soft, you will have a very rough meadow. The cornstalks will bother considerable. It can be rolled down, however. If you will go on them with a heavy roller you can press the stubble down into the ground and the ridge where the corn hill is down so that you will have a comparatively smooth meadow.

COLON C. LILLIE.

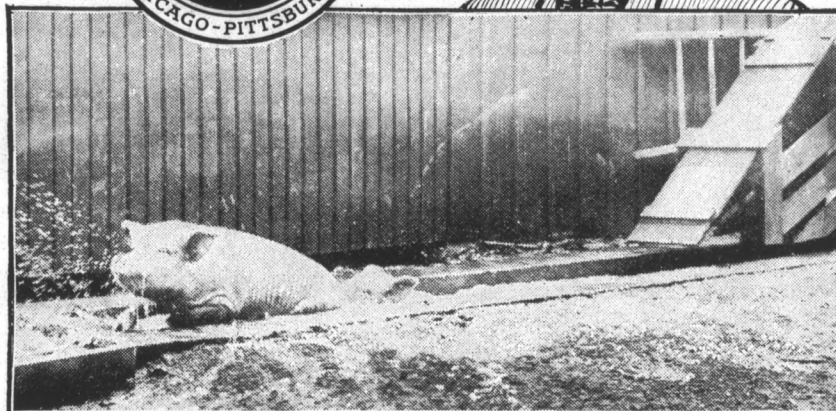
BEES FERTILIZE BLOSSOMS.

A salting station has been built here this spring, and a lot of cucumbers are being raised for pickles. A neighbor thinks that bumblebees get in the blossoms and blight them, as some of the blossoms set no cucumbers. Others think the bees are a benefit and help fertilize the blossoms. It is claimed that the bumblebees are a great benefit in fertilizing clover blossoms for seed. Do they benefit the farmer by fertilizing the blossoms of cucumbers, melons, etc.?

Berrien Co.

G. I. W.

Bees are beneficial in fertilizing blossoms of all kinds, since in their visits to the flowers for honey they are instrumental in scattering the pollen and thus fertilizing the flowers, often with pollen from other blossoms. As mentioned in this inquiry, bumble bees are of great value in fertilizing clover blossoms, due to the fact that the clover bloom is of such form as to make artificial assistance in distributing the pollen essential to the setting of a good head of seed. This is not true to the same extent of cucumbers, but it is a safe conclusion that bees would be beneficial rather than otherwise on these or any other blossoms. Cucumbers, however, do not set well in cold weather, and the cool weather, particularly the cool nights, is doubtless the cause of the blossoms blasting as described in this inquiry.



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LIVE STOCK

ECONOMICAL HOG FEEDING.

When hogs are bringing as good a price as at present and feed of all kinds expensive, there are possibilities of making or of losing much money in handling them.

Many a feeder who has not an abundance of home-grown feed in sight is uncertain whether to count himself fortunate or unlucky because of his hogs.

With due recognition of all the light that has been shed on the subject by experiment and scientific investigation, thoughtful and careful feeders feel that there is much to be learned of the economical growing and feeding of hogs. One of the great difficulties of the average feeder is to know what information he can safely rely on and what he can not.

Many experiments have been made in recent years by both experiment stations and individuals to work out an economical and efficient system of hog feeding. The German Wolff-Lehman feeding standard, because of its high protein content, has always seemed too costly for corn belt feeders to follow. Here, protein feeds are generally expensive, compared with corn.

It has been shown with reasonable certainty that a starchier ration than the German authorities advise will not only make gains much cheaper but very much more rapidly. Especially is this true after the hogs are well grown. Most feeders have proved to their own satisfaction that at no time in a hog's life can the greatest gains be made on corn alone; but they are also satisfied that corn is the best feed for the principal part of the grain ration.

At ordinary prices of feeds a liberal use of corn is the most profitable. It is nearly always cheaper per pound than any other grain feeds that are suitable for hog feeding, and as a rule, the most economical gains are made by using it freely.

In regard to the feeds rich in protein that are needed to supplement the corn, it is a question for each feeder to decide, whether he will attempt to raise it on the farm or buy it in some of the nitrogenous by-products on the market. Soy beans and peas are both well adapted to fill this need but are not successfully raised in all localities. For small pigs skim-milk is most admirably suited to this purpose, but older hogs can not drink enough of it to supply their need for the extra protein above that secured from the corn.

In the summer the supplementing of corn is a comparatively easy matter, because clover or alfalfa pasture can generally be easily furnished. Careful tests have shown that pigs gain nearly three times as fast on clover pasture with corn as on the same dry feed without pasture.

This question of summer pasture is a most important one. It furnishes a cheaper and better feed than can be had in any other way.

With higher priced corn there is always a chance to cheapen the cost of production by using a limited quantity of some protein feed even though there be an abundance of clover pasture.

The greatest single item of economy in summer hog feeding is the providing of clover or alfalfa pasture. Next to those come pasture of other kinds. No one who realizes the advantages to be derived from it will neglect to provide abundance of growing forage for his hogs.

These are two things that every hog raiser must carefully consider, viz., the rapidity of gains, which gives early maturity, on one hand, and the economy of gains, on the other. The breeder is most interested in the first and the general farmer in the second. A wise combination of the two will probably prove most satisfactory.

Ingham Co.

H. M. YOUNG.

A HARNESS CUPBOARD.

If a fine set of harness is to be kept in the stable, it is well to provide it with protection from dust, mice, etc. For this a cupboard can be provided.

The writer has such a cupboard, three and one-half feet wide and five feet high, made of inch boards. It has a single door, though a double door would seem to be more convenient. To prevent the entrance of dust, grooved or ship-lap boards should be used, thus making close

contact. If the cupboard is made deep enough the pegs may accommodate two sets of harness.

The market supplies a variety of iron harness-hooks, though very efficient ones may be made by using the crotch of two diverging limbs. The crotch should constitute an angle of about 60 degrees. The main limb should be the stronger and should be severed a few inches below the protruding limb and about a foot above. The protruding limb should be as long as the peg is desired to be. The rear side of the main limb is then flattened and the hook nailed in position to the back wall of the cupboard.

Oftentimes at a farm auction an old house-cupboard may be purchased for a small sum. Relieved of its shelves and supplied with pegs, such a piece of furniture makes a cheap harness-cupboard. If the cupboard is located where the mice can gnaw through, it is precaution to place a lump of salt inside. Mice chew harness for its salty flavor.

Ohio.

P. C. GROSE.

BUYING FOUNDATION STOCK.

Old breeders of the various types of live stock die and do not always leave sons competent to carry on the business. Others fail to win the success they anticipated and sell out. Some for various reasons see fit to change or move to town and it is therefore necessary for new breeders to take up the work which the others have laid down. Many new herds will be established this season and I venture to give these new breeders some unsolicited advice.

I do not think it wise for any man to engage in handling pure-bred live stock, and especially cattle, unless he has kept his farm up to a high degree of fertility. It is only fertile farms, those that are increasing in their fertility, or at least maintaining it, that can grow big enough grass to produce a fine type of beef cattle. Improved breeds, especially of beef cattle, are the result of improved conditions; and one of the essential conditions is land that will grow big grass and big crops of grain. Nor do I think it is wise for any man to undertake the establishment of a herd of pure-bred cattle unless he has been successful in grading up his herd of common cows. If a farmer, by buying a pure-bred sire, can bring up the grade of his cattle from the scrub or low-bred cattle of the neighborhood until, for beef purposes, they are practically pure-breds, he is then ready to undertake the more difficult task of producing a uniform herd of beef cattle.

I speak of uniformity because it has been my observation that most founders of new herds fall down in their first purchases. They buy a cow here and there of different breeding and often of widely different types, and then hope to purchase a sire that will nick well with all these various individuals. This can scarcely be hoped for and therefore my suggestion is to take a good deal of time and spend some money in fixing upon the type of cattle that is to be bred. Then, if possible, purchase females from one breeder or with similar or closely related blood lines and of the same type.

I would not pay much attention to differences in color, in breeds that have different colors, as in the Shorthorn whose colors are red, white and all possible combinations of red and white. Of course, in breeds like the Aberdeen Angus, the Galloway or the Hereford, a difference in color suggests a possible impurity in the blood and is seriously objectionable. For my part I would be quite as well pleased with a good roan Shorthorn as a red, and would not seriously object to red and white, nor even to white. These are all Shorthorn colors and all have, or should have, equal standing among breeders.

I would then give special attention to the selection of a sire to mate with these cows and heifers. It is not essential to have one of exactly the same breeding, neither is it desirable to have one whose breeding is so far removed from the others as to make a somewhat violent cross. Nor, on the other hand, would I inbreed under any circumstances for, while inbreeding is a most efficient means of improving a class of cattle of no particular breeding it is not a work for the beginner, but for the man of wide experience.

It is a great thing to be able, after conducting a breeding herd for eight or ten years, to maintain a uniformity of type that will mark the animal as one of "Smith's" or "Brown's" sort. As a matter of course, absolute uniformity is not possible, nor is it desirable. No two men have ever been exactly alike, even

if twins. The close observer would find a difference between two leaves from the same tree, apparently similar. The law of variation is quite as important in breeding operations as the law of heredity, but there should be a family likeness in every individual in the herd.

Why do I give this advice? Partly because I have had experience and made a mistake which I fear many others will make—that of buying a cow from this herd and another from that, entirely different in their breeding, and it was found to be impossible to develop a herd with any sort of uniformity except as the result of a long series of breeding operations which might have been avoided by a proper selection of breeding stock to begin with and on the lines above suggested. One of the best ways to secure uniformity is by first securing uniformity, or at least close similarity, in blood lines.

Illinois.

W. H. UNDERWOOD.

FEEDERS' PROBLEMS.

Sweet vs. Sour Feed for Pigs.

Will you kindly inform me which, in your judgment, is best for hogs, to put their middlings or other grain in with their swill and let it sour before feeding, or to feed their grain fresh and sweet at each feed? It is inconvenient to measure their grain ration if put in the barrel with the swill.

Calhoun Co.

O. B. H.

There is no experimental data conclusively showing the relative value of sweet and fermented feed for pigs. In some experiments conducted to determine the relative value of sweet and sour milk for pig feeding little difference has been noticed, although in some instances the sour milk seemed to give slightly better results. The acid developed in sour milk, however, would be a different acid to that developed in fermented feed, and where the slop given is to substitute the bulk of the feed in the ration it is the writer's opinion that it would be better economy to feed it in a sweet condition, mixing the slop, however, from 12 to 36 hours before feeding in order that the meal may become thoroughly soaked, as there is plenty of experimental data to show that soaked meal or grain feed will give about seven per cent better results than that which is fed dry or mixed just at feeding time. Where the slop fed constitutes only a part of the grain ration the sour slop would not, in the writer's opinion, be as objectionable as though it constituted the bulk of the ration. The proposition of measuring the grain is not a particularly important one, since, for best results the hogs should be fed about all they will eat of a fairly thick slop, and the hog's appetite and condition should be made a guide in feeding, rather than the amount of grain consumed.

RAPE AS A FORAGE CROP.

In the August 17 issue of the Michigan Farmer I noted a piece upon Dwarf Essex or English rape, by I. H. W., of Branch county. If more Michigan farmers realized the value of rape as a forage crop and made it a yearly practice to sow more rape for supplementary forage in their spring crops, more of Michigan farms would be mortgage free, and their owners would live in homes with conveniences that would put many a city home to shame, possess larger bank accounts and own means for rapid country transportation—the automobile.

Rape as a forage and a cover crop has many money-making and money saving features, whether sowed with oats, corn or alone. I. H. W. wrote how eight acres saved him three tons of hay, which was no small amount at the price of hay last spring.

Rape may be sowed in oats with as satisfactory results. The growth of the oats holds the rape back until after the oats are harvested. The rape then comes on and in a few weeks at the most an abundance of valuable pasture is to be had for swine, young cattle, sheep and lambs. Lambs can be pastured very profitably upon rape after weaning. The rich, succulent rape supplying the loss of milk, especially when a grain ration is added. As the rape plant will endure quite severe cold weather, and thus will last after the ordinary pasture grasses have succumbed to the frost, it can be pastured until snow flies. By the use of this late pasture stock can either be gotten in good condition for the winter market, or for winter quarters.

We have for several years sowed rape in oats and seeded with a mixture of red clover, alsike, and timothy, with very satisfactory results. We are yet to have

our first total failure of the seeding where rape was sowed, and the successful seeding after oats without rape is rare indeed, in this locality. We have tried mixing the rape and grass seed and sowing with a fiddle ahead of the drill, with the drill grass seeder, and a few days after drilling the oats. On some soils as good, if not better, results can be obtained by sowing a few days later as it gives the oats more time to get started and to hold the rape back from making too large a growth. However, upon our land we can secure better results by sowing ahead of the drill. This year satisfactory results were secured by sowing with the drill seeder.

Some may think that the rape in the butt of the oat bundle makes the oats hard to cure. We have not found it so. By cutting the oats high only the top leaves of the rape are cut off. Although rape is exceedingly succulent, it withers very quickly after being cut and the bundle cures rapidly.

Others may ask if the rape does not decrease the oat yield. It may, but I have noticed that where the rape is the rankest, there is where the best oats are to be found. If there is any decrease in the yield the fall pasture compensates for the diminished oat yield many times over, while the successful seeding and the protected ground are extra gains that will show forth in profitable crops the following season.

Oakland Co.

C. S. C.

THE AGE LIMIT FOR BROOD SOWS.

We have a Poland China sow, now eight or nine years old, that we still keep for a brood sow. She produces each year 11 or 12 pigs. What age could they attain at a profit? How long have they been known to live? SUBSCRIBER.

We have no data at hand regarding the normal length of life of the average hog. Nor would it be particularly useful in answering this question if we had, for the reason that the "personal equation" is the great controlling factor in the length of the period of usefulness of brood sows or other breeding animals. For instance, the average cow is old at ten or twelve years, but we know of instances where cows have been profitable producers to twice that age. In like manner breeding ewes have generally passed their period of greatest usefulness at six years of age, but individual ewes are not infrequently profitable producers at twice that age. In like manner, some breeding sows will retain their virility and prepotency much longer than others. In fact, the old sows are generally the best producers, and if a breeding sow has been retained until eight or nine years of age it is doubtless because she is a particularly good one, and she should not be discarded as long as her good qualities are apparent, simply on account of her age.

AVOCATES PAVED BARNYARD.

A few weeks ago I noticed an inquiry in the Michigan Farmer wanting to know what to do to remedy a muddy barnyard. I haven't noticed any remedy given as yet, so I will give one.

The nicest way would be to pave with concrete, but this would be quite expensive. A much cheaper way would be to pave with stones. Sort out stones with a flat or flatish side and place them close together with the flat side up. Cars should be taken to keep the top level and not use too small stones. The holes between the stones can be chinked up with small stones. Care should be taken to use good-sized stones at places where a loaded wagon would be driven, so they would not be crowded out of place. It would be a good plan to have the outside tier or row a little lower than the rest of the yard and fully as low as the ground around it. In paving one would not have to use all one-sized stones, as the larger ones could be settled into the ground to make the top level with the others. I have tried this plan in front of stable doors and find it very satisfactory.

Grand Traverse Co.

E. R. FOX.

A report was recently received from the Oklahoma Station on the value of alfalfa forage for hogs with and without grain. Pigs averaging about 57 pounds in weight were turned on an alfalfa field in April. At the end of 100 days the average daily gain was 0.26 pounds per head when on alfalfa alone; on alfalfa and all the dry corn chop they would eat the gain was 1.28 pounds per head and day; on alfalfa and a half ration of corn chop the gain was 0.70 pound.

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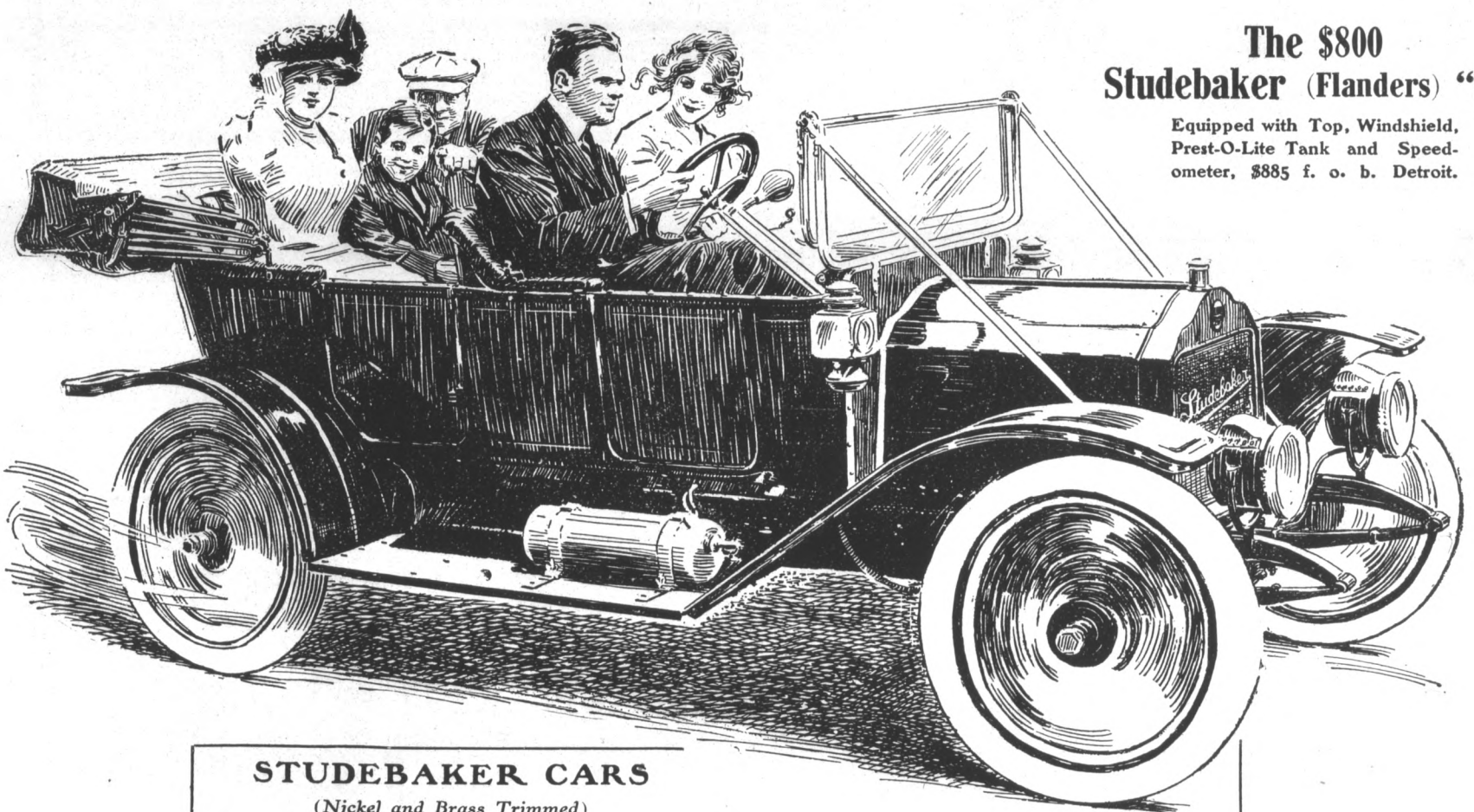
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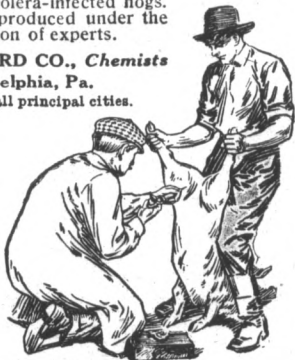
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VETERINARY

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

Hernia.—We have a four-months-old filly that has a small rupture located in navel opening; this bunch is soft and not larger than a hickory nut. We should like to know best treatment for an ailment of this kind. Mrs. A. D., Greenville, Mich.—I am inclined to believe you had better leave her alone and if she does not fully recover by Dec. 1, have her operated on. The operation is simple, not dangerous, and usually successful, when opening is not very large.

Scrotal Hernia.—We have a ten-weeks-old colt that has a soft bunch in scrotum that can be pressed up and out of sight, but as soon as pressure is taken off the bunch returns again. What had I better do? J. K., Fremont, Mich.—If the enlargement is doing no harm and colt is in good health, leave him alone until November or December then have him operated on by a competent Vet. Other treatment is impractical and not successful.

Lacerated Vagina.—I have a six-year-old mare that was lacerated when foaling. Since she met with this accident and when worked hard, suffers pain. She appears to have less strength and courage than formerly. G. A. W., Durand, Mich.—The lacerated parts should be scarified and stitched together with heavy sterilized catgut and stitching allowed to remain. Without being able to unite the lacerated parts she can never be made well.

Swamp Fever.—We have a ten-year-old mare that was taken sick about six weeks ago and our local Vet. who treated her called the ailment swamp fever. She has partially recovered, but is inclined to perspire too freely without much exertion. We have used to good advantage prescriptions taken from the Michigan Farmer and would like to have you prescribe for this mare. C. L. L., Shelbyville, Mich.—Your mare is in a debilitated condition and will be benefited by feeding her plenty of oats and giving her 1 dr. doses ground nux vomica, ½ oz. ground gentian, ½ oz. powdered cinchona and 1 dr. powdered sulphate iron at a dose in feed three times a day.

Wart on Arm.—I have a two-year-old colt with wart on fore arm, large as a silver dollar and have tried different remedies to take it off, but the wart continues to grow larger. B. B., Port Huron, Mich.—The quickest and best way to get rid of a wart is to cut it off; they are only skin deep and the wound will soon heal, if you will apply equal parts powdered alum, oxide of zinc and boracic acid.

Eczema.—We have a black mare that is seemingly all right during the cooler months of the year, but has an itchy condition of skin during summer. J. M., Hudsonville, Mich.—Give her 1 oz. of bicarbonate soda and a dessertspoonful of Donovan's solution at a dose in feed three times a day. Apply the following lotion which is made by dissolving ¼ lb. borax in two or three quarts of water; these applications should be made twice a day and apply sub-nitrate of bismuth to itchy parts of body after using the borax water.

Poisoned by Eating Weeds.—About two months ago my four-year-old mare had an attack of sickness caused from eating poisonous weed, this is what our local Vet. thought. She seemed to recover, but is dull and dumpyish part of time. W. G. W., Selkirk, Mich.—Give her ½ oz. ground ginger, ½ oz. ground gentian and 1 oz. of salt at a dose in feed three times a day. If her appetite is not good give her 1 dr. ground nux vomica three times a day.

Thrush—Knuckling.—I have a two-year-old filly that had thrush in front feet last spring and before she was cured knuckled forward on both fetlock joints. Her chest is sunken and the muscles of shoulder are hard. G. H. W., Moline, Mich.—Apply one part aqua ammonia, one part turpentine and four parts olive oil to fetlocks and shoulder three times a week.

Barren Cows.—I have two cows that have failed to come in heat since last April. Both of them freshened the latter part of March and I would like to know what can be done for them. G. E., Hamilton, Mich.—Give each of them one and one-half drams of ground nux vomica, 15 grs. powdered cantharides at a dose in feed two or three times a day.

Chronic Garget.—I have a six-year-old cow that had an attack of garget last year, but seemed to make a fairly good recovery. This summer she has had several attacks and now one quarter of her udder is almost entirely blocked. She is a cow that I would like to keep for dairy purposes. G. P., Fenton, Mich.—Give your cow ½ oz. powdered nitrate of potash and 2 drs. potassium iodide at a dose in feed twice a day. Apply iodine ointment to diseased quarter every two or three days.

In various quarters the demand for good breeding heifers is active, and the supply available or marketing is very small, most owners being aware of the good returns to be made by breeding for the future beef supply. There is also a much better demand for pure-bred bulls, but too many farmers are still using scrub bulls and cows.

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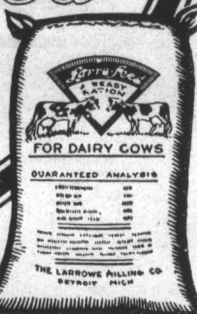
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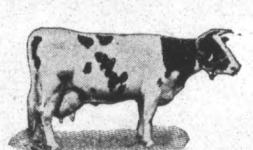
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Average percent fat for year 3.96



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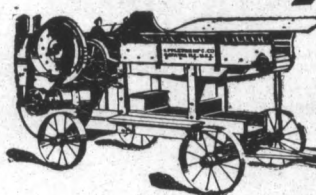
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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

FEEDS AND FERTILITY.

In evolving a system of crop growing adapted to the dairy farm, experience shows that the two foremost questions, feed and fertility, are economically inseparable. They are so intimately related that it is difficult to say just where one begins and the other leaves off. Soils must be fed in order to produce feed. Variety is relished by soils as well as by animals. Where many crops are grown to serve the appetites of the dairy cows rotation is unavoidable. When proper crop rotation is practiced the soil itself is fed a variegated ration. The legumes (nitrogen gathering crops), figure prominently in all dairy rations as well as in the most profitable crop rotations. Having the peculiar power of appropriating their nitrogen from the inexhaustible supply in the atmosphere, they not only furnish digestible nitrogen, (protein), to the dairy ration but they feed the soil with nitrogen at the same time. Following a systematic rotation of crops and feeding them to dairy cattle, increases the soil residues, and causes a natural increase in productivity.

The blighting effect of the prohibitive feed bill and the waning fertility of thousands of dairy farms is convincing proof that many dairymen are buying too much and growing too little, both of feeds and fertility. This is no new subject, yet I hope to present some facts in a different way from what we have usually considered them. I want to show as well as I can how some of these matters in relation to the question of feeds and fertility present themselves to me. It is not my intention to discourage the feeding of supplemental feeds if a man has cows that can consume them and pay for them and return to him in the increased value of the manure 60 or more per cent of the first cost of the feed. My word is more of a caution against the absurd claims made by many men who annually buy tons of these feeds to piece out, not supplement, their dairy feeds. The fault is that many men pay \$30 a ton and upward for the very elements that they should grow on their own farms, not alone for the ration's improvement but for the sake of the land.

Theoretically, the purchase and feeding of large quantities of these feeds of commerce will increase the fertility of the farm; they bring more fertility to the farm from other lands than is removed by the sale of dairy products. The man thinks that he is safe as long as he is buying more fertility than he is selling. In addition to this preachment of the case there are many half-baked, so-called dairy teachers, who have it figured (on paper) that the only loss of soil fertility from the dairy farm is crystallized sunshine (butter) and consequently a man is safe as long as he keeps cows and buys the feed from other lands. All of these arguments sound superficially pleasing to the man, whose early training fails to measure up to the present-day requirements in crop growing and soil handling. It has created an indifference on the part of dairymen to study closely the many things that modern experiments and investigations have proven in relation to feeds and fertility.

In common farm practice the man who neglects to grow fertilizing and renovating crops and relies upon the manure heap to maintain the fertility of his soil, finds his productive area growing smaller year by year. The supply of manure from his cows, as compared with the size of his farm, seldom reaches beyond a few acres about the stables, and while a few acres "hold their own" the many suffer for the few. This removal of fertility from the pastures and far ends of the farm makes a gradual contraction in the size of the productive area until only a small portion of the land is utilized for profitable agriculture.

The growing of proteinaceous forage and fodder crops as a source of protein, (the only element a dairyman has a good excuse for buying), also brings to the farm large amounts of fertility from other sources and leaves it within easy reach of other crops. They also possess the manifold advantage of distributing this fertility over the whole farm and not on a few acres about the barns. I believe and I can say with a fair amount of experience, that the time has come when every acre of tillable land should be utilized in growing feed for the cows. The

man who grows only roughage for his cows on his own farm and buys all of his grain food is farming along narrow lines. Loafing acres and robber cows are equally unprofitable. High-producing cows and rich soils are a money-making combination.

In addition to the fact that home-grown feeds cheapen the cost of the ration they are better suited to the natural needs of the cows than the feeds of commerce that have been manipulated and put through various processes of manufacture which has removed more or less of the nutrients and disturbed the proportion of the constituents. When we feed these by-product foods care must be used to properly balance the ration with other feeds if good results are obtained.

In connection with our efforts to grow crops that possess higher feeding and fertilizing value we should study the limitations of such domestic rations and the good effects of these purchased feeds toward increasing the value of the manure. It is hard to break away from an old practice and establish ourselves in a new line of work. Tension of years hangs firmly and when habits are broken and changes come we are apt to carry to the other extreme. We should avoid this tendency and make the change gradually without decreasing the size of our herd or experimenting too extensively with



Illustrates Method of Teaching Calf to Drink.

new crops for which extravagant claims are made by dealers and seedsmen.

Alfalfa, clover, peas, soy beans, corn and oats are all standard crops for feed and fertility and we should try to improve these crops to their maximum feed and fertility value before experimenting with a new set of crops to fill their places in our rations and our rotation. There is as much difference in the quality and value of our home-grown feeds as in the feeds of commerce, and it should be our aim to grow, harvest and feed these crops in the best possible condition. Feeds and fertility go hand in hand. Those crops which should be grown on the farm to maintain and improve the fertility of the soil produce that class of feed necessary to furnish a properly balanced ration for milk production. In short, we must provide succulent feed during the whole of the year, cheapen the cost of protein and increase the productivity of the soil. If we grow better feed and fertility crops, as I see it, we are to grow better corn, alfalfa, clover and oats and peas, the alfalfa, clover and mixed crop to take the place of the high-priced wheat bran. If we look to the alfalfa, clover and mixed cereal and legume crop for cheaper protein, these crops must be cut and harvested when they have reached their greatest feeding value and handled so as to insure a maximum feeding value.

The growing of maximum crops of feed for the dairy herd requires good seed, plenty of available fertility, a well prepared seed bed and approved methods of cultivation. This brings us down to another important question. All of our feed crops are bulky. There is a limit to the capacity of a cow's rumen and the energy she must employ in keeping it working. If we choke the machine we cut down its capacity. To reach the digestive and assimilative capacity of our cows they must be supplied with the required amount of fats, carbohydrates and protein in about the right proportions. The excessive amount of dry matter contained in our standard feed crops renders it impossible, without the aid of concentrated feeds, like linseed oil meal, cottonseed meal and similar feeds, to reach the digestive and assimilative capacity of our cows. In other words, the cow is not capable of eating, digesting and assimilating a sufficient quantity of these domestic feeds to enable her to produce a maximum flow of milk. Cows differ in their ability to convert various feeds into milk, each cow being a proposition within

herself. When buying feeds for our dairy cows it always pays to buy those that will bring the most fertility to our farms and supply the greatest amount of protein at the least cost. Such feeds as are worth almost as much as a fertilizer as for feed are always the cheapest feeds that we can buy to supplement our home-grown feedstuffs.

New York.

W. MILTON KELLY.

TEACHING CALVES TO DRINK.

There are farmers who claim to be able to teach calves to drink without ever having to put their fingers in their mouths, but I, for one, was never able to teach them that way. Perhaps they do as one farmer I know, who starves the calf for a couple of days, or until he comes to time and drinks without help. I don't want to do that with my stock if I do have to let the calf suck my fingers once or twice. But I have found out a very simple little trick which makes the operation very much easier and more satisfactory.

A few years ago I used to reach down over the top of the calf's nose and allow him to take my fingers in his mouth and then, by main force, try to force that balky head of his down into the pail. Well, I usually got it there but many times it was only after we (the calf and I) had accomplished several gymnastical performances of a highly exciting nature, in some of which I was riding the calf, and in some the calf was walking on me. I usually went out of the barn looking as if I had just taken a shower bath in milk and muttering strange things, neither complimentary to the calf nor becoming in a Methodist.

Since I got the tip, (which, by the way, came from my young brother, who believes it to be original with him), I go calmly to the calf's side, set the pail in front of him and slide my hand under his under jaw and my fingers in his mouth, he makes a duck with his head to get a better hold and finds his head in the pail. The sensation being pleasant, he usually decides to let it stay there. Since I began this method of teaching them to drink I have never been troubled with calves determined to drink their milk with heads pointed up, and moreover, once or twice at the most is all I ever have to give them my fingers. Mecosta Co. L. C. WHEELER.

WESTERN MICHIGAN HOLSTEIN BREEDERS' ASSOCIATION.

About half a hundred members of the Western Michigan Holstein Breeders' Association, accompanied by their wives and families, held their second annual basket picnic at "Farmer" Fred S. Kenfield's beautiful Long Beach Stock Farm, on the eastern shore of Gull Lake, three miles from Augusta, Mich., on Wednesday, August 7. Not among Michigan's hundreds of famous lakes is there one that has more natural attractions than Gull, and Long Beach Farm, with its big, shady grove, offered an ideal place for this delightful event.

The association has a membership of nearly 100 in 10 counties—Kent, Allegan, Ottawa, Kalamazoo, Calhoun, Barry, Ionia, Montcalm, Shiawassee, Berrien—and is the largest of any organization of breeders in Michigan, outside of the State Holstein Association. Present at this picnic were members from Kent, Allegan, Kalamazoo, Calhoun and Barry counties, each and every one of whom took an active interest in the proceedings of the day and enjoyed "Farmer" Kenfield's unbounded hospitality to the utmost.

Preceding dinner the breeders paid a visit to the spacious Long Beach stock barn, where Mr. Kenfield has one of the most superb herds of pedigreed Holsteins in the state, numbering nearly 60—18 cows of milking age and the balance calves, ranging in age from five months to a year and a half. The cattle were given a thorough inspection by the breeders, who had only words of praise for their excellent appearance and for the splendid "front" which the herd as a whole made.

At two long tables under the trees the guests sat down to a typical picnic dinner, tempting and delicious. The tables were presided over by the gracious hostess, Mrs. Kenfield, her charming daughter, Ruby, and several other young ladies. During the dinner hour Haas' band played a number of choice selections, which were greatly enjoyed.

As the opening feature of the scheduled program Mr. Kenfield in a felicitous manner extended a hearty greeting to the assembled guests, extending to them

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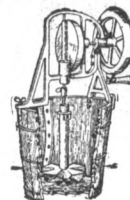
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THE FAIR OF INNOVATIONS—THE FAIR SO DIFFERENT

There's a reason and here it is. The management of the Michigan State Fair, desiring to perpetuate in the memory of the Michigan people a standard for fair promotion devised many innovations for 1912, innovations in fair promoting.

Radical departures the rule. One of the most important changes ever made in fair promotion is the addition of the industrial features including the Progress Building with every exhibit in active operation manufacturing the goods made in Michigan.

Boys' State Fair school a winner. When the plan of the school for boys to be conducted at the State Fair was broached it met with hearty response and eighty-three boys will attend this agricultural and industrial exhibition with all expenses paid.

Only Fair to promote a land show. In adding a land show with exhibits by the great railroads of every section of this country, the State Fair brings to Michigan a view of the products of the entire country, North, East, West and South.

New demonstration dairy building. After inspecting the dairy buildings at six other Fairs the Michigan State Fair adopted all good points of the others and has just completed a structure to be proud of.

There's amusement also, lots of it. There'll be the horse races of the Grand Circuit five days of the week, the night horse show every night, and both will be even greater events than in the past, providing that is possible.

Educational Exhibit promises much. From every city and town of the State will come exhibits prepared by the scholars in competition for the liberal prizes which are offered, and some extraordinarily interesting exhibits are promised.

Segregation of the real Midway. In the removal of the old Midway, now cleansed and made wholesomely clean to a spot in the far corner of the grounds, the Fair management has taken a radical step which will doubtless earn commendation.

Children's Midway a taking idea. Real live ponies to ride merry-go-rounds and numerous other attractions with a play ground especially for their use will make this the Fair of Fairs to the youngsters of the entire State of Michigan.

Valuable soil test for farmers. Several professors of the Michigan State Agricultural college will make about 200 tests of soil each day of soil to be brought in by the farmers.

Price of Admission remains the same. In spite of the numerous added attractions, the enormous expenditure made necessary by these, the price of admission remains the same as last year, 50 cents for adults and 25 cents for children.

Good roads are much needed. And they are needed in Michigan, now 18th in good roads standing in the United States. The demonstration of good roads building carried on exclusively by Michigan's Fair will be continued this year.

Latest models at automobile show. Recollect that Michigan's automobile building is the only exclusively conducted automobile show building at any Fair and remember also that the earliest view of the latest models will be found here.

Miniature model farms a feature. Thirty boys from Detroit took up farming at the Fair grounds in the Spring to bring forth crops for exhibition at the Fair and the results of their work will be viewed with interest by the country cousins.

Twenty stars in automobile races. Louis Disbrow, with his 200-horse power juggernaut, Frank Kulick and his miniature appearing, but record-breaking Ford car. Farmer Bill Endicott and a score more great drivers are in the races Saturday afternoon.

Lieut. Mestache will fly high. This gentleman was the first aerial mail carrier, New Orleans to Baton Rouge, first to fly, also from Paris to Madrid, and from Paris to Rome, and he will fly in his monoplane at the Fair grounds and over nearby country.

Fireworks will be extraordinary. Everyone pronounced the fireworks display at Cadillac the greatest ever, and the same company has the State Fair contract and will put on the Fall of Old Mexico in fire and the battle in the Skies.

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COLON C. LILLIE, Coopersville, Mich.

the freedom of Long Beach Farm and expressing the wish that they would be frequent visitors in the future. In the absence of Judge Frank H. Williams, of Allegan, who was down on the program to speak on "Our Boys and the Citizens of Tomorrow," Mr. Kenfield introduced a Long Beach neighbor, Prof. J. A. Scott, of Northwestern University, stating that the professor's topic would be, "What I Don't Know About Holsteins."

Professor Scott spoke in a happy vein, proving himself to be an ideal postprandial orator. He related a number of humorous anecdotes, recited some laughable homespun verse and his witticisms caused much merriment.

W. W. Willard, of Kent county, president of the association, spoke on the subject, "Kindred Spirits and the Black and White," saying in part:

"A common object or a special result to achieve makes people kindred spirits. If I were asked what result our association should aim to achieve I would answer, 'To develop the best all-around dairy cow of the age.' The Holstein cow seems to be taking care of herself.

"Our National Holstein Association has grown from a few hundred to nearly 4,000 members. Organizations like ours are springing up all over the country. The Holstein does well in cold or hot climates, is able to use all kinds of coarse feed and her products are commanding attention, whether taken to condensary, creamery or the city milk supply.

"I congratulate our members on the fact that it is one of our number who developed the 31-pound champion cow of Michigan; that it is one of our number who is a member of the firm producing three of the championship butter cows for one year; that it is one of our number who bred the cows that lately made the astonishing record of over 41 pounds of butter in seven days. Surely, we have championships to spare."

"Michigan is one of the banner states of the Union," said H. H. Stroud, of Hopkins, in introducing his subject, "West Michigan, the Land of Promise, and the Holstein Cow." "It has the soil to grow every known thing in grain and vegetables. It is known the world over for its celery, which is the finest grown anywhere. It is now becoming noted for the growing of alfalfa. Certain sections produce corn equal to the best grown in the greatest corn state in the Union. We can truthfully say we have the best Holsteins in the country. General farming can be carried on in Michigan the best of any of the states. The peach belt of Michigan is noted in every country on the globe. Of course, we have difficulties to overcome in all our crops, but no more than they do anywhere.

"Our climate is one of the grandest to be found anywhere and is adapted to every kind of fruit, except those grown in tropical climes. Michigan is the second apple-growing state and its 'fruit with flavor' is in great demand all over the United States, as well as in England. Michigan lakes are acknowledged to be the finest in America and nowhere is there better hunting and fishing. People come here from far and wide to be cured of hay fever, catarrh and pulmonary troubles.

"Nowhere are finer people to be found than in Michigan. We also have sources of education that cannot be excelled in the United States.

"Holstein cattle do exceptionally well in this state. There is no reason why Michigan cannot take the lead over every other state in the breeding of Holsteins—in fact, we should lead the world in the near future in the breeding of these kind, gentle and intelligent cattle."

In referring to the June sale of Holsteins at Grand Rapids, conducted by the association, Secretary W. R. Harper, of Barry county, said:

"The sale was an experiment, but it proved highly successful. We believed in order to promote the interests of the Holstein breeders in western Michigan that a sale should be held in Grand Rapids in June. We got together 75 cattle and much to our surprise sold 72. We established a record for a consignment sale, conducting it at an expense of five per cent, lowering the Detroit association's record. We hope to make each annual sale in the future better than the preceding one and in order to do this will keep out all cows that are in any way defective. Breeders have promised us to make an extra effort to have their cattle in the pink of condition for these sales.

"Western Michigan breeders allowed outside buyers to come in last June and select the choicest of the consignments.

There is not a surplus of Holstein cattle in western Michigan and our breeders should make an effort to keep outsiders from carrying off our choicest Holsteins. I was informed by one buyer who paid \$195 for a cow, that he and others had paid \$265 each for four cows at another sale, not as good as this one. You are letting Holsteins get away from Michigan at what seems to you to be fancy prices but which in reality are cheap.

"It was a Michigan-bred cow that carried off the world's record in New Jersey recently, for seven days, her record for that period being 695.5 pounds of milk, 41.8 pounds of butter (80 per cent fat), and 33.5 pounds of butter-fat."

Upon motion of the country's champion Holstein breeder—G. A. Dimoc, of Kalamazoo—Mr. and Mrs. Kenfield were tendered an enthusiastic vote of thanks for the hospitable manner in which they had entertained the members of the association.

Mr. Kenfield is an eminently successful business man of Chicago, being the head of a big publishing house. He is also the owner of "Brick," and a number of other widely known trade journals.

Long Beach Stock Farm consists of more than 250 acres, somewhat rolling, sand and clay loam soil, and since Mr. Kenfield purchased it he has made many improvements in a decidedly practical way. While Long Beach Farm is essentially a stock farm, still a large "slice" of it is devoted to fruit culture—peaches, plums, pears, apples, etc. During the last three years thousands of trees and vines have been set out and the acreage is being increased constantly. The owner looks for a bumper grape and apple crop this year. His peach crop, like that of hundreds of other growers in Michigan, is practically a failure.

Whether in the office or on the farm, Mr. Kenfield studies out the principles and details of everything new, and as a dairyman, blooded stock raiser and fruit grower he is thoroughly well posted and is getting excellent results from his agricultural efforts along various lines.

When Mr. Kenfield bought this farm he decided to keep Holstein-Friesian cattle and was determined to buy and breed into the best families, which he has succeeded in doing. All his cows are thoroughly tested and stand on their individual merits. It is confidently predicted by those who have watched his progress in this particular, that it will not be long before he will have a herd of Holsteins that will rank with any in the United States.

Kalamazoo Co. H. E. BABCOCK.

THE AUTUMN AND WINTER FEEDING OF THE DAIRY COW.

The natural food of the dairy cow, and the one most fitted for the production of the richest milk, is grass, which has its food constituents present in such proportions that it may be considered in itself a perfectly balanced ration. This is not only so in regard to the relative value of the several food constituents it may contain—the digestible albuminoids, carbohydrates and fats—but also in two other very important matters—bulk and moisture.

These remarks, however, apply only to grass in its prime, and, of course, to grass of good quality; for the quality of grass varies with the richness of the land, and the variety of plants of which it is made up, which in their turn are influenced by the quality of the soil. Good pasture grass in June has an albuminoid ratio as narrow as 1 to 4, which two months later is widened to 1 to 7; and from this it will be seen how excellently adapted grass is for milking cows during the summer, and how desirable it is that it should be improved for them later on by the addition of more albuminoid matter. Up to the middle of July, good pastures supply food sufficiently high in albuminoids to enable the cow to milk at her best, but by the end of July, the albuminoid ratio of grass is only 1 to 7, and later on still wider, instead of 1 to 5 or 6, about what is required for a cow in full milk, and the addition of some concentrate is necessary to bring up the albuminoids to the right standard for summer and autumn calving cows soon after they have calved.

In practice, now that the value of artificial foods, such as protein concentrates, so-called, is becoming recognized, a supply of such feeds is often allowed on the pastures. Burnt pastures, and those poor soils that grow herbage of inferior quality, really necessitate at all times, some additional feed to keep up and prolong the supply of milk; for the addition of concentrates—especially one

rich in the nitrogenous constituents of food—supplies the albuminoids which such grass is deficient in, while, at the same time, there is a very marked improvement noticeable in the pasture; as (although an animal producing milk is very likely to make the utmost value of the cake), the undigested portion, which must always be present in any food, gives manure of good quality. But, as I have shown, even the very best grasses deteriorate in feeding value as the season advances, and an addition of some food is essential to enable the cow to do her best.

There exists considerable difference of opinion as to the time of year at which cows should be taken off grass and housed. Climate, which varies considerably, must, of course, be taken into consideration, and it would be absurd to advocate allowing full milk dairy cows to remain out all winter in some districts because there are sheltered valleys where this system of management is found to answer. But there is no doubt that there is generally too much hurry to get the cows in, and especially to begin to shelter them at night. It is argued that of the food we give an animal, part is required to repair the waste of tissue, part goes to maintain the animal heat, and the surplus remaining is expended, in the case of the dairy cow, in filling the milk pail. This being so, it is contended that to allow a cow to remain out in all weathers is to make a greater draught upon the food for the maintenance of the animal heat, leaving less to convert into milk, and that when there is such a drain on the cow's system as the production of several gallons of milk daily entails, she is not in condition to resist chills like the dry beast or young stock.

This sounds well in theory, and yet experience and experiment demonstrate that the milk yield is adversely affected by bringing the cows in early, or even keeping them in at night.

Some time ago, an experiment was described as having been conducted, as to the housing of milk cows in autumn. The regular practice had been to bring all cows into the house at night about the end of October, a proceeding which entails extra labor, and extra feed, and extra bedding. The object of the experiment was to ascertain the advantage or otherwise, of bringing milk cows in at night during the late autumn. Two lots of cows, as closely alike as possible, five in each lot, were selected, special care being taken that each lot corresponded as to date of calving, length of time in milk, and weight of beast. The two lots of cows were treated in exactly the same manner, with the sole exception that one lot was kept in at night after milking, and not turned out until after milking the following morning. This lot of cows received 8 lbs. of hay in the racks the last thing at night. The second lot were milked and then turned out to the same pasture and brought up for milking the following morning. Milking was commenced at 6:30 a. m. and 4 p. m.

The experiments demonstrated that the effect of keeping cows in at night is to decrease the milk yield at a greater rate than by leaving them out on the pastures, that the effect of quality, as shown by the percentage of butter-fat in the milk, is practically the same, any advantage being with animals turned out at night, and that they do not suffer in live weight by being kept out.

Experience confirms experiment as to falling off in the milk yield when the cows are kept in, and the inference is that, of course, with proper provisions for supplementing the deficiency of the grass in albuminoids, the cows should be kept out as long as possible.

At no time of the year do stock need more watching than just now, and dairy cows especially need care. It is not desirable that cows should be allowed to sink in flesh when facing winter, and the farmer should have a certain standard of condition below which his cows should never be allowed to get.

There comes a time, of course, when the pastures must be abandoned, and the cows brought in for the winter. Then we have to consider that ruminant animals must have bulky matter in their diets, such as hay or straw, and are well capable of dealing with the crude fibre contained in them.

Also that cows require a diet that is somewhat relaxing to the bowels, and that when grass is not available, roots, bran, linseed, small quantities of molasses or other laxative food material has to be relied upon for keeping them right in this respect.

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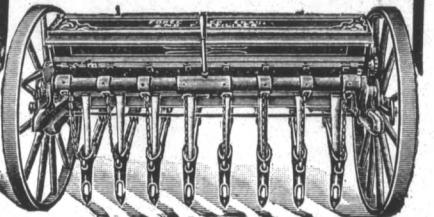
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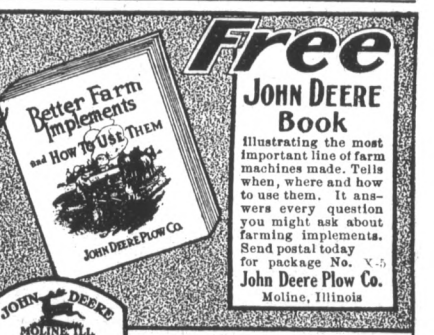
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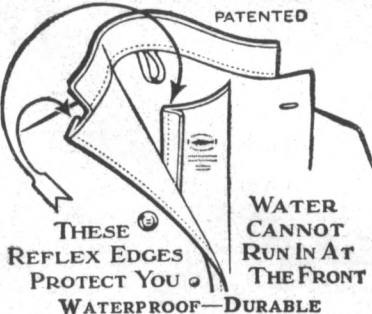
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POULTRY AND BEES

HOW DO YOU MARKET YOUR POULTRY PRODUCTS?

A large part of the profits in poultry keeping depends upon the marketing of the products. The poultryman must be a good salesman as well as a good raiser of poultry. Either he must have good markets to begin with, or know how to make them. High-priced trade is not found "ready made," nor can it be "made to order" by others, and transferred. The poultryman must make it himself. To build up a high-class trade requires time, skill, tact and high-grade products that somebody wants and that most people will not take the trouble to supply. Such a trade is worth working for. The easiest money to be made in the poultry business, or in any other business, is the margin of profit received for extra quality put up in an attractive package, delivered at the right time to the right market.

The nearer the producer can come to the consumer in selling his products the higher will be his prices and the greater will be the labor and expense of marketing, but it pays. The highest prices can be obtained and the largest profits are made in supplying a retail trade. This is also one of the most satisfactory trades to cater to and is easy to get. There are hundreds of families in every large town that are looking for the person who will furnish eggs regularly each week the year around at a cent or two cents per dozen, or more, above the retail store price. The stores in large towns and cities are frequently willing to pay several cents a dozen above the highest wholesale price for the right kind of eggs delivered with regularity throughout the year. But the best paying customers, whether retail or wholesale—those who are willing to pay five to ten cents per dozen above the highest wholesale quotation—are hard to secure. Such trade, which should be the ultimate goal sought by all commercial egg-producers, must first be educated up to an appreciation of high-class eggs before it will pay the highest price.

There is a fair profit, but no more, in producing eggs at regular market prices. The largest profits must come from superior marketing and from special market advantages in selling eggs and stock. A difference of only a few cents per dozen makes a large increase in the income when several hundred fowls are kept. For example, the average highest market price per year for eggs in New York city is about 21 cents per dozen. A certain poultryman who has 1,000 hens sold his eggs last year for an average of seven cents per dozen above the highest market. Assuming that he sold from each fowl ten dozen eggs, which is a fair but not a high average, we find that at seven cents per dozen he received 70 cents per hen over and above what he would have received if he had sold the eggs at the highest wholesale quotation. Therefore, from his 1,000 hens he received the very comfortable sum of \$700. This was all clear-cut profit, due entirely to good business methods, neat crates, careful grading of eggs, cleanliness, quality of products and regularity of shipment throughout the year. Is this worth trying for?

Making and Keeping Customers.

It is an almost universal experience in poultry raising that the "best advertisement" is a satisfied customer. Trade grows by one satisfied customer recommending you to another. Poultrymen who can reach the rich guests at summer resorts, and those who live in communities where summer boarders are taken on the farms, have a good opportunity to secure customers for eggs. Frequently a large hotel, restaurant, sanatorium, hospital, and occasionally large retail dealers, will pay nearly or quite as much as private families. This wholesale trade, however, is harder to secure, but easier to serve.

In order to adjust claims for breakage with the express companies it will be found more satisfactory to have the purchaser pay the express charges, even if it should be necessary—which usually it is not—to have the express charges deducted from the bill at the end of the month. The consumer will then hold the express company responsible for rough handling. The one who is on the spot and finds the eggs broken can deal direct with the man who delivered them much more easily and satisfactorily than through a third party living at a distance. With strong, handy, conspicuously

stenciled crates the breakage is not serious. If possible, avoid shipping to points where the eggs must be handled by two express companies. Each company lays the breakage to the other.

It is advisable to have a regular shipping day each week. This economizes labor by bunching the work of cleaning, packing, and delivering at the express office. It also simplifies the keeping of accounts. Once a week delivery will satisfy most customers. If all eggs are sold each week and the shipment lasts the customer a week, it is plainly possible that some of the eggs may be two weeks old when the last eggs are eaten. If they have been kept in a proper place, however, they should be perfectly satisfactory. By shipping to certain customers each day of the week, eggs can be delivered before they are two days old, but usually this system is wholly unnecessary and multiplies the work.

The Price Problem.

There are three ways of fixing the price. The first is to agree upon a single price per dozen for the year and the number of eggs to be delivered each week. The latter clause is necessary in order to insure fairness and not leave to either party the temptation to take advantage of the other. This might easily be done by a dishonest purchaser who would sell eggs to outside parties when he could get more than his contract price, or to the dishonest buyer who would purchase elsewhere when he could get eggs cheaper than the contract price.

The second plan is to decide upon a certain fixed percentage increase; for example, five to 50 per cent, to be paid above the highest market quotation each week, as quoted in the wholesale market. By this sliding scale there will be less incentive for either party to the contract breaking faith.

The third plan is to name a fixed price per dozen for the different months, varying the price a certain number of cents, according to the demand which usually maintains at that particular season. A good scale of prices on this basis, which is being paid to a certain poultryman, is 25 cents per dozen for April, May, June and July; 35 cents per dozen for August and September; 40 cents per dozen for October and November; 45 cents per dozen for December and January; 35 cents per dozen for February and March. By this system there is an incentive for the customer to eat more eggs when they are abundant and cheap, and to find less fault if he should not get his full supply when they are scarce and high.

New York.

T. A. TEFFT.

PRODUCING AND SECURING EXTRACTED HONEY.

Extract each variety of honey by itself, if possible, but it is not always possible, for the bees will persist in working on sumac when we would like clover honey. I prefer to do the extracting in its season as soon as it is fit. One must be guided by the thickness of the honey—it should be left with the bees until ripe enough to keep. I believe all beekeepers should be very particular about this, in order to be able to have a reliable article. If honey is extracted while raw or very thin, it will soon take on a rank, strong taste, and really is not worth over half price.

My honey is all left on the hives until the middle of September or later. By this time the bees have thoroughly ripened it and it has become so rich and thick that it takes a good right arm to swing it out of the combs. When the combs are taken from the bees they are carried to the honey house, and left there until evening. After the bees have stopped flying we drive to the yard and haul home the honey. Before beginning to extract it I put a keen edge on the uncapping knife. This will prevent tearing the combs to a great extent when shaving the cappings off. The knife is occasionally dipped into a pail of hot water which greatly expedites the work, also. Two frames of nearly equal weight are selected each time so as to balance nicely in the extractor. The crank is turned rapidly for a minute or so and the honey is whipped out of the combs.

It is then drawn off at the honey gate into an agate pail which has a sieve over it to catch the bits of capping which frequently get into the extractor. The honey is then poured into five-gallon tin cans for the wholesale trade and some in Mason jars and tumblers for retailing.

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F. G. HERMAN.

While other duties are pressing just now it is important to take a few moments to consider the needs of the poultry this coming winter.

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PRACTICAL SCIENCE.

THE GENERAL CONSIDERATIONS IN DAIRYING.

BY FLOYD W. ROBISON.

In the last few years dairying has come to be an important factor in Michigan agriculture. Certain stalwarts have for years cast about them with the purpose of favoring the introduction into farming of certain methods and procedures which would tend to the ultimate good of agriculture in the state. During the life and activity of the late Dr. Robert C. Kedzie, of the Michigan Agricultural College, the sugar beet was developed and added to the crops produced on Michigan farms, which introduction tended very materially indeed, to the farmers' advantage. A number of personages have lent their influence and time to the building up of dairying within the state. We are pleased to pay special tribute to Ex-Governor Fred M. Warner in this matter as having, through a peculiar insight, become conscious that through the development of dairying, the farmers of Michigan had in their hands an industry which would place them independent of the conditions which so closely encompassed them as a rule. Our sister states to the west of us, Wisconsin and Minnesota, with climate no more favorable than ours, have developed wonderfully along the lines of dairying. The state has recognized the value of the industry of farming and the dairyman has been encouraged by favorable laws and been given assistance in various ways through the executive departments.

Warner's First Message Called for the Fostering of the Dairy Industry.

When Governor Warner was inaugurated in 1905 his first message to the legislature was an appeal for recognition for dairying in the state, which appeal was wisely met by the legislature and during his entire administration of six years the energies of the Dairy and Food Department were bent to a remarkable degree to the up-building and fostering of this industry in the state. There are many reasons why dairying should be fostered among our people in preference to certain other animal industries. Among these reasons is the fact that the dairy industry is a cash industry.

The Dairy Business is a Cash Business.

It is not necessary to wait one, two, three or four years for financial returns from an investment in dairying, neither is there the same hazard of chance in the dairy business that there is in the production of beef, for example; or the raising of pork, or horse raising or other avenues of live stock husbandry. In the production of milk, there is financial recompense week by week, or month by month, according to the market conditions, but with the tremendous market for dairy products which exists in this country, and the unfailing demand, there is no risk from that point whatever, and the dairyman is assured from the time of making his investment, of a market for his product. Not so with the raising of horses or the production of beef, for there the question of supply and demand is constantly before the farmer. Let us consider for example, the raising of horses. Aside from the fact that the farmer must have a considerable amount of capital to start horse raising with on any prominent scale, there is the question of an investment of two, three or four years before there can be any realization in a financial way on this investment. It is very evident at the start that the farmer must be well equipped financially in order to take this chance and besides he must be possessed of considerable intuitive knowledge regarding what market conditions may be three or four years hence. In the dairy business, meanwhile, he has disposed of the products and is receiving financial returns week by week therefore. In raising horses he may by one bold coup d'etat acquire a fortune but we should remember that fortunes are lost in just the same way and we would therefore conclude that horse raising is too hazardous a business to warrant directing the energies of the people generally along this line.

Beef Production is Not so Safe as Dairying.

In a similar degree though, the change is not so great, would we class the production of beef. The farmer may go upon the market and purchase one to several car loads of steers with the idea of feeding them and in this way turning the results of his summer's work into

money through the sale of the steers when the feeding season is over. The great hazard in this procedure is that the farmer has no control of the market and while he may buy on a rising market he has no assurance that he may in turn sell on a rising market. In fact, as is too well known by many feeders, combinations in the various packing centers and elsewhere too often so control the market at the time his beef is ready that he actually sells at a loss. Obviously, beef production is too hazardous for the general farmer to stake his interests in. Regarding dairying, however, the dairyman is always sure of a market and no matter how much or how little he produces, that milk always finds ready sale if he will give it any consideration whatsoever.

Profitable Dairying Depends Upon the Dairyman Himself.

A very unique feature of dairying is that as a rule, the dairyman gets in return for his work according to the intelligence of the effort he puts into it. Care and skill go hand in hand in dairying. The dairyman's mind is his most valuable asset. When he has mastered the few fundamental principles of dairying, he has at his command the key to the store-house of a profitable industry. The state has done considerable for the dairyman and has benefited in return materially thereby. It is the duty of the dairyman to produce butter or milk or cheese, as the case may be, as perfect and clean and wholesome as modern science and human ingenuity can produce it. The dairy industry is not an easy business and the state is not interested in the selection of a business which can be carried on without effort on the part of the farmer but if an industry can be established which will yield according as the energies of the farmer are exerted, then that industry is one of promise in the land.

When the legislature of 1905, acting upon the message of the governor, wrote into the statutes of the state of Michigan, "It shall be the duty of the Dairy and Food Commissioner to foster and encourage the dairying industry of the state," they meant that the activities of the Dairy and Food Department should be directed in a searching manner into the general conditions of creameries, cheese factories, condensed milk factories, skimming stations, and milk stations and farm dairies and by inspection, policing and systematic instructions secure a more valuable food product to the consumer and put this legitimate and valuable industry among the farmers of the state thoroughly upon its feet. That this was done is throughout the state universally accepted, and the standing of dairying as a business within the state in the last few years is a living testimonial to the wisdom and foresight of the governor in advocating it. The farmer has become acquainted with methods of increasing his profits in dairying and the consumers have benefited to a marked degree in the increased intrinsic value of dairy products through better manufacture and through the introduction of sanitary reforms. The installation of competitive contests among the butter makers of the state was provocative of much pleasant rivalry. The installation of cow-testing associations was the means of inciting a more careful study of the feed problem.

Economical Feeding Usually Spells Success in Dairying.

It is well known that the dairyman who would succeed financially in the dairy business must feed economically. This does not mean that cows should not be given their full complement of feed but that the ration must be selected with care and upon a scientific basis. The feed bill is a bill that is the dairyman's greatest concern and it should be reduced to the lowest possible margin through the scientific combination of rations. We have already stated that economy in feed does not anticipate cutting down in the quantity of nutritious feed given to the cow but it does contemplate that the feeder must select his nutrients in that feed in which they may be obtained at the lowest price. This means that so far as possible it is generally expedient to raise the roughage portion of the ration on the dairyman's own farm and purchase such an amount of true concentrates as are necessary to supplement the home ration. One of the best classes of feeds at his command is

the leguminous feeds, such as clover and alfalfa, also the succulent, such as corn silage. In some sections of the state corn silage is being supplemented by ensilaged peas and beans and in this way the protein is appreciably raised. The dairyman must cast about him with a studious eye to select just that combination of feeds which, first of all, will satisfy fully the physiological requirements of his cows, and second, which will yield the greatest quantity of milk products for the dollar.

ABNORMAL CORN PLANTS.

With the vegetable kingdom, as in the animal, inbreeding, when carried too far is injurious. Sometimes corn growers, while attempting to produce new varieties resort to almost any extreme to accomplish the desired result. On the other hand, in spite of usual precautions, slight accidental crossings between varieties take place, which cause serious embarrassment to growers of seed corn and plague everyone who wants to raise corn which is uniform in appearance.

The Connecticut Experiment Station for more than six years has been studying the inheritance of corn characters and in many cases has met with dwarfs in strains which have been inbred. In one instance some dwarf plants appeared in a commercial culture of Stowell's evergreen Sweet. A normal plant from this culture was inbred and gave both dwarf and normal plants the following season. The original dwarf plant was not as high as a normal ear from a normal plant when stood on end. Later a cross was made between a normal plant and a race in which dwarfs had never appeared, which, when grown gave only normal plants, two of which were self-fertilized. One of these ears produced only normal plants, and the other gave both normal and dwarf forms.

Several attempts to self-fertilize the dwarfs have proved unsuccessful and in one case when a few mature seeds were produced they failed to germinate.

Officials of the station state that if dwarfs appear in an otherwise valuable strain they can be most quickly eliminated by hand pollinating a large number of ears, although it must be expected that one out of every three will give only normal plants. The hand-pollinated ears should be tested by planting a part of each and reserving the remainder of the seeds. The seed from all ears which in this test gives only normal plants may be used to develop the strain the following season. Unless the strain is a most valuable one such a method should not be used.

Officials of the Department of Agriculture have strongly recommended detasseling as a means of improving the yield of corn, utilizing only the ears from the detasseled plants as seed. There is then no danger from inbreeding and the corn grower is not likely to encounter abnormalities such as dwarf plants, divided ears and irregular rows of seeds.

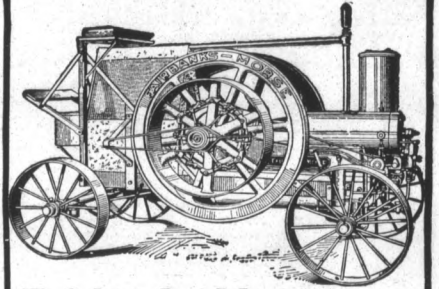
G. E. M.

EFFECT OF PLOWING ON FIELD OF WHEAT.

An experiment was conducted at the Oklahoma Station for the purpose of determining the effect of early, medium and late plowing upon the yield of wheat. As an average for five seasons, July plowing gave a return of 27.1 bushels per acre; August plowing yielded 24.2 bushels per acre; while land which was turned about the middle of September brought only 22 bushels per acre as an average. If the wheat fields are plowed in July and are then worked down with tillage implements so that they do not present a rough, open surface, any rain which may fall throughout the summer will be absorbed and subsequent culture will enable the grower to save this supply for his crop. The same plan can be followed in preparing fields for alfalfa seeding. Where it is intended to prepare the soil early in September, officials of the station recommend that special effort should be made to pulverize the seed bed thoroughly after plowing so that in the event of autumn rains being abundant, the crop will come through in good condition.

So destructive to the grain crops in Korea have the sparrows been that the authorities are encouraging the farmers to kill as many of them as possible. Last year more than 3,790,000 sparrows were destroyed. This year the crusade against the little birds has again been instituted and thousands of them are daily being hunted and killed.

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DETROIT, AUG. 31, 1912.

CURRENT COMMENT.

The Farm Labor Problem. The farm labor problem is conceded to be one of the most difficult to solve of the many perplexing problems with which the average farmer is confronted. Too often when one hears this problem discussed it is in a rather one-sided manner. Occasionally, however, one hears an expression from a man who has had considerable experience in hiring labor for farm work, who has come to look at the problem from both angles, that is from the viewpoint of the employe as well as that of the employer.

In such cases one is quite apt to learn that the employer has retained his help for consecutive periods of more than average length and speaks of his employes as men who are faithful to his own best interests. In another column of this issue will be found an article from such a man; a man who has apparently reached the best solution of the farm labor problem, and a solution which the average reader may well peruse with thoughtful care.

If we are to have the best help upon the farm we must give constant employment to men under conditions which will promote a degree of satisfaction on the part of the men. Otherwise, we will be more than likely to be dissatisfied with the character and extent of the services which are rendered. Undoubtedly, the best solution of the farm labor problem is to so plan the farm work as to be able to hire the men the year round, and then provide suitable tenant houses for them. This affords permanent employment at fair wages, which is always an attraction for the men and establishes them in a more or less permanent manner upon the premises.

Then, the arrangement of the work so that it may be accomplished within reasonable hours, the granting of reasonable concessions as to home privileges and recreations and the promotion of interest in the work by making it educational to such a degree as is possible, will put into it a degree of mutual good feeling on the part of the employer and employe which will make for a maximum of satisfaction on the part of both.

Where unmarried help must be employed, student labor is undoubtedly a more desirable source of help than any other. There was recently published in these columns an article on the subject of student labor which included many testimonials from men, particularly fruit growers throughout the state, who had employed students from the agricultural college, with the best of satisfaction. But this is not the only class of helpers which might properly be included under the term of student labor. We have recently received from a young man in the

city, a letter which is typical of many which are received from a similar class of young men. This young man has had no previous experience in farming, but has decided that he would prefer agriculture as a business and sought a position upon some farm where he might study the business in a practical way and could earn a fair wage at the same time. Such a man would be excellent help and would take a greater interest in the operation of the farm than one who approached the tasks in hand simply from the standpoint of wages received.

There are a great many young men, both in the city and country who, with a little encouragement of the right kind would make the most valuable kind of farm help, and at the same time be studying the problems of agriculture in a manner which would equip them for future success in this field. To all of this class we can well afford to extend the hospitality which will include reasonable home comforts and a degree of encouragement in the way of good literature and helpful suggestions, since to do so is a true philanthropy which, however, in the doing will afford us an immediate and profitable return upon our investment.

The official figures touching the exportation of manufactures from the United States in the last fiscal year as prepared by the Department of Commerce and Labor show that the total values for the first time passed the billion dollar line. The aggregate value of manufactures exported in the fiscal year is placed at \$1,021,753,918. Of this total \$674,302,903 was the value of manufactures ready for consumption and \$347,451,015 that of the manufactures for further use in manufacturing.

This total does not include food stuffs which have undergone a process of preparation or manufacture, which class of articles are grouped under the general heading of food stuffs exported.

Something of the significance of this total of manufactures exported is realized by way of comparison. For instance, this 1,022 million dollars' worth of manufactures exported during the last fiscal year is more than double the amount of our exports of manufactures in 1903, or nine years ago. It is also more than three times as great as the total of our exports of manufactures in 1898; four times as great as the exports of 1896; five times as great as the exports of 1894; six times as great as the exports of 1890, and 10 times as great as the exports of 1876.

Previous to the year 1873 the value of manufactures exported in a single year had never reached as much as \$100,000,000. Comparing 1912 with 1902, a decade earlier, the total is 1,022 millions against 454 millions, or an increase of 125 per cent during the decade.

The official figures are also interesting from the fact that they show the exports of manufactures to have increased more rapidly than the exports of other classes of merchandise, manufactures forming 47 per cent of the exports of 1912, as compared with 33½ per cent in 1902 and 18 per cent in 1892. This apparent increase in the percentage of manufactures is, however, largely due to the falling off in the exports of food stuffs which formed but 20 per cent of the total of the exports in 1912 against 38 per cent in 1902 and 50 per cent in 1892.

This increase in the total of manufactures exported is a very important factor in the continuance of our national prosperity, since without this increase in the exports of manufactures the balance of trade in our favor would inevitably have been greatly reduced, if indeed, it had not turned against us. For this reason the great growth in our manufactures and exports thereof is a matter for sincere congratulation to the farmers of this country, inasmuch as it has added to our prosperity, not alone by maintaining a large balance of trade in our favor but as well in stimulating the home market for the products of the farm through the increased number of laborers employed in our domestic manufactures.

In another column of this issue will be found an article on the subject of ambition and determination which is opened by this question. In this article the writer comments upon a statement which he had heard a well informed man make to the effect that personal satisfaction with one's attainments in life constituted success, and took issue with this statement. Inasmuch as this is a most pertinent

question for every man to ask himself, a brief supplementary discussion of what success really is will not be out of place.

Obviously, what may be success for one man would be accounted as failure by another. The personal equation is a great factor in all the affairs of life. The writer of the article above referred to has well said that ambition and determination are necessary factors of success, as measured by our standard. But he has also well said that ambition is subject to growth. The ambitions of today, when realized do not necessarily mean satisfaction with our personal attainments. On the other hand, the realization of our wishes of today give birth to the larger ambitions of the morrow.

This progression is too often a continuous one, and the man who attains what might seem like a brilliant success as measured by the standard of the average man, may feel that his life has been more or less of a failure because he is unable to realize his latest ambition which is the product of progression. Like Alexander the Great, having conquered the whole world he may weep because there are no more worlds to conquer.

In searching for the true definition of success we should remember that the accumulation of wealth does not necessarily mean success in the highest sense of the word. Few people ever realize their ambitions in this direction, and too few are satisfied with their attainments to this end, even though they may be great. Success in life in the best sense of the term, means rather a benefit to mankind than the gratification of selfish ambitions and we anticipate that there is more satisfaction for the man who has helped to solve the problems of humanity than for the man who has gratified his own ambitions in a more selfish manner. In other words, we believe that there is a common ground upon which ambition and satisfaction might well meet with the average man.

The successful farmer is ambitious to have a fine farm, well stocked, and many a man has worked himself and his family beyond their capacity in the accomplishment of this end, when it would have given infinitely greater satisfaction to have enjoyed the fruit of their early years of labor in their old age. Likewise the accumulation of wealth is not so great a satisfaction in itself, or should not be, as the wise use of the wealth accumulated.

Truly, we cannot have too much ambition, nor too much determination in working out the realization of our wholesome ambitions, but we may well pause in the pursuit of happiness to consider whether the gratifying of those ambitions constitutes success in the best sense of the word, and if not we will reap greater satisfaction in life by modifying our ambitions to conform with a sane and sober conclusion as to what will constitute success in the sphere of life in which we are placed.

Agriculture in the Rural Schools.

Our readers are familiar with the plan under which agriculture has been introduced into a number of the high schools of the state during recent years. When the plan was adopted by the state board of agriculture and Prof. French was secured as the head of the department of agricultural education at M. A. C., it was with the idea of preparing teachers for the primary schools, as well as for better equipping high school graduates to go back to the farms.

That this plan was a wise one has been fully proven by the results which have been attained in the high schools where agricultural courses are given. That it was beginning in the right place is evidenced by the fact that many teachers will be available who have some agricultural training for primary schools in which agriculture will be gradually introduced.

Under a law passed by the last legislature, agriculture must be taught in the primary schools of the state where there are eighth grade students. Under the law, the superintendent of public instruction has prepared a course of study to be pursued in all district schools in the state. This course of study has been prepared and is now available for distribution in printed form. It contains some important changes, among which is the plan for introducing agriculture in the primary schools. This course of study requires one-half year of intensive work with a text book for the eighth grade and recommends work in nature study leading up to this subject.

As a consequence of the introduction of agriculture in the primary schools, it

will be included in the list of subjects in which the rural student must pass an examination in order to complete the eighth grade. This study will necessarily be of an elemental nature, taking up some of the underlying principles of scientific agriculture in a simple way, including the testing of soils, the testing of seeds and other primary essentials.

The introduction of this subject in the primary schools must necessarily be through a small beginning and a gradual growth. This kind of instruction is unquestionably a beginning in the right direction and will undoubtedly interest many boys and girls in the subject of agriculture, thus directing their attention to the possibilities of farming in a manner which would otherwise be unlikely, if not impossible. This is a change which should be welcomed by country people instead of being received with suspicion or criticism.

Experience has demonstrated that vocational training is of great value and part vocational training is recommended by the most practical of our educators, since the training of the mind may just as readily be accomplished while imparting useful information, as under a system in which mental and vocational training is entirely separated, as has been the trend of educational work in the past.

Attend the State Fair.

The special features of the Michigan State Fair, as announced by the management, make it certain that this year's fair will be far more attractive from an educational standpoint than any which have preceded it in the history of the State Agricultural Society.

These educational features will include the Boys' Model Farms, which have been previously mentioned in these columns and the Boys' State Fair School, in connection with which 83 boys from the several counties of the state will attend this agricultural and industrial exhibition with all expenses paid. The new dairy building which was planned last year, but not completed, is now approaching completion, and is a model of its kind.

But perhaps the most interesting of the many educational features which will be staged at this year's fair, will be the new industrial feature in the Progress Building, in which exhibits will be made of manufactures in active operation, where many of the classes of goods made in Michigan will be manufactured during the fair, under conditions which will afford every opportunity for visitors to inform themselves regarding manufacturing methods in these lines.

The educational exhibit proper will comprise exhibits prepared by the schools throughout the state in competition for prizes which are offered, with the result that some extraordinary exhibits are being promoted.

Another addition to this year's fair will be a land show, with exhibits by the great railways of every section of the country in which the products of many sections of the country will be grouped in attractively arranged exhibits. The removal of the old midway to one corner of the grounds where it will be segregated from the rest of the fair, will be a feature of arrangement appreciated by many who do not care to patronize this amusement feature. The free amusements will be fully up to the character which has been afforded in previous years and will include Blue Ribbon races, monoplane flights, elaborate fireworks, automobile races, etc.

There are other attractive features staged for the fair which space will not permit to be enumerated in full, but it is certain that, with a good agricultural fair proper, and all of these features added, that it will be a profitable place for all who can do so to spend a day or two during the week of the fair, from September 16 to 21, inclusive. The State Fair should be given the liberal support of the people of the state, as should also the local fairs and the larger district fairs.

There is no better place than the agricultural fair for the farmer to keep in touch with progress in agriculture and the time expended in attending state, district and local fairs cannot but be time well spent if the most is made of the educational opportunities afforded, to say nothing of the amusements and recreations which can be derived from this source.

This year the first The West Michigan State Fair.

of the big Michigan fairs will be the West Michigan State Fair at Grand Rapids, which will be held from September 9 to 13 inclusive. As all Michigan Farmer readers who

have had an opportunity to attend this fair in previous years well know, the management have well earned the right to designate it as a state fair by the character of the exhibitions which have been presented. The exhibits in every department at this fair are always of the best. The commodious quarters for live stock are generally filled to overflowing, while the horticultural exhibit fully maintains the reputation of western Michigan in the production of the "fruit with flavor."

The general exhibition of farm machinery and implements is also each year a very complete one, affording patrons an excellent opportunity to get in touch with the latest improvements in this line of manufacture. The business men of Grand Rapids give this fair most liberal support, making the art building an attractive spot, while the educational exhibits which are shown on the upper floor of the art building are especially creditable to the work done in the schools of western Michigan. The amusement features of this fair are plentiful and of a high class.

In fact, every department of the fair is such as to have stimulated an attendance which has made possible the repetition of this excellent fair with added features of attraction from year to year. The space recently added to the grounds will this year be available for use, as well as the new and commodious grandstand. There is every reason why there should be an increase in the patronage of this fair by the farmers of western Michigan and in fact, of the entire state who are able to attend it.

What is true of this fair is also true of the district and local fairs which follow it. There is too little appreciation on the part of many farmers of the fact that a well conducted agricultural fair is an educational institution, as well as a place of amusement and recreation. Start the fair season right by attending this first of the larger Michigan fairs, and keep up the record by giving support to the state and local fairs which follow it.

THE GREAT VALUE OF "AMBITION AND DETERMINATION."

What is success, or why do some men succeed and others fail? Must a man be a failure because of the fact that he is a farmer, or that he has no wealthy relatives or friends to start him in life? Do you realize that a goodly share of the biggest failures come from those who have fortunes bequeathed to them? It is true nevertheless.

I heard a well-informed man make the remark not long ago that a successful man was one who was satisfied. I have given this subject much thought, but I am not able to see any true merit in the statement. Have you not heard it remarked by many people that if they had as much money as some other more fortunate person has, they would not do another day's work? This means that they would be perfectly well satisfied, to lie down, like a hog, perhaps in perfect idleness and let the great world of opportunities roll by as they were satisfied with their lot. Now look at this matter squarely in the right light and suppose we all had enough to live on without work. It would be a queer world would it not? Nothing doing! Just think of it; we well know what becomes of the drones in a busy swarm of bees. They "won't work," consequently they are taken out and killed by those who do work.

Such is the law of existence. We are supposed to exercise our ambition, and in order to have strength and good health we must "forge ahead." The treasures of this life that are most dear are those which are hard to find. They all come slow—as "Rome was not built in a day." What everyone can have, no one wants. If all our farms contained great deposits of gold, it would be no more valuable than the sand. Hence if we want valuable gold or great crops we must work faithfully and honestly, and our efforts will, sooner or later, be rewarded.

People generally make their lives what they are. If they are continually looking for trouble, they generally find it. If they are looking for poverty, they always have that, and this class of people are looking on others who are better off than themselves with hatred and malice. The keen desire of a person's life should be within their own power and skill. A man that builds his own house or his own boat is "sure" to have one. But the fellow who has no resolution and depends on his "so-called" friends is quite liable to lie out in the cold, or sink.

There is no excuse for any able-bodied man today to fail to succeed. He may have to shovel sand to get a start in life, but let him do that with good cheer and determination. He will land sooner or later in a much better field if he sticks to his job. A man that goes to war and tries to dodge the bullets, generally can't do any effective fighting, and always gets hit.

I heard Prof. Brown, of the Valparaiso College, say that any many could reach his desired goal if he thought so. He said his ambition was, when he was a boy, to "teach school" and he thought if he could ever teach a certain school in his vicinity it would be as far as his desire and ambition ran at that time. But when he reached this victory he was not satisfied, of course, and at the time I heard him make this statement he was at the head of one of the best and largest educational institutions in the land. He could look upon over 3,000 bright young people who were only too glad to be guided by his helping hand. Is this not a good example of determination and pluck for the benefit of the world at large? This is only one out of thousands and millions of energetic men, who have brought the world to its present high standard of wonderful development.

Is it right to condemn and envy great men, who are honest, moral, and upright, simply because they have made fame and fortune by their hard, faithful labor which has taken years to accomplish, while the less ambitious and progressive fellow is idling away valuable days, months and years, by having what he calls a "good time," while he lives in this world? No, indeed. We all have equal rights to fill these positions of honor and trust. But we never can expect to without energy and great courage, which enables us to reach the highest rungs in life's ladder.

It is the man with "true aim" either behind the gun or behind the plow, who hits the right mark. He may sow "red clover," haul "barnyard manure," carry brick and mortar, or fill the most humble vocations in life that must be filled, but without "ambition and determination" his works are fruitless.

Washtenaw Co. B. F. WASHBURN.

HAPPENINGS OF THE WEEK.

National.

Three young men were drowned and a fourth narrowly escaped when a canoe capsized while its occupants were attempting to cross the Detroit river last Saturday evening.

A search is being made on the waters of Lake Michigan for a pirate boat which is believed to have stolen property valued at \$10,000 and to have been responsible for the death of one man. A police boat has been armed with machine guns and rifles for accomplishing the purpose.

Sunday night during a storm six persons were badly injured when a Detroit street car hit a derailler while going at full speed, smashing into a telegraph pole and afterward being run down by a passenger train.

Missouri was visited by severe storms Sunday at several points. Seven persons were killed by lightning and several others were shocked during the downpour. Considerable property is also reported to have been destroyed.

An organization has been completed by a number of influential Jews of Michigan to provide land for establishing rural communities for those of their people who are not prospering in the cities.

A fire, estimated to have entailed a loss of nearly \$25,000 occurred in Battle on Sunday. A food storage house and contents were burned. Three firemen were caught under falling walls and painfully injured. It is also rumored that two tramps were in the building and are supposed to have been burned.

A 14-year-old Flint boy, while wading in the Flint river near Flint, was drowned by being caught in the swift current. Ezra E. Carson, a prominent accountant of Port Huron, died in that city Sunday.

Taxpayers of Kalamazoo, Mich., are protesting vigorously against the valuation placed upon the property of the city by the state tax commission. A mass meeting was recently held and attended by thousands of citizens who unanimously voted to instruct the city assessor not to accept the new valuations fixed upon the Kalamazoo property owners. The supervisors of Kalamazoo county have also been asked to act in the same manner as the city assessors.

The 18 pension offices throughout the country are to be abolished and, beginning with the December payment of pensions payment will be made by checks, (except those to be paid by vouchers), sent to pensioners at their last known post office address. Postmasters will not forward letters containing pension checks and to prevent their return and insure prompt delivery pensions paid without vouchers must give notice of any change in post office address before the time for mailing the check.

Detroit grain shippers are protesting against the \$2.00 charge of reconsigning cars in the city, their claim being that since it is necessary to inspect the cars all shipments made to the city must be

reconsigned, and therefore subject to the \$2.00 tax. Conferences are being held in Chicago with reference to the matter.

The extension division of the Department of Agriculture of the University of Minnesota will begin operations on demonstration farms beginning next March, the purpose being to place model farms closer to the farmers from which modern agricultural practices can be observed and compared.

Claims aggregating \$600,000 and a provision for an extra month's pay for the employees of the house and senate are the two points of the general deficiency appropriation bill upon which an agreement could not be reached, with the result that congress has finished its legislative work but has not been able to technically adjourn, since a number of the members have left Washington, making it impossible to secure a quorum to settle upon a date of adjournment. The situation is unprecedented.

The state board of health of Ohio is preparing a statewide campaign against rats. The danger of the spreading of bubonic plague to the United States is the reason for the special activity against these rodents.

The federal department of agriculture has come in for criticism by the Moss committee appointed to investigate and discover if possible, the reason for the suppression of information gathered by engineers of the department regarding certain land in North Carolina and Florida. It is intimated that had the information been published certain real estate men acting in the states mentioned would have been unable to dispose of cheap or worthless lands under their control.

Foreign.

Former President of Columbia, General Reyes, was severely injured in an automobile collision near Lourdes, France, last Sunday.

Tung Chow, a Chinese city located 12 miles from Peking, is reported to have been looted and partly burned by a number of discontented Chinese troops. Twelve persons are reported to have been slain.

In an effort to extend the fullest possible protection to American property and lives in Nicaragua, it has been decided by the state department at Washington to land marines in the troubled Central American country. Re-enforcements to the men already along the shores of Nicaragua will be sent this week.

Small towns are being looted by Mexican rebels who are traveling about in the northern states of Mexico in small guerrilla bands.

The strike of the British masters and mates, which has been on for about two years, still remains unsettled. Renewed efforts on the part of the men to secure the demands they are making of the large boat companies, is being attempted and a better organization is reported, with the probability that some compromise may be agreed upon that will be satisfactory to the men.

General William Booth, commander of the Salvation Army, died at London last week. His body laid in state in London last Friday and Saturday. His son, Gen. Bramwell Booth, succeeds to commandship in the organizations.

THE SOUTHERN MICHIGAN STATE FAIR.

This fair, which was held at Benton Harbor, August 13-16, proved that the old saying, "The early bird catches the worm," still holds good. This year the association came out even and had a small balance on hand. The reason for the small display of farm and garden truck was no doubt because of the early date at which the fair was held, for one thing, and another reason was that the bad weather the first of the season had put the farmers so far behind with their work that they could not spare the time to arrange their displays. Otherwise they would have been there, for the farmers of Berrien county are not the kind to shirk their part when it is possible to do it. Had it been possible for them to have spent the time and made their usual display, Benton Harbor would certainly have carried away the laurels by the best fair in the state, as the outside free attractions were fine. Everyone who attended felt that it was time and money well spent and that much credit was due the members of the association. Especially to A. H. Peters, the president, A. S. Miles, secretary, and J. W. Lucas, concession manager. These men were hard at work, while there was another class of men known as the ancient order of knockers, as well.—C. E. S.

COMING MICHIGAN FAIRS.

The Thumb District Fair will be held at Port Huron, Sept. 10-11-12-13. The achievement of the Thumb District Fair during its first two years when the handicaps under which a new organization of this kind operates was considered, is really remarkable. This year the managers of the fair are in hopes of making it even better than the two preceding years. John S. Wittliff, Sec.

The next annual fair of the Fowlerville Agricultural Society will be held at Fowlerville, Mich., Oct. 8-9-10-11. Geo. A. Newman, Sec.

The Fifth Annual Northern District Fair will be held at Cadillac, Sept. 17-18-19-20. There will be a splendid exhibition of farm products and also many free attractions. The flying machine is guaranteed to go up this year.

ADA PIONEER PICNIC.

The old settlers of Ada and surrounding towns will hold their Annual Pioneer Picnic in Schenck's grove, Sept. 2, Labor Day. There will be good speaking, music and sports. Come and bring your basket and enjoy the hearty handshake of the old pioneer.

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HORTICULTURE

SELECTING AND EXHIBITING FRUIT.

During the next few weeks, there will be a great many fruit growers of the state collecting and exhibiting their choice fruits at the several state and county fairs. The writer has seen many such exhibits in past years and has no fault to find with them, but realizes that while much advancement has been made in recent years, there is still much room for improvement. The object of this article, then, is to give a few suggestions as to how exhibitors may collect and display their fruits more properly and then, when the judge has given his awards, they may know why they have won a prize or why their fruit has failed to receive his approval.

Of course, to be really successful in exhibiting fruit or any article, the first step is its proper production. The orchard should be pruned and sprayed, thinned and fertilized, so that the trees and vines may be healthy and able to produce fruits of good size, quality and color and free from blemishes, due to insects and diseases.

The next step is to examine the premium list carefully to determine exactly what the general rules of the fair management are and also the requirements of the department and several premiums offered. Notice particularly as to the purposes mentioned, for instance, if the premium offered is for a collection of several plates of winter apples for market purposes, every variety selected for the exhibit should be known to be a winter variety, especially adapted for commercial uses. Any plate or specimen included that does not conform to those qualifications had better be left out than allowed to compete. It is better to lack one or two varieties than to have duplicates or a plate not adapted to the purpose mentioned.

After the rules and regulations are clearly understood, then the exhibitor is ready to select his specimens. In this lies the most difficult part of the whole task and it should be done with great care and forethought. Specimens should be chosen that are free from all blemishes, especially those that are caused by insects and diseases and other agencies controlled by spraying and other good care in the orchard. Such blemishes include scale, scab, decay, insect punctures and worm holes, (which are positively prohibited). A plate containing a wormy apple ought to be disqualified entirely. The specimens should have exceptionally good color for the variety. They should be above the average size for the variety but not excessively large for excessively large varieties as well as excessively large varieties are known to be poorer in quality and will be scored down by any good judge. They should be typical in shape for the variety and it is well to remember that many varieties vary somewhat in this respect in different localities. Then, in addition to being of good size, color, shape, and free from all blemishes, all specimens in a plate, box, or other package should be as uniform in shape, size, and color as possible. A study of the following apple score which is used by a prominent judge in Michigan gives an idea of the relative importance that is given these different points, especially uniformity:

Size, 15 points; form, 10 points; color, 20 points; blemish, 35 points, and uniformity 20 points, making a total of 100 points.

It should be noticed that size or form are not nearly as important as either color or uniformity and that "freedom from blemishes is much the most important."

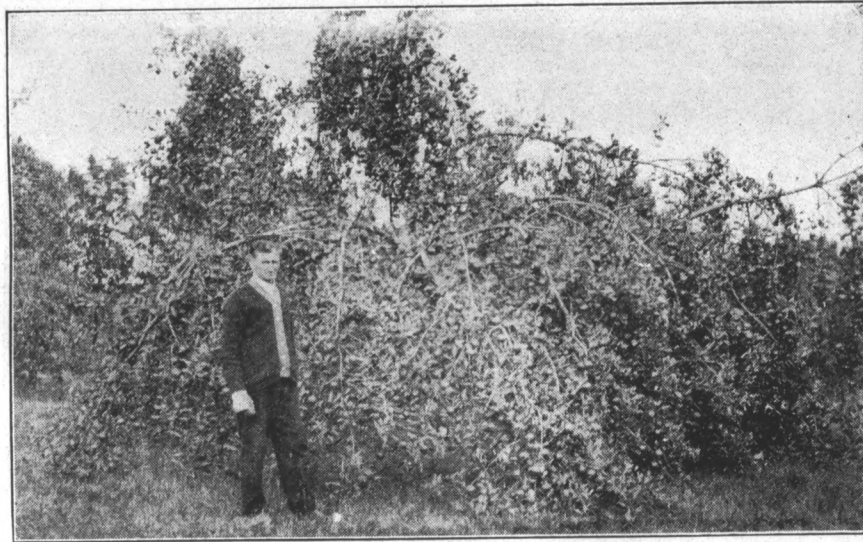
In picking the specimens of cherries, apples, plums, etc., the stem should always be left on because they appear much better, keep longer and give the judge an impression of extra care.

After the fruits are picked, the next problem is to so handle, pack and transport them as to prevent bruising in any way, rubbing off the bloom, dislocating stems, etc. If the fruit must be shipped or hauled any considerable distance or kept for some time in storage, each specimen should be wrapped separately in soft paper. This avoids the bruising, etc., and also delays and prevents the spread of decay. If the fruit must be kept for several days or weeks before displaying, it should be put into storage just as soon as possible after picking. The storage temperature should range from 31 to 34 degrees.

Having taken care in all these matters

there is still the task of placing the fruit on exhibit. Here again it is well to refer to the premium list to be sure of its requirements so that no mistake will be made. The premium list should, and usually does, specify the number of specimens that a plate or other package of apples, plums, grapes shall contain, and this provision should be followed to the letter. If more specimens are put upon a plate, for example, than required, that plate has an unfair advantage over others having the correct number, and this cannot be allowed. The judge, in most cases, will disqualify the plate entirely.

The exhibitor must be careful that all specimens on a plate are the same variety and that all plates are plainly and correctly labeled. Above all, an exhibitor should never allow his display to appear padded by exhibiting a number of plates of unknown varieties and labeling with most any name that occurs to him. The judge is quick to detect such tricks and concludes that an effort is being made to



Striking Example of Apple Tree Permanently Ruined by Overbearing.

get the premium money easily, and this he heartily disapproves.

Finally, it is necessary that the exhibits must be correctly entered or else they cannot be considered by the judge. Very frequently excellent exhibits lose out on account of failure in this matter.

To conclude, I would say that carefulness in looking after these details and many others not mentioned, will go a long way in improving displays at our fairs, will make judging more simple and satisfactory and will give a more general distribution of the prizes.

Mich. Agri. Col. O. K. WHITE.

THE VALUE OF THINNING APPLES.

For a number of years, the most aggressive fruit growers have appreciated the value of thinning some kinds of fruits. In fact, there are few intensive fruit growers today who do not realize that they will get larger and better peaches or plums if the fruit is well thinned early in the season. This often means the picking of one-half to three-fourths of the crop and yet they know that it more than pays for all the extra labor and expense that it requires. To thin apples, however, is a different proposition, and most of us have hesitated to carry this practice of thinning to the apple crop.

The value of thinning apples, however, has been very forcibly impressed upon my mind by experiences of the past fall. Our crop in Michigan was very heavy with most varieties of apples except Baldwins and Spys, although in a few scattered orchards even these varieties bore heavy crops.

In one of the best orchards that I have seen in this state, consisting of some 65 acres of excellent trees just in their prime, a very heavy crop of fruit was set. The owner started thinning the apples in the summer but due to lack of help and a lack of general confidence in the value of thinning, the fruit was only slightly thinned. During the harvesting period, a visit to his orchard revealed the fact that a large number of his trees had broken down with their excessive loads of fruit. Many of the trees had split down right through the trunk permanently ruining them. These trees had such an excellent bearing surface that if properly thinned, they could have easily carried a crop of from 12 to 15 barrels of first-class fruit. The loss of such excellent trees, therefore, is many times greater than the value of a single excessive crop. The value of thinning, if for no other reason than to save the trees, has been a dear lesson for this

grower to learn. Naturally, he is today a strong advocate of the value of thinning apples.

Another fruit-grower purchased an orchard two years ago; sprayed and cultivated his orchard and harvested his first crop the past fall. During his last spraying, the weather was exceedingly hot and he noticed that where the sun struck the sprayed fruit, it caused a dry rot to form. Fearing that he would ruin his entire crop if he continued, he ceased spraying when only about half the trees had been covered, thinking the burning was more serious than the injury from the codling moth worm or apple scab would be. Before very long, the injured fruit fell and it seemed as if little fruit would be left on these trees for harvesting. When the picking season arrived, there was one great surprise awaiting him. The trees that had missed the last spraying were very heavily loaded with small wormy fruit of very little value. The sprayed trees, upon which very little

had been expected, matured a good crop of large, well colored apples, absolutely free from worms or apple scab, that sold for better than a dollar a bushel on a well filled market. The spray had thinned the fruit just enough to stimulate the growth of the fruit that remained on the trees.

To quote the owner of this orchard, "This experience has taught me the value of thinning. Next season the fruit on every tree in my orchard is going to be well thinned, and I'll apply that last spray whether it burns or not."

Mich. Agri. Col. C. P. HALLIGAN.

CULTIVATING THE NEW STRAWBERRY BED.

After eight weeks of dry weather, a few light showers only have fallen during that time, we were treated to a generous downpour during the night of Aug. 1. While our new strawberry bed was not greatly in need of this rain, it will still be of great service to the plants. An efficient earth mulch had been constantly maintained over the entire surface of the field, hence there has been a continual supply of moisture a few inches below the surface. This has enabled the spring set plants to thrive luxuriantly. And, too, by taking proper measures to place the new plants, as they have formed on the runners, these have rooted promptly, and those set earlier in July have already attained considerable size. Except for vacancies caused by the depredations of the white grub, the hedge rows are now completely filled in with plants. Now while these plants were making a creditable growth in the absence of rain, the generous showers that have just fallen will give these plants an extra boost. Whereas they would have been large without these rains, they will now be extra large. We shall not, however, relax our vigilance in the matter of maintaining the earth mulch. The soil will still get a stirring after each shower, as though we knew it was to be the last that was to reach us this season. We shall take no chances in the matter of maintaining ideal soil conditions for plant growth and development.

During the earlier years of our experience in strawberry growing we made it a practice to continue cultivation until late in the season, or as long as the condition of the soil would permit. We now question the wisdom of this practice, whether it may not be labor to no purpose, or it may even be that this late cultivation works injury to the plants by inducing vegetative growth at a time when the growth already made should be

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ANOTHER YEAR IN THE CHAUTAUQUA GRAPE BELT.

Michigan grape growers will be interested in the condition of the crop and prospects in the Erie and Chautauqua districts.

Last year this belt produced a grape crop which approached very closely to the 8,000 carload mark which has been considered high water mark for the belt, and which has never been reached since a satisfactory annual compilation of the statistics of the crop was begun. This year, the consensus of opinion, based on reports from every township in the belt, verified by growers, wine buyers, and representatives of the city commission firms who have been here, places the size of the crop at least 40 per cent below that of last year, or not far from five thousand carloads and less than that number, if there is a variation in either direction. Five thousand carloads of grapes means not far from 60,000 tons or 15,000,000 eight-pound baskets.

In addition to this falling off in size of the crop, the belt has been and still is, experiencing unseasonably cold weather, with cold rains, such as will delay the ripening, and may delay the beginning of the harvest quite materially. While it is still possible that a few carloads of early grapes will be shipped the first week in September, it is still more likely that the big bulk of the Concord crop will not begin to move from western New York before September 30.

The falling off in productivity this season is due to three distinct causes. First and most important is that the big crop of 1911 drew so heavily on the vitality of the vines that the usual quota of fruit buds were not formed and matured last season. This is the common cause of alternating light and heavy yields of most fruits. It is a situation which requires the best attention of every fruit grower to prevent, and correct. The second cause was one perhaps unavoidable, and not fully understood, namely, winter killing. Why some winters cause severe vine injury, and others, with lower temperatures cause little, is still to be scientifically explained. The third cause of the short crop is found in the severe attack the present season of the two still serious insects pests, the grape root worm, and the grape leafhopper, combined with a wet spring, which prevented sufficient vineyard tillage, and while delaying the start of the foliage, and causing poor pollenization, was favorable to the development of these insects.

Not only is the local grape crop small, as stated, but the peach crop is also much below normal. This crop, too, was injured by winter killing, the most seriously of recent years, and the buds which survived the winter, suffered from poor pollenization, because of the wet weather of blossoming time. The peach crop will be the smallest since the beginning of the development of the peach industry here on a commercial basis.

The outlook for grape prices, which is the most important matter of all, is of the very best. General reports from all other grape growing sections do not indicate a normal crop, not enough anywhere to make up any part of the shortage which will exist here. Last year the prices for bulk grapes kept well below \$20 a ton, and for baskets did not get far from 10 cents per eight-pound basket. There is very small profits in growing or handling grapes at either of those figures. This year there is ample evidence today that it will take an almost impossible change in conditions to keep the price less than 15 cents per basket, or less than from \$36 to 40 for bulk grapes, the latter price for select stock, such as the grapejuice makers must have.

The demand for grapes for the manufacture of unfermented grapejuice is growing year by year, and has come to be an almost controlling factor in the price situation. Last year two concerns used respectively about 5,000 tons, and 11,000 tons. These are the two largest concerns in the business. Both report to your correspondent that their cellars are practically empty of last year's stock. One has built another cellar this year, doubling the capacity and will be in the market for not far from 8,000 tons this year. The other larger company which

used last year 11,000 tons, will this year buy not far from 14,000 tons, if that many No. 1 grapes can be bought. These two concerns contract ahead for entire vineyards, agreeing to pay "market prices." This will take, out of a total of not far from 60,000 tons, the very large quantity of 22,000 tons, or more than one-third the entire crop out of the price competition in the city markets, where the "market price" is established by the daily sales. It is the personal opinion of the writer, that if the bulk of the crop is evenly divided over the season, there need be no grapes sold at a price less than 15 cents, net, F. O. B. grape belt.

At this price there will be a small demand for grapes for sour wine here in the belt. Sour wine makers say they can not sell their product at a price which will afford them profits if they have to buy their grapes at above \$30 a ton. They will, however, buy the waste, and the culls, at a better price, thus making a market for what last year was thrown away at a clear loss.

New York.

A. M. LOOMIS.

ABOUT JAPANESE PLUMS.

If a motto were to be chosen for the Abundance or the Burbank plums, it should be, "Never say die." Surely, no tree in the orchard more obstinately resists being sent to the brush pile. The Burbank has proven more vigorous than its relative, but both are richly endowed with the obstinacy of the nation whence they come and whose name they bear. For Japs they are in their ability to flourish under difficulties.

A small orchard of these varieties I have had occasion to notice. Several years ago they were nearly destroyed by the San Jose scale before the owner was aware that there was one of the insects on the place. He gave them up for lost and expected to dig them out. Not so with the trees. They sent out new shoots from trunk and limbs. Soon they had grown new tops and were ready with crops of fruit. Meanwhile the scale had died with the old tops, leaving the new growth free.

In course of time the scale came back and again played havoc with the tops. Again the trees went at it to repair damages and it now looks as though they would succeed. There is a fine new growth, which is apparently free from the pest.

When early, frequent and prolific bearing are considered, both the Abundance and the Burbank can give the Domestic some object lessons. They bear too much. Unless the fruit is severely thinned it is small. Even the curculio is obliged to work overtime in order to keep up with these two Japanese varieties.

The Domestic are at a disadvantage. They do not bear as early as the Japs and when they do produce a heavy crop they are apt to die as a result.

When the Japs were introduced it was claimed by some nurserymen that they were proof against the curculio, but this is not the case. No cultivated plum is. Possibly a variety will yet be found which will produce a fruit in a leather case that the curculio cannot bite through nor penetrate with its oripositor, but what will it be good for?

Another claim was that the black knot would keep away from the Jap, but time has not proved it. The disease seems to be more prevalent upon them than on the European varieties. But they have one advantage: They will endure more severe pruning. Being more vigorous they will repair damages much more readily than the Domestic can. An amount of cutting and sawing that would be fatal to the latter may be merely a wholesome check to the former.

The shot-hole fungus I have found less severe on the Japanese plums than on the Europeans. The former have escaped with little or no injury when the latter, standing alongside, have been seriously affected.

But the Domestic are free from the peach yellows, while the Japs are not. This disease, though supposed to belong to the peach, attacks the newcomers from across the Pacific.

When the Japs were introduced great claims were made for them. Nursery catalogues described them in such glowing terms that they were supposed to possess all the good qualities and lack of all the bad of plum creation. They have fallen short, of course. In some localities they have proved of value, while in others they are not wanted. They have a place in American horticulture, a much humbler one than was at first expected, but one of importance, nevertheless.

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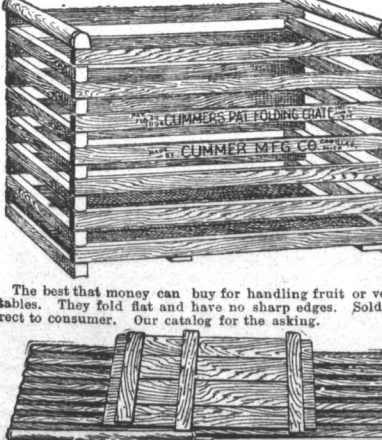
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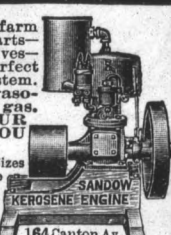
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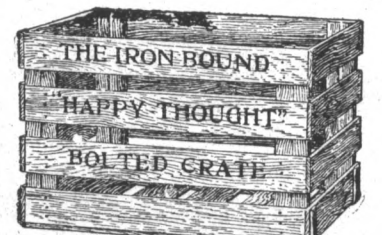
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Woman and Her Needs

At Home and Elsewhere

HAVE YOU TRIED SILENT WARFARE.

YOU have all heard the story of Pat, who, when the donkey kicked him across the street, got up and remarked that the best way to treat such fellows was with silent contempt. Granting that discretion is the better part of valor, Pat had the right of it. And his philosophy would apply equally well to some of the two-footed "fellows" that we meet with.

How many of us have had a neighbor that was just bent, bound and determined to be disagreeable? One of the kind who is always insisting on "my rights," and for fear you may infringe, is constantly imposing on you so he can keep even in advance? Here's a pen picture of conditions in one neighborhood.

A certain woman kept a vicious bull dog because her husband was gone a great deal and she was afraid to stay alone. Now there were a great many children in that neighborhood and they played outside of their own yards. Mr. Dog nipped one and the combined mothers petitioned the dog's mistress to keep him shut up. She promptly asked them why they didn't keep their children shut up, and his dogship continued to roam. The mothers took her advice and kept the youngsters in the yards. Doggie walked into a yard where a group were at play and bit a little girl. The girl's father asked the woman's husband to get rid of the dog and he confessed that he didn't dare. The dog still was master of the street and the offended father took the matter into court.

Then began a reign of terror for the mother of the child who had been bitten, and in fact, for practically every family around. The woman who owned the dog was past mistress at the art of petty retaliation and she certainly made things interesting. Let two women stand at the back fence and talk and she immediately suspected they were talking about her. Such a flood of innuendoes would pour forth that there would be either a three-cornered squabble or the original duo would have to flee to their homes to escape the virago's tongue. Nor was this all. Shrubs would be found of a morning mysteriously trampled down. Choice flowers would be broken and hacked, tin cans would adorn doorsteps and the wo-

men on either side of the dog's home would get up of a morning to find their enemy's front walk and porch neatly swept and an astonishing amount of dirt and leaves adorning their own premises.

The woman on one side retaliated in kind, and it was a pretty sight to non-combatants to see tin cans and old shoes and bottles fly out of one yard and into the other and then back again with a speed that would be the envy of an auto tester. This neighbor was determined that the virago would not run over her and would not listen to the advice of the woman on the other side who counseled Pat's method of "silent contempt." So it happened that the neighborhood row soon settled down into a drawn battle between these two, which lasted until the offended neighbor got tired and moved away, leaving the dog and his owner undisputed masters of the field. The warfare on the other side of the fence died out for lack of incentive. There was no pleasure in throwing rubbish into the yard of a woman who quietly disposed of it, and paid no attention whatever to taunts and jibes. So when the neighbor who would fight moved away, the dog was disposed of. The woman who fought by ignoring her enemy's presence had won the battle.

So most of us can win such battles by simply forgetting the pesterer exists. The things such people do really can't hurt us unless we let them. All they can do is to annoy, and nothing can annoy us, if we do not choose to let it. How much better to laugh at the crude actions of such people than to lose our tempers and bring ourselves to their level by quarrelling with them. Rubbish thrown into your yard will not hurt you but the rubbish you throw into someone else's yard is what does you the injury. The things a quarrelsome woman says to you will not hurt you either if you promptly shut your soul's ears to it. But the thing you say back to her are what will sear your soul.

If you have an irritating neighbor, then, try this method of warfare. Just shut eyes, ears and mouth and live as though the pesterer didn't exist. She will soon tire of her attempt to annoy you and you will have peace.

DEBORAH.

Chemists Dabble in Jelly-Making—Point Way to Save Fruit.

By Mella Russell McCullum.

One would not expect men to know much about making jelly, but men are beginning to sit up and take notice more than they used to of the way women do things. So it isn't surprising that they should look into jelly-making, along with vacuum-cleaning, dustless dusting, and other economical devices. I refer to the chemists whose experiments were chronicled in the Journal of Industrial and Engineering Chemistry, from which I quote broadly.

Of all domestic processes, cooking is known to be the most stubborn about conforming to scientific principles. It is full of knacks and superstitions which, far be it from me to disbelieve. (Conscientious study of one of the best cook books has never made my cakes come up to those of a bride friend of mine who doesn't even measure things.) And jelly-making is a most inexact phase of an inexact art. How many of you have stood in the hot kitchen, the air redolent with sweetened fruit-juice, and gazed sadly at a row of glasses whose contents were not up to par in spite of all your pains and labor—and wondered why? Or beheld in dismay that the boiling mixture had passed the "jelly-point" and gone to syrup—and wondered why? Or shaken your head over a woefully small yield from an expensive and excellent kind of fruit? It was with a view to improving such discouraging conditions as these that the chemists went to work.

Not that they succeeded in clarifying the process entirely. But they gave much light, which, together with my own experience, runs as follows:

In making jelly best results are obtained by cutting the larger fruits into small pieces. Cover it with water—about a pint to each two pounds. (That's probably too much trouble, so just cover.) Let it simmer gently until thoroughly cooked. Strain and let drip, without squeezing, through double cheese-cloth. Two strainings are advisable for grapes. Then, do not throw away the pulp, for the chemist-men proved—and I back them—that not nearly all the jelly-making properties have been exhausted by that first boiling. Cover the pulp again with water, boil, and strain as before. No matter if the pulp is colorless and uninviting. It will make just as beautiful jelly as the first lot. Then boil it a third time, and a fourth. Of course, you won't get nearly so much jelly from these succeeding extractions, but if your fruit is scarce and of rare flavor it will be well worth your time.

I actually made plum-and-apple jelly seven times from the same pulp! I was trying to see just how far I could go anyway, and it was an interesting experience. Starting with five medium sour apples and a quart of sour blue plums (don't laugh, please), I got, first, two and one-quarter glasses of jelly—large glasses, tumbler size. The second boil-

ing yielded one large glass; the third, three-quarters of a glass; the fourth, one-half glass; the fifth, one-third glass; the sixth, one-fourth glass; the seventh, one-sixth glass. The first four lots were excellent, and scarcely differed in brilliance. The fifth was a little weak in color and flavor. The sixth was decidedly weak, but its jelly-texture was so good that I added a little strawberry jam to give it character. The seventh was useless except as an experiment. It was colorless and flavorless, but was still fairly good in jelly-texture.

I have found that four extractions from the same pulp are as far as it is practicable to go.

Perhaps you imagine that the second, third and fourth extractions are not so pleasant to eat as the first, but that is not the case. They are more delicate in flavor and texture, and, as a rule, clearer in color. My own family really prefer them to first extractions. Especially is this true in the case of grape. The first extraction of grape jelly is apt to be a little uneven in texture and so strong in flavor as to be cloying. As it ages crystals of acid potassium tartrate are apt to form. So I have adopted this plan with grapes. I bottle the first extraction for grape-juice, and make my grape jelly from the second, third, and fourth boilings.

For instance, one peck of grapes made five quarts of grape-juice. The second boiling made two large glasses of jelly; the third, one and one-half glasses, the fourth, one-half glass—all of it good jelly, dark and clear.

Where so many extractions are carried on great care is necessary with the jelly-bags. They must be thoroughly sterilized between strainings.

Likewise, I always extract four times from currants and crab-apples, and see no reason why it cannot be done with any jelly-producing fruit. Even if you don't care about the "saving" (which I do!) it is mighty satisfying to feel that you are actually getting "something for nothing."

The chemist-men tell us that fruit, to make jelly, must contain two things—acid and pectin. They say that the reason peaches, pears, and sweet apples do not "jell" well is because they contain pectin but not enough acid. They advise the addition of .5 per cent of tartaric acid. I have never tried this, but it would undoubtedly open an interesting field. The fruit best adapted to jelly-making is the crab-apple. It contains acid and pectin in the most nearly correct proportions. Did you ever fail with crab-apples I never did, and I never heard of anyone else doing so.

The quantity of sugar required in jelly depends on the amount of pectin and the thickness of the juice. The time-honored rule of "cup for cup" has been badly jarred. With crab-apples and sweet apples the best proportion is three-fourths of a cup of sugar to each cup of juice. With grape, plum, and currant, and medium sour apples, the rule holds, however.

The custom of "boiling twenty minutes before adding sugar" is absurd in principle, although it is a safe rule to follow in most cases. Probably in olden times the housewife boiled the juice until it was about right, which happened to be twenty minutes! The best plan is to judge the thickness of the juice. If it is watery, it stands to reason that it should be boiled down a good deal, and vice versa. Experience is the only guide. There is more danger in under-boiling than in over-boiling, however, for if there is too much water in the juice jelly will not form quickly enough after the sugar is added, in which case you are liable to miss the "jelly-point." The only light the chemist-men have to offer here is, "Boil sugar with juice not to exceed one-half the time of total boiling." Oh, they haven't fathomed it all by any means, with their high-sounding chemical terms. But I'm distinctly grateful to them, for all that. They have made a blind, custom-encrusted old art more interesting and useful to me than it ever was before, and paved the way toward accurate jelly-making.

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"This wretched condition continued until I was twenty-five, when I became interested in the letters of those who had cases like mine and who were getting well by eating Grape-Nuts.

"I had little faith but procured a box and after the first dish I experienced a peculiar satisfied feeling that I had never gained from any ordinary food. I slept and rested better that night and in a few days began to grow stronger.

"I had a new feeling of peace and restfulness. In a few weeks, to my great joy, the headaches and nervousness left me and life became bright and hopeful. I resumed my studies and later taught ten months with ease—of course using Grape-Nuts every day. It is now four years since I began to use Grape-Nuts. I am the mistress of a happy home, and the old weakness has never returned." Name given by the Postum Co., Battle Creek, Mich.

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HUMAN WELFARE QUERIES.

Household Editor:—What can we do to cure chronic constipation? We have an adopted daughter living with us the last six months who is troubled with constipation. Her age is about 13 years.—

Constipation may be helped by eating laxative foods, drinking plentifully of cold water and taking outdoor exercise. Give your daughter oatmeal porridge, brown bread, plenty of vegetables and some fruit. A dish of stewed prunes for breakfast, three prunes, perhaps, and plenty of juice, has corrected constipation for many. A fig folded over two senna leaves and eaten just at bedtime is recommended by some doctors. See that she takes a good walk every day and does not eat candy, pastry and much white bread. Anything made from Graham flour will help her. Some recommend eating freely of fruit but too much fruit does harm in other ways. Plain, wholesome food with exercise is the best cure. Sitting down a good deal causes constipation.

Editor Household Department:—How may one best spend a day's vacation?

2. What is the cause of great discouragements in life?

3. What is to be done with anyone who looks so much on the dark side of life?

4. How may we help such?

5. What is the cause of melancholy?

6. In what way could a person overcome a great trial?—M. R.

1. The best way to spend a vacation must be decided by the individual, for what one would consider a good time would be very unpleasant to another. If you have been working indoors the best way to you would probably be a day in the open, while one who has worked outdoors might like simply to go for a visit.

2. I could scarcely answer your second question unless I knew the person who was discouraged.

3. A person who habitually looks on the dark side of life had better go to a good doctor and find out if he has some organic trouble. A bad liver is more often responsible for a gloomy frame of mind than any other thing.

4. The best way I know of to help such folks is to ignore their laments or make so much fun of them that they are ashamed to complain.

5. Melancholy is usually caused by ill-health and lack of will power to control one's thoughts.

6. The best way to get around a great trouble is to make up your mind to forget it, and then do so. If you do not talk about it and resolutely fill your mind with other things it will soon pass away.

Household Editor:—Will you please give recipe for elderberry wine and quantity of salt per gallon for sauer kraut in the columns of your paper? We think it is the best paper out.—Mrs. R. P., Wayne.

Pick, wash and gently mash ripe berries and let stand 12 hours to settle. Then strain off the juice and add one pint of water to every pint of juice and four pounds of sugar to every gallon of liquid. Or add the water to the berries after the clear juice has been strained off, let stand two hours and then strain this off and add to clear juice. Stir until the sugar is thoroughly dissolved and then let stand until it works. Then put in a keg or in bottles and cover the bung hole or mouths of bottles with clean gauze until the wine ceases to work. Cork tightly and put in the cellar. If you wish you can add one gill of alcohol to every gallon of liquid. The English use brewers' yeast in making the wine but this is a longer process.

A German advises using only a half-cup of salt to every six gallons of kraut. Too much salt makes the kraut strong.

Thank you for your kind words about the paper.

Household Editor:—Who wrote "My Wildwood Cabin Home," a poem?—A Reader.

I have been unable to find the poem. Have looked through all the catalogued poems in the public library, and asked at music stores, thinking it might be a popular song. Perhaps some reader can help us.

Household Editor:—What is the meaning of the word "roux"?—Cook.

Roux is the term applied by French chefs to the cooked flour and butter used to thicken gravy and sauces.

Household Editor:—How do you make coffee? My mother is sick and mine is not fit to drink, the boys say.—May.

See that your coffee pot is perfectly clean and scalded. Then put one tablespoonful of coffee, even, for every cup you will need. If you have a large family add a beaten egg, if you only make three or four cups a part of the egg will be sufficient, and about a quarter-cup of cold water. Shake vigorously to wet all the grounds, and add as many cups of boiling water as you will serve. Stop the

spout with a clean cloth and boil gently for five minutes, remove to the back of the range for three or four minutes and just before serving pour a tablespoonful of cold water down the spout.

Household Editor:—My baby is slow about teething. She is ten months old and has no signs of a tooth. Is there anything I can do?—Mother.

If you have given her nothing but milk try giving her bits of thoroughly toasted bread or crackers to chew on. She is old enough to have some starch and it is better to give it to her this way than to soak it up and feed it to her with a spoon. Watch her carefully to see that she does not get a piece in her mouth large enough to choke her. I would not worry if she is slow about teething. There is an old saying that the longer a child is about cutting teeth the better the teeth are.

Household Editor:—What is wrong with this sentence? "There isn't nothing the matter with me?"—James.

You are using two negatives, "not" and "nothing." It should read, "There is nothing the matter with me."

Household Editor:—In answer to Mrs. H. T. B., I would say, use a tablespoonful of carbolic acid to a large teacup of turpentine and dampen the carpet all around the edge for four or six inches. It may need two or three applications but it is good.

Household Editor:—Can you give me a recipe for making tomato relish? There was such a good one in The Farmer four or five years ago but I lost it in moving. The tomatoes were not cooked and would keep all winter. Also, please, a recipe for sweet cucumber pickles.—Mrs. F. H. S.

Who Can Give Elderberry Recipes?

Household Editor:—Can you give me a good recipe for using and canning elderberries?—Reader.

When washing a cotton rug which is too large, of course, to put through a wringer, use an ordinary rolling pin and run it several times over the rug, which may be spread on the grass. The water will run off in little streams, and the rug will dry quickly afterward.—Mrs. J. J. O'C.

FASHIONS BY MAY MANTON.

No. 7539.—Blouse or Guimpe for Misses and Small Women, 14, 16 and 18 years, with full sleeves in three-quarter or full length, or with plain, long one-piece sleeves, with or without peplum. Perforated for round or square yoke facing, or for round or square, low or Dutch neck 1½ yds. 36-inch material with ¾ yd. 18 in. wide for yoke facing and cuffs is required for 16-year size.

No. 7532.—Blouse with long shoulders, 34 to 40 bust. With one-piece set-in sleeves, with or without chemisette; 2½ yds. 36-inch material with ½ yd. 18 in.



wide for round collar and cuffs, ¼ yd. any width for frill, ¾ yd. 18 in. wide for chemisette and stock collar is required for medium size.

No. 7538.—Semi-princess Dress for Misses and Small Women, 16 and 18 years. Four yds. 36 inches wide with 7¼ yds. of banding, 5½ yds. lace, 3½ inches wide to trim as shown in large view, 1½ yds. 18 in. wide for yoke and under-sleeves, 2 yds. ruffling to trim as shown in small front view is required for 16-year size.

No. 7283.—Twopiece Skirt for Misses and Small Women, 14, 16 and 18 years. With high or natural waist line; 2½ yds. 36-inch material is required for 16-year size. Width of skirt at lower edge is 1½ yds.

No. 7297.—Four-gored Skirt, 22 to 22 waist. With high or natural waist line. 3¾ yds. 36-inch material is required for medium size. Width of skirt at lower edge 3 yds., 2½ yds. when plaits are laid. The above patterns will be mailed to any address by the Fashion Department of the Michigan Farmer, on receipt of ten cents for each.



Anty Drudge Learns of a New Use for Washboilers

Mrs. Farmer—"Well, for land's sake! Anty Drudge, come here! Old Speckle has gone and laid her eggs in my old washboiler, that I threw away when I started to use Fels-Naptha Soap, and here's twelve little chicks just hatched out!"

It is as natural for a hen to set as it is for a duck to swim. But farmers have found out that it is easier and safer to hatch chickens in an incubator. There are new things for the farmer's wife to use, too; and, goodness knows, a farmer's wife has to work just as hard in her way as her husband does.

Every woman dreads washday, if she does her washing the way her mother used to do it. But she needn't do it that way if she is a wise woman. She cuts the work in half by letting Fels-Naptha Soap work for her. With Fels-Naptha Soap she does away with the drudgery of washday, because clothes soaped with Fels-Naptha Soap, and put to soak for about thirty minutes in cool or lukewarm water, require little rubbing.

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HOME AND YOUTH

THE GLOOMY PESSIMIST VS. THE HAPPY OPTIMIST.

BY ALTA L. MARVIN.

I've met the gloomy pessimist,
As he goes from place to place,
I have noted the expression
On his sour unhappy face.

I have watched him picking thistles,
When he might have gathered figs,
Scattering abroad the prickles,
Giving many, many, "digs"

To the world around in general;
Caring nothing how 'twas done,
Never for a moment heeding
That 'twas hurting anyone.

I am tired of his harping.
When I see him coming—hide,
Turning 'round a mental corner,
Pass upon the other side.

There's another kind of fellow
With a very different name,
And it does not really matter
Who he is, or whence he came.

You will know him when you see him,
With his brow and hair sun-kissed,
Radiating hope and gladness—
'Tis the happy Optimist.

Every word you hear him utter
Seems a blessing from above;
And one could not fail to blossom
In the sunshine of his love.

Out of seeming incompleteness,
Things not always understood,
Sees things with a clearer vision,
Sees it all and finds the good.

Then, hail to the cheerful person,
Though rain and fogs exist,
One who knows the sun is shining
Far above the clouds and mist.

THAT BARRED WINDOW.

LAURA TILDEN KENT.

"Hasn't she got eyes, though?" Fred asked me rapturously.

"I suppose so. Most people have," I returned coolly. Fred is too susceptible at best and it is frequently my clear duty to discourage him a little. Now my well-meant efforts were met with a growl and a silence that lasted for almost ten minutes, but Fred finally began again.

"You can see that she wasn't educated in Arizona, can't you? Hasn't she a way with her? Did you ever see a prettier—?"

"Oh, Freddie!" I yawned—though I had felt enthusiastic on the same subject when we first came home to our tent. "You make me tired! I should think you'd have more sense than to get keyed up like this so early in the game. That young bookkeeper seems to be on pretty good terms with the family, and as nearly as I can see, Miss Thornton—"

"Oh, do shut up, you blockhead!" grumbled Fred. "Can't a fellow look at a pretty girl but you've got to begin dealing out your advice? Haven't I got eyes in my head? Can't I see that Daniels dotes on the 'Supt's' daughter? What kind of an idiot do you take me to be?"

"Humph!" said I. And conversation languished.

It was our first day in the Arizona mining camp where Fred, a very young engineer, had been sent by his uncle, one of the company's directors, to do some surveying. Our first surprise had come when we found ourselves landing in a mountain snow storm instead of in the desert's heat. I had not realized before that there was anything but sand and sun in Arizona. Our second surprise had been the superintendent's daughter. I hardly know what of "wild and woolly" we had expected in the girls of the country. Certainly we had looked for nothing like Miss Thornton.

We had seen her at dinner, first, in an alcove where the superintendent's family dined a little apart from the crowd of miners who also ate in the camp boarding house; and we had seen her later in her own house, to which we were invited for the evening by the friendly father.

On the next day, while we waited for the snow to melt under a bright sun, Fred and I sat in our little doorway and gazed downward at the camp. Fred, I knew, had an eye upon the superintendent's quarters, of which we had an especially good view from our vantage point, but instead of seeing the beautiful Miss Thornton emerge, we presently looked upon a little scene which added mystery to the surprise which we had experienced the day before. It was a tame thing to watch, too, but—what did it mean?

The superintendent came around the corner of his house armed with several boards and a hammer. He approached

one of the windows that looked toward us and began to nail the planks over it, at intervals, like the bars on a cage.

"Now tell me what he's up to?" queried Fred as the man disappeared. "Looks like a prison, doesn't it?"

"It does, a little. I'm sure I don't know what he was doing."

"You don't suppose he has a demented relative, do you?" hazarded Fred. He put on a melodramatic air, "Tom, old boy, here's adventure in the land of adventure! Here's—"

"Bosh!" I sneered. It is always my way to seek a reasonable explanation for things that puzzle me. Presently I clapped Fred on the shoulder.

"I have it!" I chuckled. "There's nothing uncanny about it. They've put up these mysterious bars to keep the ice from smashing the glass when it falls!"

For one minute Fred looked convinced. Then he turned triumphant.

"But, Tom!—the other three windows side by side with this one! Why aren't they protected?"

There was a question. We had begun the inquiry idly enough, but now we were getting interested. We spent a good half hour in puzzling over the enigma, but we could hit upon no solution of it, unless we were to accept Fred's preposterous theory of the demented relative.

That evening, late, to make matters still worse, we chanced to be gazing down at the Thornton house when a light gleamed in the grated room and we saw, through the bars, that it was Miss Thornton who came to lower the shade.

"Well, there goes the lunatic idea," I hastened to let Fred know, "unless you think Miss Thornton is a little mad."

Fred glared at me, and after a few wild guesses, we let the matter drop.

On the next evening, however, after we had again watched the light flash into Miss Thornton's room and seen her pull down the curtain, Fred turned to me with a curious expression on his face.

"Tom," he demanded in a low voice, "Do you notice that Miss Thornton seems never to be left alone for a minute? She's always attended by her father or her mother—or both."

I stared at him.

"Great Caesar, Fred. You don't mean to say that you seriously think—"

"I don't mean to say that I seriously think anything! But had you noticed?" he insisted.

"No, I hadn't!" I snapped. "Didn't her father say that she'd just come home from a visit?—that they were so glad to have her back?"

"From a visit." Fred nodded significantly.

"Now look here, old chap," I exploded. "Out with it! What fool notion have you got into your poor little headpiece this time? Go on."

"Well, it would be a thundering shame, of course—" (Fred looked as if he felt it). "But—do you suppose she could have broken down from overwork or something—she graduated from college last June, they said, and she seems awfully young to do that—and that she could have been in some private institution, you know, and—of course, she'll be all right now, but—Don't people who are—not insane you know—but awfully nervous—" He stammered and stuttered and finally blurted, "Well, don't they get notions of wandering around the country sometimes? And don't you think they might be sort of anxious about her?"

"Humph!" I snorted.

Then as I thought about it, it began to seem as plausible as any solution that we had yet hit upon. I was determined, though, not to be baffled longer.

"I'm going to get to the bottom of this thing, Fred," I declared. "We can't very well ask the family whether or not Miss Thornton's a little off, but we can ask young Daniels. He seems to room at the Thornton's and he'd be sure to know." I had given up the idea that Daniels was Miss Thornton's lover.

The next night Daniels came to our tent to visit us, and after we'd talked on general subjects as long as we could stand it, I came to the point.

"Say, you stay with the Thornton's, don't you?"

"Why, yes." The young fellow seemed rather surprised. "You see, I—"

"Well, I interrupted eagerly, "We don't like to seem curious, you know, but— I suppose you know a good deal about the family?"

Daniels looked more astonished than ever.

"Why, yes," he repeated blankly.

"Well, could you tell us—? You see, we saw Mr. Thornton nail up Miss Thorn-

ton's bedroom window—and we were wondering whether she—that is—"

"Nail up her bedroom window?" stammered Daniels.

"Yes, and we didn't know—we thought— Say, there isn't anything wrong with Miss Thornton's mind, is there?"

"Anything wrong with her mind?" shouted Daniels; and I began to think that that was her lover after all. But his anger changed to amusement and he roared helplessly for a minute.

"Don't fret yourselves about her mind," he gurgled finally. "You'll find her mind's all right, I guess."

We felt a little crestfallen and I could see that Fred was congratulating himself that I, and not he, had asked the question. He left me to get out of the mess as best I could.

"You know, it looked queer to see her window all barred like that. Why did Mr. Thornton do it?"

"I don't know. I wasn't aware he did it." Daniels had grown serious now, and he began to puzzle over the problem too. At last comprehension dawned on his face. Then his lips were twisted with some emotion that we could not read. He rose abruptly.

"I rather think I know why he did it, but—don't say anything about it, will you? I—I'll have to leave you now." He spoke in a low, choking voice—and then he was gone.

Fred and I gazed at each other.

"The plot thickens," I murmured.

Fred said nothing.

"Can you see any brilliant solution for this difficulty?" I persisted.

"Shut up," snarled Fred. His forehead was wrinkled with thought. After a good while, "Daniels seemed quite affected," he ventured.

"He certainly did. It looks as if there must be something peculiar about this business."

"There is. You mark my word, there is."

Three minutes later, a sudden comprehension of the situation burst over me.

"The family fears an elopement," I whooped. "Daniels and the girl are devoted to each other—we noticed that the first thing, you know—and naturally it would go hard with papa to marry his only daughter to the camp book-keeper—be he ever so good looking."

"I was just thinking of something of the sort myself," Fred admitted. "But if they were planning an elopement, why shouldn't Daniels know of the barred window? She'd surely find means to tell him."

We put our heads to this additional problem, feeling like a pair of Sherlock Holmes, and again I was inspired.

"Eureka!" I exclaimed. "Her pere is a suspicious old curmudgeon, and he fears an elopement that the young people have never planned. Daisy is a good girl and would never think of marrying without her parents' consent. Daniels, knowing her quite well, would never think of asking her so to do. She shrinks in maidenly confusion from informing him of her father's foul suspicion."

"Tom, you're a genius," cried Fred, admiringly. "You'd make big money as a private detective."

His praise was half banter then, but on the next day, my conjectures were surprisingly confirmed by the behavior of Daniels and Miss Thornton. It was evident that he must have told her of his knowledge of the barred window, and that, angered by the old man's distrust, they had decided to do the very thing he was working so hard to prevent. In the moonlit winter's evening, we even saw Daniels and the girl come stealing around the house, look at the window, glance suspiciously about them, talk earnestly for a minute, and then—after the exchange of a lingering kiss—go stealing back. When we entered the house a few minutes later, on the invitation of Mr. Thornton to spend another evening with the family, though all was outwardly cheerful and calm, we seemed to detect under the light-hearted laughter of Miss Thornton, and of Daniels, too, a nervous quality that sometimes bordered on hysteria. Mr. Thornton was also aware of it. Once especially he shot them a questioning glance and growled, with an effort at good humor in our presence, that he'd be glad to know what ailed them tonight.

Fred and I were thoughtful as we went to our own abode.

"They're going to do it, sure enough," I mused. "And it'll serve the old man jolly right, too—hard-hearted old reprobate. I wonder if we couldn't help the lovers somehow? Say—that would be an adventure, Freddie! That ought to appeal to your sentimental soul."

"Humph!" said Freddie, and I began to think that he'd sooner elope with Miss Thornton himself than aid another fellow to do it.

During the next few days, Fred and I were hard at work at the surveying, daytimes, and we had no chance to observe the progress of this interesting love affair at night, but as we spent nearly all of our evenings with the Thorntons now, that was a good deal. We knew well enough that something was going to happen soon.

Then one afternoon we returned early from work—just in time to see Mr. Thornton drive up to the door and to hear him shout to Mrs. Thornton and Daisy. They both appeared, dressed for an outing, and then Daisy seemed to change her mind. Her parents seemed to coax and argue with her, but they finally drove off without her. And almost immediately young Daniels appeared, flushed with hurry.

"Great Caesar's ghost. You don't suppose they'll dare do it today, do you?" I gasped.

"Don't know." Fred's air was singularly dejected. Then he flung back his head with a kind of desperation.

"Let's put a stop to it," he cried.

I was really sorry for the poor old boy.

"Hold on, Freddie," I advised. "I don't see what we can do. Let's watch them a minute anyway. Maybe they won't dare. Everybody'd see them go, and old Thornton could get them before they got started."

We waited, peeping from the little window of our tent; and instead of seeing Daniels and Daisy flee together, we saw them sneak into the woodhouse and return with an ax. This they took around to the barred window and with it Daniels carefully pried loose every one of those planks.

"So that's the caper," I exclaimed. "Of course, that would be the thing to do. Now they'll probably leave tonight before papa finds out that the grating has been loosened."

"We've got to prevent it," cried Fred distractedly. "We've got to prevent it. The idea of her going off with a penniless wretch—a girl who's had everything. Why, it's abominable. We've got to do something."

"Oh, Freddie, you make me tired. If they're bound to elope, they'll do it sometimes, and if papa can't stop them, you can't. If we inform on them, we'll get the lasting enmity of both the elopers and papa'd be likely to turn on us too. He's a proud old fellow, and he won't be too fond of anybody who tells him that his daughter's going to run away."

"I didn't mean that. But we could go there tonight and stay as late as we dare. Maybe we could hang around until they'd think it too late to do anything about it tonight. And we could take turns watching up and just happen to stroll along when he comes to get her. We could do something," insisted Fred.

"Well," I assented. "Still I think it would serve the old man right, if—"

"Don't think of the old man. Think of her! Think of her!"

I was, after all, willing enough to do as he said; and that evening we strolled over to the Thornton's to begin our good work. We were both pretty highly wrought when we arrived and there was an electrical feeling in the air, too. Daniels and Miss Thornton were flushed and excited, though they were both very evidently trying to hide the fact. Mr. Thornton seemed suspicious and ill-at-ease. The evening began strainedly and it grew more and more painful. I was beginning to feel that I couldn't stand it any longer but would have to take Fred away, when an amazing thing occurred. Mr. Thornton who had been talking—about what I have no idea—put his hand suddenly on Daniel's knee and smiled up at him very good naturedly.

"As my son here, says," I caught those words. It flashed through my mind that they had just gotten pater's consent after all. That accounted for their agitation.

This idea hadn't reached Fred, though. He gasped and blurted, "But he hasn't married her yet?"

"Married—what on earth?" The inscrutable lines between Thornton's brows were strongly in evidence.

"Your daughter—she—"

"Oh, ho!" The smiling lines around his mouth appeared suddenly. "That's true. You didn't know that Jim is my stepson. Now, Jim, the murderer's out. Why didn't you want 'em told? What devilment have you been up to anyway?" twinkled Mr. Thornton.

"But—the barred window?" choked

Fred, looking straight at his puzzled host. "The barred—put up to keep the ice from breaking Daisy's window." Mr. Thornton stared at him.

"Just as I told you," I hastened to tell Fred.

"But what in Sam Hill are you driving at? Jim, what on earth ails you?" exploded the bewildered Thornton.

Fred went right on as if he were doomed to do it.

"But the other windows weren't nailed up."

"Had screens on 'em. But what on earth—?"

Fred turned from the excited Thornton to the sputtering Daniels.

"Just explain what you meant by mooning around and making us think that you—that Miss Thornton—that—that—"

"I—why, the night you informed me of Daisy's insanity, I—I thought I'd let you puzzle your heads over the window business and when I thought better of it and went back to tell you—I heard you talking about an elopement. Oh, it was too rich. I let Daisy into the thing—and told dad not to own me for awhile—Oh, ha! ha! ha!—'Adventure' in the land of adventure!—'Mystery!—Ho! ho! ho!'"

Daniels, who had been gasping through his laughter, became helpless altogether. He shut up like a jack-knife and rocked and roared.

I looked from him to Miss Daisy who had been trying to smother her mirth in a sofa pillow. I gazed from her to Mr. Thornton, who, after a puzzled minute, began to haw! haw! as if he were in a fit. From him I turned to Mrs. Thornton who was growing purple in the face and gurgling.

My angry passions rose and soared. What blithering idiots they must take us to be. It occurred to me that a violent departure was the only dignified thing left to Fred and me, since we could hardly slap Thornton and Daniels in the presence of the ladies.

I turned to Fred—and anger was swallowed up in amazement. Fred's expression was beatific.

He finally came to himself sufficiently to realize that I was gazing at him insanely, and he leaned over and grasped my arm.

"Old fellow!" he murmured, rapturously, "she isn't in love with him at all!"

And gazing from his blissful countenance to the helpless, writhing family, I forgave everybody. To this day, though, Fred cannot see why I laughed too.

OUR COMPANY.

BY A. LAYMAN.

"A man is known by the company he keeps." This saying may be taken as the conclusion of thoughts expressed in the words, "Birds of a feather flock together." The instinct or desire of man to find other men of his own frame of mind has divided our society into classes. Those who have wealth seek others of affluence; pious people enjoy the company of serious trained minds; the business man discovers a companion in the person who has current knowledge of bonds, stocks, costs, etc.; the criminal is at home in dives. If we acquaint ourselves with one person of a class we formulate an opinion of all persons in that class and we repeat, "a man is known by the company he keeps."

But is not this saying somewhat aside from the truth and should it not be qualified? Can a class of men be named which does not contain persons of character? Even the burglars claim such a one in the personality of a Philadelphia councilman who but recently has been heralded as a modern Jean Valjean. The mingling of Abraham Lincoln with common souls has heightened rather than dwarfed his standing among men. Even the Master sat with publicans and sinners.

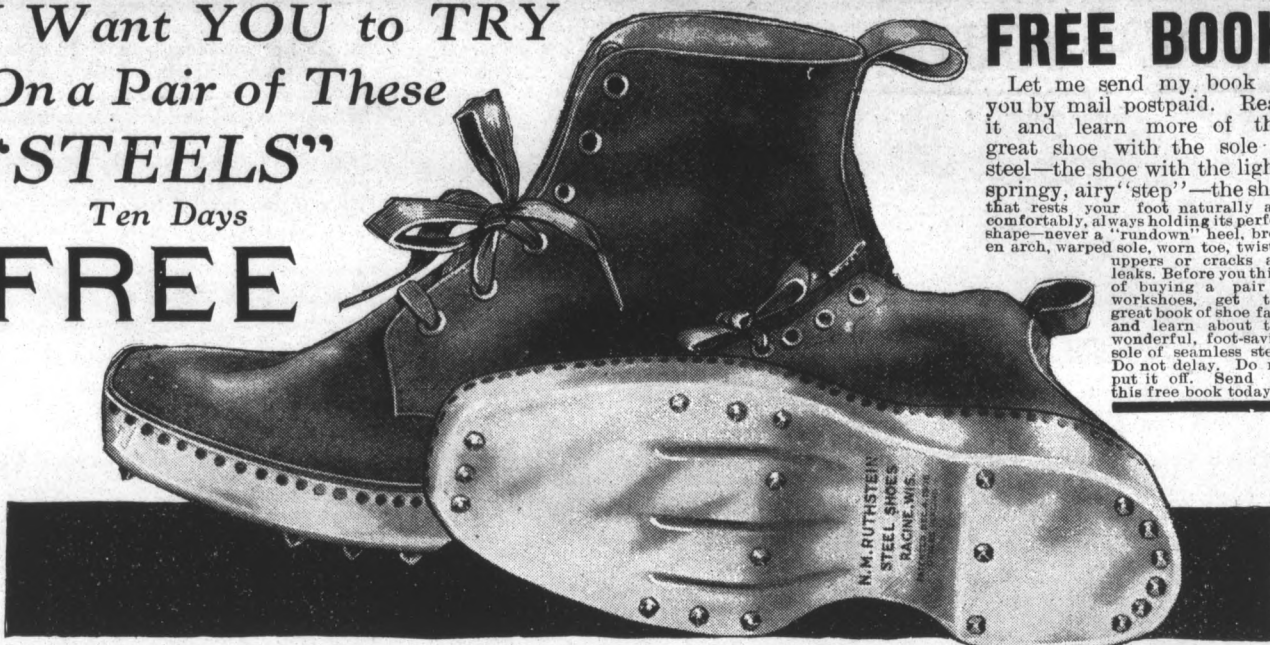
There is another way in which the quotation may be understood and which would include the illustrations just mentioned. The man of character associates with the best that is in his companions. The Master did not prattle over the vulgar when with the publicans and sinners, although they may have done so when out of His presence. Every man has some commendable qualities. Men of character seek to keep company, as it were, with these qualities; they see the best in other men. In this way their reputation remains irreproachable, although duty and perhaps pleasure may cause them to mingle freely with those whose standards of life are not high.

ITEMS.

It is expected that the rules for trying equity cases in the federal court will be revolutionized by the new systems now being prepared by justices of the United States Supreme Court.

A move is on foot for the establishment in the Illinois schools of a system of agricultural and vocational work for the vacation periods.

I Want YOU to TRY On a Pair of These "STEELS" Ten Days FREE



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Ten Days' Free Examination and Try-On in Your Own Home.



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The Steel Shoe Man

I GLADLY send my wonderful "steels" to you upon this great satisfaction guaranteed basis. I want you to try them on in your own home without the risk of a penny. I want to let you be the sole judge. I want to prove, right on your own feet, the marvelous comfort, elasticity, airy tread, and permanent, perfect shape of this light, springy, sensible sole of seamless steel. I take all the risk—absolutely—and leave it wholly and entirely up to you to say from your own trial and examination that this shoe will preserve your feet, protect your health and save you the money that you now waste in continuously buying the old, heavy, leaky, warping, unsanitary and painful leather-soled workshoes that look bad, smell bad, feel bad and wear out every few months at the very best.

I Have Saved Over a Million Feet.

And I have done it by simply applying common sense to the greatest health problem that confronts the working man today—I have created a shoe that is comfortable, dry, sanitary and economical. Therefore, I know of no better way to extend the reputation and sales of these wonderful shoes than to honestly and fairly offer them to every working man on this free, open, home try-on plan—because they are just what I say of them, they are honest, dependable under every test, and once you have them on your feet, you will never again work in another kind of shoe.

Every Pair Saves You From \$10 to \$20.

Because, each pair will outlast three to six or even eight pairs of best quality all-leather workshoes. There are no repairs—and no loss of time, or trouble of any kind. The soles and sides (as shown in illustration) are stamped in one seamless piece from light, thin, springy steel, secured firmly to uppers of the very best quality soft, pliable leather—absolutely waterproof, and almost indestructible. The soles are studded with Adjustable

Steel Rivets, which give perfect traction, firm footing, and protect the soles from wear. The rivets themselves (which take all the wear) can be quickly replaced when partly worn. Fifty adjustable rivets cost but 30 cents, and should keep the shoes in good repair for from two to even three years.

No Corns, Blisters, Bunions nor Callouses.

This shoe has absolute foot form—and the sole being steel, it cannot warp, twist, nor draw out of shape. Consequently, it is easy to be seen that corns, bunions, callouses, etc., cannot be irritated, and no portion of the foot be rubbed so as to start new miseries of this kind. A perfect fitting shoe never made a corn in the world—and no all-leather shoe can fit after it has a twisted, broken sole that allows the uppers to crease up into galling wrinkles. Erase these pains and disturbances—be foot free and foot healthy.

No Broken Down Arches.

You know from your own experience that as soon as the leather sole becomes wet and slightly worn, the arch gives way and flattens out—your instep is immediately endangered and the very life and service of your foot is imperiled. The steel arch cannot break or get out of shape—it is a continuous, elastic, restful support, always remaining exactly the same during the entire life of the shoe.

No Wet Feet—No Colds—No Rheumatism.

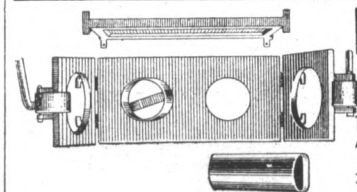
This steel soled, waterproof shoe is an absolute protection to your health, aside from being a comfort to your feet; for you may work all day in mud and water with your feet powder dry. Thus you escape colds, rheumatism, neuralgia, the dreaded pneumonia, and the long list of ills that result from damp or wet, cold feet. These shoes pay for themselves again and again by preventing sickness, saving doctors' bills, and allowing you to work in weather in which you would not otherwise dare leave the house.

These Shoes are Lighter Than Leather Workshoes.

and the firm, yet springy, elastic tread gives you an ease and lightness of step and comfort that delights your feet and gives your whole body a resiliency that lifts the pain and burden from the work of the day. You can walk more, stand more, do more, earn more—and live longer in perfect muscular health and strength.

The Leather Trust Thunderstruck. Farmers, miners, smelters, railroad men, hunters, and all workmen raise to the skies their praise of this shoe, with its wonderful, yet simple, sensible, perfect sole of steel. The

N. M. Ruthstein, The Steel Shoe Man, Racine, Wis.
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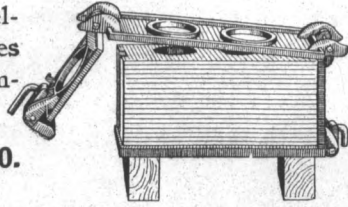
Tile your farm. It pays. Construct your buildings, water tanks and silos of cement blocks. This work can all be done accurately, economically, and quickly with our wonderful low priced

Combination Tile and Block Machine

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success has been amazing—and in four years I have found it necessary to establish great factories in Racine, Wisconsin; Toronto, Canada; and Northampton, England, to meet the demand that has arisen in such tremendous volume from all over the world. This astounding growth is the result of good words spoken by delighted wearers to their friends and neighbors. The same comfort, luxury and economy are offered you.

New 1913 Models in All Sizes—For Men and Boys.

For men in sizes 5 to 12—6 in., 9 in., 12 in. and 16 in. high. For boys, sizes 1 to 4—6 in. and 9 in. high. They cost no more than ordinary all-leather workshoes.

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Do not delay. Do not put it off. Do not think of buying a pair of workshoes without learning all about this wonderful shoe with the sole of steel. Read my free book and my fair, open, satisfaction guaranteed Free Try-On Proposition. Simply put your name and address on this coupon and mail it to me, or send me a postal card, and I will immediately send you, free, postpaid, this book of facts, figures and illustrations, together with complete literature and my Free Ten Days' Try-On offer. Send this coupon, or address your postal to me personally, today.

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N. M. RUTHSTEIN

59 Racine Street, Racine, Wis.

Dear Sir:—Please send me postpaid, your free book, "The Sole of Steel," together with full particulars of your Ten Days' Free Try-On Proposition, which will enable me to examine and test a pair of your shoes in my home without placing myself under any obligations or taking any risk.

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GRANGE

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

THE SEPTEMBER PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Opening songs.
Are the Michigan Development Bureaus helping or harming this section of the state? How?
Dialect song.
What treatment of the meadow gives best results?
The Referendum vote as proposed at State Grange, 1911.
Instrumental music.
Book review, by a woman.
Character song, "Mary Ann," in charge of Equal Suffrage Committee.
Current events in Equal Suffrage circles.
Refreshments, "My wife's favorite treat," furnished by the husbands.
Suggestions for Second Meeting.
Instrumental music.
"Co-operation in this and other countries," a paper.
Reading, "University Students and Women."
Popular music of today compared with that of 30 years ago, a paper or talk with examples.
New ideas gained at the fairs: 1. Through a man's eyes. 2. Through a woman's eyes.
What men most desire on a farm, by a woman, discussed by a man.
What women most desire on a farm, by a man, discussed by a woman.
Refreshments, "My husband's favorite dish," furnished by the wives.

GRANGE LEVERAGE.

Through long association with rural work one phase of it has grown more attractive to me than any other. It is suggested in the question, "How can a Grange take a neighborhood by its four corners and lift it up?"

Why not? Listen a moment. Over the line in Ohio the other day some of us were discussing ways and means of improving district schools, when a group of three or four men drew near with active interest showing in their faces and offered some information about a seven-year struggle they had just had in their community to secure a new school building. Bit by bit they gave the details and then one of them exclaimed significantly, "The Grange got us that schoolhouse all right. We would have been discouraged long ago if we had worked separately."

Again, listen to this about a little Grange that had a most precarious life for a number of years and then began to pick up: "Our Grange had a picnic, with many present from three other Granges and a number from our own township who were not patrons; we felt that it paid many times over for the effort. The Sunday school organized through the Grange is flourishing. Some of us thought for various reasons it might be best to close the Grange for a time during the summer, so we made an extra effort to notify the members of what we were thinking and that we would vote upon it at the next meeting. A goodly number came out and voted to continue the meetings. We were so glad that, though it is sometimes hard to arouse interest, the members do appreciate what it means to the township. Looking back over the things the Grange has accomplished for us here, we are not discouraged."

Ah, there are "corners" and "corners" in every neighborhood, and it only needs to take hold of the right ones to do away with the undesirable!

JENNIE BUELL.

AMONG THE LIVE GRANGES.

Successful Joint Picnic.—The Grange-Gleaner picnic in Gray's grove on the shores of Elk Lake, Grand Traverse Co., was well attended. The dinner was followed by a program made up of musical numbers, recitations and speeches. The orator of the day was State Master Hull; the other speakers were Hon. Frank Leshner, of Mancelora; Webster Wilson, of Kewadin Arbor; R. H. Elsworth, assistant secretary of the Western Michigan Development Bureau, and George L. Crisp of Williamsburg Grange.

Successful Eaton County Picnic.—West Benton patrons were hosts to Oneda, Needmore and Charlotte Granges at a picnic in Lipsey's grove, Wednesday, Aug. 14, and of the many Eaton county Grange events of the summer, this was the most successful. The attendance was large, the music of the best, the ball game all that could be desired, and the speaking away above par. And the dinner—well, no one ever saw a poor Grange dinner, so what's the use. The proceedings were opened by Mrs. John Lipsey, lecturer of Benton Grange. Leonard Cole delivered an able address of welcome, which was responded to by Archie Kenyon, master of Oneda Grange, and Wm.

Huber, master of Charlotte Grange. J. C. Nichols, on whose farm the grove is located, bade the guests welcome and assured them that the grove was at the disposal of the Grange at all times and asked them to come often and make themselves at home. Mrs. Peter Turo, of Charlotte, gave a reading on the woman suffrage movement, and Elmer N. Peters delivered a splendid address on the same subject. John Ketcham, of Hastings, the speaker of the day, was detained and it was late when he arrived on the scene, but he delivered a splendid address. The ball game between West Benton and Needmore resulted in a score of 7 to 0, in favor of West Benton. The proceedings were brought to a close late in the evening, and all present joined in declaring that West Benton Grange was composed of royal entertainers.

Granges Prove to be Good Entertainers.—An unusually pleasant time was had by the members of the local order who gathered in Traverse City last Saturday to enjoy a banquet and program. Despite the rainy day a large attendance turned out and the banquet tables were full, a condition which always makes for a pleasant and profitable session. The day was set aside for honoring Ceres, the goddess of the grain, and the hall was tastefully decorated with the different cereals and flowers for the occasion. During the hour several grangers were given their final instructions as to the secrets of the order. A program consisting of several well selected readings, a story and songs, were ably rendered and thoroughly satisfied those present that they had spent a day that never will be regretted. At its next meeting this Grange will devote the session to the consideration of what the organization will exhibit at the coming fair, and the manner in which the exhibits will be displayed.

Consider Woman Suffrage.—Regular meeting of Arcadia Grange No. 500 was called to order by Worthy Master Hubbell. Grange opened in form and regular order of business taken up. Two new members were obligated. The program consisted of a song, a select reading by Sister Esther Smith, and the discussion of the question of woman suffrage by several members. Some very good ideas were advanced in favor of the question. Penny march. Meeting closed in form, after which the young ladies treated all present to peaches.

Wilson Grange, of Charlevoix Co., is in good condition notwithstanding light attendance at some of its summer meetings. At the last meeting in July the Grange's receipts for the preceding quarter were shown to be nearly \$50, about one-half of which remains in the treasury. One application for membership was received. The lecturer's hour was largely given over to an experience meeting in which the brothers discussed the mistakes they had made in farming during the past year.

Day of Leisure.—Tecumseh Grange held its annual picnic at the home of Mr. and Mrs. Newton Bryan, Saturday, July 27, 136 people being present. A sumptuous picnic dinner was served at noon. There was no regular program, but the guests spent a most enjoyable afternoon telling jokes on one another and having a general good time.

Debated Suffrage Question.—Members of Baraga Grange, one of the hustling subordinates of the upper peninsula, recently held an open meeting in their hall at which the question of granting suffrage to women was debated. Messrs. C. H. Anderson and J. J. O'Connor spoke on the affirmative, while Messrs. H. A. Brennan and Dr. von Zeller took the negative. The question was thoroughly debated and immediately thereafter a vote was taken, resulting in 31 for and 30 against the proposition. The ladies present were given the honor of voting first and they practically cast a unanimous vote for suffrage, 25 to 5. The gentlemen were then allowed to do likewise, the result being 25 to 6 against.

The Coopersville-Nunica Oratorical Contest, announced some weeks ago, was held Saturday evening, July 27. The friendly rivalry existing between these Granges made the occasion a notable one and the success of this new and novel undertaking in Grange endeavor speaks well for the lecturers who planned it. The attendance was near the 300 mark, both Granges being well represented. The program was opened by singing "America," after which the contestants delivered their orations in the following order: "Optimism," by Frank Hambleton; "The Keynote to Progress," by Cassa Weaver; "The principles of Agriculture," by Dorothy Lillie; "Society and its Relation to Mankind," by Andy Peterson; "Corners," by Clare Dunning; "Obstacles to Stepping Stones," by Edgar Wyman. The orations as a whole were very creditably delivered, and the judges had no easy task in choosing the winner. The standings of all were good, but someone had, of course, to be the highest. The oration, "Corners," by Miss Clare Dunning, of Coopersville Grange, received the highest percentage, and she was awarded the gold medal in a neat presentation speech by Dr. F. D. Smith. The oration by Edgar Wyman was a close second, there being a difference of only two points in the judges' markings. The orations were interspersed with violin and piano selections rendered by Henry Rankins and Mrs. Harvey Walcott. At the close of the contest the young folks indulged in dancing.

COMING EVENTS.

Pomona Meetings.

Grand Traverse Co., with Silver Lake Grange, Wednesday and Thursday, Sept. 4 and 5.
Ingham County Pomona, with Holt Grange, Saturday, Sept. 14.

FARMERS' CLUBS

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—J. D. Leland, Corunna.
Vice-President—D. M. Morrison, St. Johns.

Secretary-Treasurer—Mrs. C. P. Johnson, Metamora.

Directors—C. L. Wright, Caro; E. W. Woodruff, Blanchard; C. P. Johnson, Metamora; H. W. Chamberlain, White Lake; Wm. T. Hill, Carson City; Jerry Spaulding, Belding.

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

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

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

THE FUTURE OF THE FARMERS' CLUB MOVEMENT.

The origin and growth of the Farmers' Club movement in Michigan is perhaps without precedent in any agricultural state or country. With a small beginning of a few Clubs, whose organization dates so far back that there has been some discussion as to which was first organized, this movement spread gradually at first from the examples afforded by these Clubs of the benefits to be derived from such a local organization. Practically a score of years ago representatives of these few Clubs met together for the purpose of organizing a State Association of Farmers' Clubs. From that time on for some years the growth of the Farmers' Club movement was rapid. It has been continuous up to the present time, although its growth in recent years has not been as rapid as during the early years following the organization of the state association.

All this has been accomplished spontaneously and without any special effort toward the promotion of Club organization by the central body. While the state organization has, like most of the local Club organizations, been a success from the very start and, while each of its meetings have been well attended and most profitable from the standpoint of the deliberations of delegates assembled, yet at no time have all the local Clubs been represented at this meeting or affiliated in a suitable way with the state organization.

While the latter has accomplished much good in various ways it has not been the power which would be possible had it been differently financed. There has been no accumulation of funds which might be used in cases of emergency where the influence of a well financed Farmers' Club of this kind could be properly brought to bear upon public questions of importance to its members. Nor have the funds been available to conduct a systematic campaign of Club extension in order that the benefits of these local farmers' organizations might be brought to the attention of other communities whose citizens are unacquainted with their advantages.

It has been well said that a season of prosperity is not well suited to the development of permanent organizations among farmers, particularly along business lines more than any other one thing. That the Farmers' Club movement has survived a period of the greatest agricultural prosperity that this country has ever known is evidence that those who have identified themselves with the movement find in it much of benefit to themselves and their families from a social and local standpoint alone, else the hundreds of local Clubs which have been organized throughout the state would not be maintained, and their numbers would have gradually diminished instead of increasing, as has been the case. But that the growth of the movement has not been very considerable in recent years would seem to indicate that the future holds little more in prospect for the organization than has already been realized, unless its field of usefulness be enlarged or its units be more closely held together by a strong central body.

In our issue of August 7 was published the report of the committee appointed at the last meeting of the state association to consider this subject and propose amendments to the constitution and by-laws of the association which would strengthen that organization and place

it in a position to be of greater service to the local Clubs and their membership. The local Clubs were urged to discuss this proposition at an early date and be prepared to act on it through their delegates at the next associational meeting. This is too important a matter to be neglected or to be acted upon hastily, since it has a most important relation to the future of the Farmers' Club movement in Michigan. It is worthy of early and serious attention from every local Club in the state, to the end that their joint conclusion may be a wise one in furthering the interests of the local Clubs and their membership.

FARMERS' CLUB PICNICS.

Napoleon Farmers' Club.

The annual picnic of the Napoleon Farmers' Club was held at Eagle Point, Clark's Lake, Saturday, and was enjoyed by nearly 100 members and friends. The usual bountiful dinner was first on the program, and although a "pot-luck" nothing was lacking from chicken-pie to ice cream. Following this several selections were rendered by the club band, which, by the way, constitutes the greater part of the Napoleon cornet band. The program of sports which was a new innovation at the picnic was then taken up, and to make it more interesting and amusing small prizes were given as follows: Potato race for boys, toy accordion, won by Clyde Lester; potato race for men, half pound salted peanuts, won by F. M. Andrews; potato race for girls, Chinese doll, won by Mabel Lester; nail driving contest for ladies, hammer, won by Mrs. Zaida Stephenson; nail driving contest for men, his fill of ice cream, Clyde Lester; umbrella and apron race, box of candy, won by Clyde Lester; needle-threading contest, shaving mug and olive dish, won by Claude Cole and Mrs. Clara Richardson; raisin-eating contest, box raisins, won by Lora Carpenter; girls' running race, box stationery, Olive Richardson; shoe and stocking race, box stationery, Claude Cole; sack race, half-pound salted peanuts, Harold Nichols; ball-throwing contest for girls, fancy plate, Mabel Lester; ball-throwing contest for boys, ball, Harold Nichols. The September meeting of the Club will be held at Many Woods, the home of Mr. and Mrs. G. W. Butler, the roll call to be answered by vacation experiences.

CLUB DISCUSSIONS.

Question Box Feature of Meeting.—The August meeting of the Wixom Farmers' Club, of Oakland county, was entertained by Mr. and Mrs. Charles Kinney, at their home in Milford. A large crowd gathered there and as the day was fine the tables for dinner were placed on the lawn under the beautiful maples. After the usual social hour the president called to order. We listened to a good program, consisting of vocal and instrumental music, recitations and readings. As there were a number of questions in the question box to be answered, the one the program committee had prepared was carried over and will be discussed at the September meeting.—Mrs. R. D. Stephens, Cor. Sec.

The Future of Farming.—The August meeting of the Howell Farmers' Club, of Livingston county, was held at the genial farm home of Spencer Tooley, a large company being present, including visitors from the Geona Club. After the usual opening exercises, followed by a number of excellent musical and literary numbers, Mrs. R. R. Smith read a paper on "The Future of Farming." The article said that the farm was in the stage of great transformation. That the little farm has had its day. That farming on cotton plantations had already passed out of individualism. The farm being the last stronghold of individualism to enter the industrial revolution. The discussion on this article was taken up by S. M. Yerkes, A. M. Wells and others, who did not think such a thing would occur and that socialism was not best for our country, to take away man's individuality.

The Question Box is always an important factor in the program and this meeting was no exception. In response to the questions which it contained, the following answers were given: Spencer Tooley thought the telephone merger would be cheaper for those who now have two phones, unless they raise the price. S. M. Yerkes favored a bona-fide sale, while opposed to combinations. He thought that a state commission would be best to regulate price. "Is Socialism the Result of Evolution?" assigned to W. W. Crittenden, who thought not, while Mrs. Smith said it was. That other nations should have the privilege of going through the Panama canal without toll was answered by W. W. Crittenden, who did not think they should. "Is Alfalfa a Paying Crop, and when is the Best Time to Sow it?" Discussed by A. M. Wells, who thought it was and believed in inoculation of soil. "For the nation which is the better, to dissolve the trusts or to regulate them?" Tooley and Crittenden thought if they could not be regulated they would grow worse. A variety of opinions were given as to the best methods of control. "Are you in favor of the tactics employed by the English suffragette to obtain the ballot?" assigned to Mrs. Smith, who decidedly said no. The Club then adjourned to meet at the S. M. Yerkes home the first Thursday in September.

MARKETS

DETROIT WHOLESALE MARKETS.

August 28, 1912.
Grains and Seeds.

Wheat.—This has been a week of strength in the wheat market, prices gradually advancing since last Wednesday. Among the reasons for better prices are the general demand from abroad, active buying by millers who are finding an excellent outlet at present for flour and the failure on the part of the farmers to deliver wheat at the elevators. Usually at this season deliveries are heavy from farmers who need the money, but this year appears to be an exception. This last week the increase in the visible supply amounted to only 419,000 bu. Shipments from South America to Europe are small and there is competition between the markets of England and those of the continent for the cargoes, which gives buying on the opposite side of the Atlantic much impetus and encourages higher values. One year ago the price here for No. 2 red wheat was 87½¢ per bu. Quotations for the week are as follows:

	No. 2	No. 1		
	Red.	White.	Sept.	Dec.
Thursday	1.09	1.08	1.09	1.10½
Friday	1.09	1.08	1.09	1.10½
Saturday	1.09½	1.08½	1.09½	1.11½
Monday	1.09½	1.08½	1.09½	1.11½
Tuesday	1.10	1.09	1.10	1.12

Corn.—The corn market has improved the past week from the standpoint of the seller. The advance in wheat was no doubt influential in giving a firmer tone to the corn deal. This past week the weather has been favorable to the growing crop, but the improvement has not been such as to stampede the market from its present high position. Conditions will need to be unusual to give the country a yield that will bring prices to the usual level this coming season. A year ago the price for No. 3 corn was 57¢ per bu. The visible supply decreased over one-half million bu. Quotations for the week are as follows:

	No. 3	No. 3		
	Corn.	Yellow.		
Thursday	80½	83		
Friday	81½	84		
Saturday	81½	84		
Monday	81	83½		
Tuesday	81	83½		

Oats.—With the two former grains, oats has also shown an advance. While supplies are coming to many markets in liberal quantities there is disappointment in the quality of the grain offered. Recent wet weather colored a large per cent of the crop and reduced the grade. At this date in 1911 the market was paying 44¢ for standard oats. The visible supply increased over one million bushels. Quotations are as follows:

	Standard.	Sept.		
Thursday	36½	36		
Friday	37	36½		
Saturday	37	36½		
Monday	37	36½		
Tuesday	37	36½		

Beans.—There is scarcely any activity in this market. Nominal quotations were advanced 3¢ a week ago and have remained at the new figure the present week. Damage is being done to the crop by excessive rains, and, while it is yet early to predict the size of the crop, the probabilities are that it will be cut short of the usual acreage yield by the unfavorable weather conditions. Nominal quotations are as follows:

	Cash	Oct.		
Thursday	2.68	2.30		
Friday	2.68	2.30		
Saturday	2.68	2.30		
Monday	2.68	2.30		
Tuesday	2.68	2.30		

Clover Seed.—A little activity has crept into the clover seed market this week. A few small contracts have been reported at prices comparing with the nominal quotations recently published. On Tuesday, October seed showed an advance of 10¢, while alsike remained steady. Quotations are:

	Oct.	Alsike.		
Thursday	10.00	11.00		
Friday	10.00	11.00		
Saturday	10.00	11.00		
Monday	10.00	11.00		
Tuesday	10.10	11.00		

Rye.—This market is dull and steady, with the quotation for No. 2 rye unchanged at 71¢ per bu.

Timothy Seed.—Offerings of this seed are on the market and transactions have been made the past week at \$2.50 per bu. for prime spot, which is 10¢ below the quotations of a week ago.

Flour, Feed, Potatoes, Etc.

Flour.—Prices unchanged except best patent is up 5¢. Market is active.

Straight	5.60
Patent Michigan	5.85
Clear	5.00
Rye	5.00

Feed.—Feed values about steady with last week. Carlot prices on track: Bran, \$26 per ton; coarse middlings, \$28; fine middlings, \$31; cracked corn and coarse corn meal, \$31; corn and oat chop, \$31 per ton.

Hay and Straw.—Market rules steady. Quotations are for new hay. They are: No. 1 timothy, \$17@18; No. 2 timothy, \$16@16.50; clover, mixed, \$14.50@17; rye straw, \$9@10; wheat and oat straw, \$8.50@9 per ton.

Potatoes.—Michigan tubers are moving in increased volume but the wide demand is maintaining last week's quotations. They are selling at 75@85¢ per bu. The ruling price for southern offerings is \$2.50 per sack, a decline of 25¢.

Provisions.—Family pork, \$22@23; mess pork, \$19.50; clear, backs, \$21@22; hams, 15½@16½¢; briskets, 12½@13¢; shoulders 13¢; picnic hams, 13¢; bacon, 16@18¢;

pure lard in tierces, 12¼¢; kettle rendered lard, 13¢ per lb.

Dairy and Poultry Products.

Butter.—There is a large quantity of butter being made throughout the country but the current demand appears to be sufficiently liberal to hold prices steady. The local market is unchanged, with quotations for extra creamery 26¢; first creamery, 25¢; dairy, 21¢; packing stock 19¢ per lb.

Eggs.—The advanced price of last week is maintained, largely due to the shrinkage in output, a condition that is being felt all over the country. Current receipts candled are quoted at 22¢ per dozen, which is last week's price.

Poultry.—A steady tone marks the poultry deal. The only change in price noted is a slight decline in the quotations for turkeys. All other prices remain steady with a week ago. Quotations are: Broilers, 16@17¢ per lb; hens, 13@14¢; No. 2 hens, 9@10¢; old roosters, 9@10¢; turkeys, 15@16¢; geese, 10@11¢; ducks, 14¢; young ducks, 15@16¢ per lb.

Veal.—All grades higher. Fancy, 13½@14¢ per lb; choice, 9@10¢.

Cheese.—Market steady. Michigan flats 16@17¢; York state flats, 17@18¢; limburger, 17@19¢; domestic Swiss, 22@23¢; brick cream, 17½@18¢.

Fruits and Vegetables.

Peaches.—Peaches from Lake Erie districts are selling at 20@25¢ per one-fifth bu, basket.

Pears.—Bartlett's are quoted at \$5@5.50 per bbl.

Plums.—Per bushel, \$1.25@1.50.

Huckleberries.—Selling at \$3.25@3.50 per bushel.

Apples.—New apples are quoted at \$2.50 \$3 for fancy, and \$1.25@2 for common; poor, \$1@1.25 per bbl. Good apples by the bushel are selling at 50@75¢.

Honey.—Choice to fancy comb, 15@16¢ per lb; amber, 12@13¢.

OTHER MARKETS.

Grand Rapids.

Dressed hogs are selling around 11¢ now. Veal calves are worth 10@11½¢. Live poultry, delivered, is bringing the following prices: Fowls, 10¢; broilers, 12¢; ducks, 8¢; geese, 7¢; turkeys, 10¢. Eggs are worth 20@21¢; dairy butter, 20@22¢. Hay is selling at \$12@15. The potato market is lower, the tubers now selling around 50¢, with liberal offerings.

Chicago.

Wheat.—No. 2 red, \$1.05@1.06; Sept. 94½¢; Dec., 94½¢.

Corn.—No. 3, 79½@80¼¢; Sept., 73½¢; Dec., 55½¢.

Oats.—No. 2 white, old, 34½@35¢; Sept. 32½¢; Dec., 33½¢.

Butter.—Creamery shows price improvement while dairies remain steady. Quotations: Creameries, 22½@25¢; dairies, 21@23¢.

Eggs.—A very firm tone prevails with offerings on the decline. Prices are advanced. Quotations are: Firsts, 20¢; ordinary firsts, 18¢; at mark, cases included, 17½¢ per dozen.

Potatoes.—Increased shipments depress prices. Decline amounts to about 10¢. Minnoscas are down to 45@50¢; Illinois to 50@55¢; Wisconsin, 45@55¢.

Beans.—Choice hand-picked is the only grade showing change, which is 2¢ lower. Pea beans, choice, hand-picked, \$2.85@2.88 per bu; prime, \$2.78@2.80; red kidneys, \$2.50@2.60.

Hay and Straw.—Prices unchanged from a week ago, with trade steady. Quotations are: Timothy, choice, \$21@22; No. 1, \$19@20; No. 2 and No. 1 mixed, \$16@18; clover, \$7@10; No. 2 and no grade, \$5@7; alfalfa, choice, \$18@18.50; No. 1, \$17@17.50; No. 2, 14@15. Straw—Rye, \$9.50@10; wheat, \$6.50@7; oat, \$7@7.50.

New York.

Butter.—Market steady with values scarcely changed. Quotations: Creamery, special extras, 26¼@26½¢; do., firsts 25@25½¢; do. seconds, 24@24½¢; factory do., June make firsts, 22½¢.

Eggs.—Market firm. Best grades are steady, lower grades higher. Receipts are decreasing. Fresh gathered extras, 25@26¢; extra firsts, 23@24¢; firsts, 21½@22½¢ per dozen.

Poultry.—Dressed—Broilers and fowls weaker. Fresh killed western broilers, 15@24¢; fowls, 14@16¢; turkeys, 16@17¢ per lb.

Boston.

Wool.—Unusual activity characterized the Boston wool market this past week, over 12,000,000 lbs. being reported as having changed hands. This large movement is probably the direct outcome of the removal of the uncertainty, for a time at least, as to federal legislation affecting the wool market. The trading consists principally in fleece wools. A large block of Ohio ¾-bloods went at 30@31¢; some Michigan ¾-bloods sold at 30½¢, and ¾-bloods from the same state at 30¢. The demand for Michigan wools has been only moderate to date, with the probability that in future weeks heavier selling will be the order. Territory wools are quiet. Foreign offerings are larger than usual, and in quite active demand.

Elgin.

Butter.—Market is firm at 25¢ per lb., which is the quotation for the past several weeks.

THE LIVE STOCK MARKETS.

Buffalo.

August 26, 1912.
(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York.)

Receipts of stock here today as follows: Cattle, 195 cars; hogs, 55 double decks; sheep and lambs, 45 double decks; calves 1,250 head.

With 195 cars of cattle on our market here today, and only 18,000 reported in Chicago, we quote our market on all grades of cattle showing fat, and on

stockers and feeders, from 10@15¢ per cwt. higher. There was not a single load of really good cattle on the market, and our quotations would have been held strong with last week on the best grades.

We quote: Best 1,350 to 1,500-lb. steers \$8.75@9.40; good prime 1,200 to 1,300-lb. steers, \$8.50@8.75; do. 1,100 to 1,200-lb. do., \$8.15@8.40; medium butcher steers, 1,000 to 1,100, \$7@7.25; butcher steers, 950 to 1,000, \$6.40@6.65; light butcher steers, \$5.35@5.85; best fat cows, \$5.50@6.25; good to prime do., \$4.50@5.50; fair to good do., \$3.75@4.50; common to fair do., \$3.25@3.75; trimmers, \$2.50@3; best fat heifers, \$6.75@7.50; good to prime heifers, \$6.50@7; fair to good do., \$4.75@5.25; light butcher heifers, \$4.25@4.75; stock heifers, \$4@4.25; best feeding steers dehorned, \$5.25@5.50; common feeding steers, \$4.40@4.60; stockers, inferior, \$4@4.25; prime export bulls, \$5.75@6; best butcher bulls, \$4.75@5.25; bologna bulls, \$4@4.50; stock bulls, \$3.75@4.25; best milkers and springers, \$5@5.50; common kind do., \$25@35.

Receipts of hogs today were again light, there being but 55 double decks on sale. Light receipts at all western markets and a strong demand here forced prices 10@15¢ higher than Saturday's average; pig stuff in some cases sold 20@35¢ higher than Saturday's best time. The quality of the hogs here today was not the best; buyers picked out lots that suited them, paying \$9.50 for this kind. Anything a little off in quality, or a little on the light order sold from \$9.25@9.40; pigs and lights, \$8.50@8.75; roughs, \$7.50@8; stags, \$6@7. Market closed full steady here today, and we look for a good trade on the good hogs, but common hogs must be bought to sell lower. Buyers are going to make a big difference between the strictly corn-fed and just the fair kind.

The lamb market was active today, with prices about the same as the close of last week; most of the choice lambs selling from \$7.50@7.60; yearlings, \$5.25@5.75. The sheep market was active on the heavy weights but dull on the heavy kind. Look for a little improvement in lambs and about steady prices on sheep, the balance of the week.

We quote: Choice lambs, \$7.50@7.60; cull to fair do., \$5.50@6.25; yearlings, \$5@5.75; bucks, \$2.50@3; wethers, \$5@5.15; handy ewes, \$4@4.25; heavy ewes, \$3.35@3.50; cull sheep, \$2@3; veals, choice to extra, \$10.50@11; fair to good, \$7.50@9.50; heavy calves, \$4.50@6.

Chicago.

August 26, 1912.
This week's cattle trade opened with a run of 19,000, including 8,000 western rangers. In spite of a scant quota of native steers prices were advanced only in trade for the choice to prime grades. Latter sold 10¢ higher, topping at \$10.55, with a meagre crop above \$10, while other grades dragged at last week's closing rates and western range steers sold 10@25¢. However, two loads of prime Montana rangers made a new record price of \$9.50. Butcher stock sold steady with last week as did feeder cattle. Hogs advanced 10¢ on the early market, a run of 27,000 being below the expected number, but before the day was over values had receded to last Saturday's basis. Several loads of butcher and light weights went at \$9, highest since October, 1910. Average weight of hogs received last week, 241 lbs., against 243 lbs. the previous week and 242 lbs. a year ago. Sheep receipts were 35,000 and ewes and wethers sold strong to 10¢ higher while lambs went 10@15¢ lower, topping at \$7.15.

Cattle have reached a point where the consumption of beef everywhere in the country is so materially lessened on account of the unprecedentedly high prices outside of Civil war times that it is impossible to maintain cattle prices for the bulk of the offerings at the recent high level except when supplies are held down to meager proportions. The small percentage of strictly prime beefs may go higher still, as they did last week, the top being a dime above the previous high record of the year, but otherwise it seems doubtful whether it will be possible to maintain recent high prices. The bulk of the steers sold last week brought \$7.50@10.10, with choice heavy beefs selling at \$10@10.60, while the lower class of little yearling grass-fed steers from feeding districts brought \$5.80@7.75. A good class of steers sold at \$9 and upward, with medium grade cattle going at \$8 and over, and cattle below the \$10 line were 50@75¢ lower than the recent high time. Yearlings with quality sold at \$8.50@10, and cows and heifers sold at \$4.35@8, butcher stock participating in the decline noted in steers. Occasionally a heifer sold above \$8, and there was a sale of 16 prime 732-lb. heifers at \$9.50, the highest sale of the year. Cutters sold at \$3.50@4.30, canners at \$2.35@3.45 and bulls at \$3.75@7.25. Western range cattle were received much more liberally than a week earlier, but less freely than a year ago, and their quality was not so good as during the previous week. They averaged 25@35¢ lower, steers going at \$6.50@8.55 and cows and heifers at \$4.60@7.50. The demand for stockers and feeders was improved, and good lots were largely 25¢ higher under limited offerings, stockers selling at \$4.25@6.50, feeders at \$5.75@7.50 and feeder heifers at \$4.65@5.25. Calves were active and higher, selling at \$4@10.25 per 100 lbs., and milkers and springers had a good sale at \$40@110 per head.

Hogs have remained in a firm position on the whole, for still another week, with the inevitable reactions after advances, fluctuations being within narrow limits. There appears to be no danger that the markets will receive too many hogs for sometime ahead, for the requirements of the fresh pork trade are greatly increased by the decreased consumption of beef throughout the country because of its unusual dearthness. Furthermore, there is a large demand for lard and cured pork, bacon and hams on domestic

and export account. The extreme range of prices for hogs continues extremely wide, as is usual at this season, when grass hogs and rough, heavy sows on the packing order comprise so liberal a percentage of the offerings. The demand for prime light hogs that average around 180 to 200 lbs. for the requirements of the eastern packing trade is still a big factor, these offerings topping the market with late sales at the highest prices recorded since October, 1910. Speculators have operated freely and contributed greatly to the strength in the market. The week closed with hogs selling at \$8.85 for the best, the highest price yet attained. Receipts for the week were much smaller than a year ago.

Sheep and lambs were traded in last week extensively, prices fluctuating much more than usual, prime lambs selling up to \$7.30 on Wednesday and afterwards weakening under smaller buying orders. There was free marketing of range lambs from Idaho, and range wethers and yearlings arrived in very fair numbers from Montana. Native lambs, too, showed up freely, and native ewes sold to a fair extent, but supplies of Louisville lambs consigned direct to packers were much reduced. The poorer lambs sold at \$5 and upward, with late sales of the best range lambs around \$7.15@7.30. Yearlings brought \$4.50@5.65, wethers \$3.60@4.35, ewes \$2@4, and bucks \$2.50@3. Feeders were good buyers at stiff prices, the offerings from the ranges being inadequate and lambs brought \$6.35@6.50, yearlings \$4.35@4.85 and wethers \$3.60@4.25. Breeding ewes were active at \$4@5. The market was mainly supplied with flocks from the ranges, and fat lambs were much the most active at a liberal premium over everything else. Prices for sheep and lambs were much higher than a year ago.

Horses were in good demand on some days last week, there being a fair number of eastern dealers present, and they took hold well whenever good business horses were offered in fair numbers. The demand centered in horses good enough to bring from \$200@300 per head, with the class quoted at \$100@190 not especially animated. Desirable wagon horses were in excellent demand at \$200@285, and a limited inquiry prevailed for the class offered at 160 and upward. Inferior animals were quoted as low as \$75.

LIVE STOCK NOTES.

Every year there is more or less hog cholera in parts of the corn belt states, and some years ravages of the malady are extremely severe, resulting in materially lowering the supply of matured hogs, for at such periods thousands of farmers hurry their pigs to market in fear that sickness in their neighborhood will extend to their holdings while the moment sickness attacks any pigs owners waste no time in selling everything they possess in the swine line. Last year Ohio, Indiana and Illinois were ravaged by swine plague, with disastrous results, and this year the disease has been spreading westward, but it has not prevailed anything like as much as it did in 1911. It has broken out in Iowa at different points in recent weeks, forcing many sick pigs on the Chicago market from infected districts, while St. Louis has been receiving lots of sick pigs from Missouri. A wide prevalence of the plague this season would be extremely disastrous, for pork is the poor man's meat these times, particularly so when beef is reaching prices that are prohibitory to thousands of families that in former years were regular beef eaters. The spring pig crop of the country has been estimated as from 25 to 30 per cent short of that of 1911, and had it been equal to last year, it would not have been in the least excessive. Receipts of pigs at the stock yards of the country are always looked upon as an infallible barometer of the state of health of the pig crop of the country.

Hogs have soared still higher recently under the influence of an extraordinarily large demand from packers and butchers, and in the Chicago market speculators have taken a free hand of late, making good-sized purchases and afterward sorting out the hogs. For a considerable time the exceptionally high prices realized for hogs two years ago have been looked backward to as unlikely to be duplicated for years, but recent sales have been made nearly as high, and hogs in the Chicago market have been selling at the best figures recorded since November, 1910. The light hog-droves averaging in weight considerably under 200 pounds—are market toppers still, and there is the biggest kind of a spread in prices between these and rough, extra heavy old packing sows.

The stockmen who have been making money on the cattle selling in the Chicago market all the way up to \$10@10.60 per 100 lbs. are men who stay in the business year after year, no matter how the outlook may be. These men figure that good years overbalance the bad ones. A. W. Bragg, of Illinois, who has been topping the Chicago market with as fine heavy beefs as were ever seen anywhere, says he has lost money on only three crops of fat cattle in a continuous series of 35 seasons.

Grass cattle have been moving marketward from the vast region of country west of the Missouri river from Oklahoma to Montana, and their good average grading reflects the good pasturage. It is expected that fairly good shipments of desirable grass-fed range cattle will show up in the Chicago and other western markets during September, October and November. After then look out for a renewed scarcity of beef cattle and rallies in prices for medium grade cattle, as well as in other kinds.

The extremely high prices current in the Chicago market for fat beef cattle are drawing fair supplies from the Canadian ranges, notwithstanding the import duty of 27½ per cent ad valorem.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

August 29, 1912.

Cattle.

Receipts, 1,822. Canners and bulls active and trifle higher; other grades 10c lower than last week.

We quote: Extra dry-fed steers (quotable), \$8@8.50; steers and heifers, 1,000 to 1,200, \$6.25@7.50; do, 800 to 1,000, \$5@6.25; grass steers and heifers that are fat, 800 to 1,000, \$5@6.25; do, 500 to 700, \$4@5; choice fat cows, \$4.75@5.25; good do., \$4@4.75; common cows, \$3.50@3.75; canners, \$2.50@3.25; choice heavy bulls, \$4.50@4.75; fair to good bolognas, bulls, \$3.75@4.25; stock bulls, \$3.50@4; choice feeding steers, 800 to 1,000, \$5@5.75; fair do., 800 to 1,000, \$4.50@5; choice stockers 500 to 700, \$4.50@5; fair stockers, 500 to 700, \$3.50@4.25; stock heifers, \$3.75@4.25; milkers, large, young, medium age, \$4@5.5; common milkers, \$2.5@3.5.

Spicer & R. sold Bresnahan 1 bull weighing 1,110 at \$4.50, 3 do av 607 at \$3.60, 1 cow weighing 660 at \$3.50, 4 do av 1,007 at \$3.75, 9 butchers av 621 at \$4.35; to Morgan 1 stocker weighing 560 at \$4.35; to Sullivan P. Co. 2 bulls av 890 at \$4.25, 7 heifers av 707 at \$5.25; to Gerisch 2 steers av 810 at \$6.10; to Austin 8 stockers av 520 at \$4.00; to Hammond, S. & Co. 10 cows av 1,144 at \$4.60; to Bresnahan 4 cows av 860 at \$3.75, 1 do weighing 1,080 at \$4; to Parker, W. & Co. 2 bulls av 835 at \$4.25, 1 steer weighing 870 at \$5, 2 do av 700 at \$4, 3 do av 1,083 at \$4.50; to Goose 2 heifers av 385 at \$3.75; to Kamman B. Co. 30 butchers av 832 at \$5.25; to Rattkowsky 6 cows av 940 at \$4.25, 8 butchers av 425 at \$3.75; to Snow 2 stockers av 685 at \$3; to Rattkowsky 2 cows av 970 at \$4.25; to Kull 5 butchers av 636 at \$4.25, 1 cow weighing 900 at \$5.25, 1 steer weighing 1,270 at \$5.75, 1 do weighing 870 at \$6, 2 cows av 1,000 at \$5; to Rattkowsky 2 cows av 975 at \$4.25; to Schlischer 3 butchers av 473 at \$3.60, 6 do av 575 at \$4.25.

Bishop, B. & H. sold Goose 11 butchers av 380 at \$3.75; to Sullivan P. Co. 11 do av 605 at \$4.20, 4 do av 757 at \$5.25, 2 cows av 930 at \$4.50, 4 butchers av 612 at \$3.25, 1 cow weighing 1,050 at \$4.50; to Bresnahan 3 do av 880 at \$3.50, 4 heifers av 625 at \$4.50, 2 cows av 875 at \$3.50, 3 do av 907 at \$3.50, 2 do av 870 at \$3.50, 1 do weighing 1,010 at \$3.75, 14 stockers av 486 at \$4; to Greene 3 do av 563 at \$4.75; to Gerisch 8 steers av 820 at \$5.75; to Parker, W. & Co. 2 bulls av 895 at \$4.25, 5 butchers av 900 at \$4.25, 10 steers av 1,178 at \$7.25; to Fry 8 do av 690 at \$5, 2 do av 680 at \$4; to Goose 11 butchers av 463 at \$3.75; to Greene 3 stockers av 666 at \$5, 2 do av 730 at \$5; to Applebaum 6 butchers av 691 at \$4.15; to Parker, W. & Co. 2 cows av 995 at \$4.50, 2 do av 890 at \$3.25, 3 do av 990 at \$4, 3 do av 1,126 at \$4.25, 9 steers av 691 at \$5, 3 cows av 933 at \$4.25, 3 do av 970 at \$4.40, 2 steers av 835 at \$5.50; to Regan 19 butchers av 490 at \$4; to Fromm 5 steers av 864 at \$6.15; to Hammond, S. & Co. 2 bulls av 1,325 at \$4.75; to Sullivan P. Co. 2 cows av 970 at \$5.10, 1 do weighing 1,370 at \$6, 2 do av 925 at \$4.75, 2 do av 970 at \$3.40.

Roe Com. Co. sold Parker, W. & Co. 3 bulls av 1,020 at \$4.50; to Bresnahan 1 cow weighing 1,000 at \$3.50; to Gerisch 9 steers av 960 at \$6.40; to Sullivan P. Co. 2 cows av 910 at \$3.50, 10 butchers av 987 at \$4.60; to Mich. B. Co. 13 do av 881 at \$5.25, 1 bull weighing 1,300 at \$5, 2 steers av 1,190 at \$7.25; to Bray 14 cows av 822 at \$3.50, 17 stockers av 574 at \$4.25; to Newton B. Co. 3 cows av 800 at \$3.25, 2 bulls av 980 at \$4.25; to Austin 3 stockers av 440 at \$4.

Haley & M. sold Fry 10 butchers av 685 at \$4.60; to Rattkowsky 7 do av 490 at \$4.15, 1 cow weighing 870 at \$3.50, 3 do av 960 at \$4.50; to Hammond, S. & Co. 1 steer weighing 780 at \$6, 1 do weighing 840 at \$6.25, 2 cows av 1,050 at \$4.50; to Applebaum 6 butchers av 515 at \$4.10; to Kamman 6 do av 743 at \$5.25; to Miller 3 feeders av 740 at \$5; to Newton B. Co. 9 butchers av 809 at \$4.90; to Schlischer 12 do av 620 at \$4.75; to Breitenbeck 27 do av 795 at \$5.50, 1 cow weighing 800 at \$4.25; to Goose 6 butchers av 895 at \$4; to Kamman 3 do av 837 at \$4, 2 do av 560 at \$4.50; to Sullivan P. Co. 4 cows av 990 at \$4.75, 1 do weighing 780 at \$3.75, 2 heifers av 630 at \$4.15; to Parker 1 bull weighing 1,320 at \$4.75, 1 do weighing 870 at \$4.25; to Bray 1 stocker weighing 620 at \$4.75, 3 cows av 1,047 at \$3.25, 3 stockers av 623 at \$3.75, 5 feeders av 734 at \$5; to Miller 8 stockers av 647 at \$5, 5 feeders av 736 at \$5; to Newton B. Co. 1 bull weighing 1,270 at \$4.50, 5 canners av 906 at \$3.25; to Hammond, S. & Co. 2 bulls av 1,220 at \$4.50, 1 do weighing 1,440 at \$4.85; to Sullivan P. Co. 18 steers av 892 at \$5.50; to Lachalt 5 butchers av 736 at \$4.85, 5 heifer weighing 620 at \$4.25; to Miller 12 stockers av 677 at \$5; to Kamman 12 butchers av 732 at \$4.75, 10 do av 535 at \$4.25; to Alanzo 7 stockers av 480 at \$4.40.

Johnson sold Morgan 17 stockers av 581 at \$4.75.

Weeks sold Parker, W. & Co. 5 bulls av 1,072 at \$4.60.

Johnson sold Hill 12 stockers av 676 at \$3.70, 3 do av 440 at \$3.50.

Weeks sold Heinrich 32 steers av 870 at \$8.

Veal Calves.

Receipts, 500. Market strong at last week's prices. Best, \$10@11; others, \$4.50@9.50.

Bishop, B. & H. sold Parker, W. & Co. 3 av 170 at \$10.50, 11 av 175 at \$9.75, 14 av 250 at \$8, 8 av 150 at \$9.50, 1 weighing 160 at \$10, 2 av 150 at \$9.25, 5 av 225 at \$6, 3 av 315 at \$7, 2 av 145 at \$11; to Hammond, S. & Co. 2 av 160 at \$8, 5 av 165 at \$11, 3 av 150 at \$10, 2 av 175 at \$6, 4 av 155 at \$7, 7 av 165 at \$10, 3 av 180 at \$7.25, 3 av 155 at \$9, 2 av 145 at \$10, 5 av 150 at \$11; to Goose 2 av 125 at \$8.50; to J. Goose 11 av 190 at \$5.50; to Mich. B. Co. 6 av 215 at \$7, 9 av 150 at \$9.50; to Nagle P. Co. 4 av 145 at \$8.50, 6 av 155 at \$10, 3 av 200 at \$6.50, 1 weighing 140 at \$10.50; to Hammond, S. & Co. 7 av 145 at \$10.50, 1 weighing 120 at \$10, 2 av 140 at \$10.50.

Spicer & R. sold Mich. B. Co. 5 av 150 at \$10.25; to Rattkowsky 2 av 250 at \$8.50, 1 weighing 290 at \$5; to Parker, W. & Co. 1 weighing 120 at \$8.50; to Mich. B. Co. 9 av 160 at \$9.50, 3 av 165 at \$9, 1 weighing 140 at \$10.50, 2 av 170 at \$10.50, 1 weighing 110 at \$8.

Mich. B. Co. sold Roe Com. Co. 6 av 130 at \$10.

Adams sold Parker, W. & Co. 7 av 185 at \$10.50.

Sheep and Lambs.

Receipts, 4,741. Market steady at last week's prices. Best lambs, \$6.50@6.75; fair to good lambs, \$5.75@6.25; light to common lambs, \$4@5.50; yearlings, \$4.75@5.25; fair to good sheep, \$3@3.50; culs and common, \$1.75@2.75.

Roe Com. Co. sold Barlage 6 sheep av 95 at \$3, 40 lambs av 60 at \$6, 12 do av 75 at \$6.50, 15 sheep av 110 at \$3.25.

Haley & M. sold Breitenbeck 10 sheep av 123 at \$3, 56 lambs av 63 at \$6; to Sullivan P. Co. 24 do av 73 at \$6.50, 6 sheep av 115 at \$3.50, 9 do av 115 at \$3.50, 5 yearlings av 80 at \$4.50, 22 lambs av 75 at \$6.50, 50 do av 63 at \$6.25; to Mich. B. Co. 58 sheep av 110 at \$3.25, 107 lambs av 65 at \$6.50, 182 do av 70 at \$6.40, 14 sheep av 115 at \$4, 12 do av 95 at \$3.25; to Newton B. Co. 13 lambs av 55 at \$5.50, 62 do av 75 at \$6.75, 15 do av 77 at \$6.50; to Hayes 22 do av 62 at \$6.50; to Pratosky 58 sheep av 85 at \$3.25.

Spicer & R. sold Sullivan P. Co. 43 lambs av 63 at \$5.50; to Newton B. Co. 25 yearlings av 70 at \$5, 53 lambs av 65 at \$6.75; to Mich. B. Co. 36 sheep av 90 at \$3.10, 9 do av 83 at \$3; to Sullivan P. Co. 22 lambs av 47 at \$5, 6 sheep av 95 at \$3.40; to Mich. B. Co. 70 lambs av 65 at \$6.40, 45 do av 55 at \$5.50.

Weeks sold Newton B. Co. 39 lambs av 70 at \$6, 19 sheep av 115 at \$3.50, 20 yearlings av 75 at \$5.

Campbell & W. sold same 10 sheep av 99 at \$3.50.

Adams sold Sullivan P. Co. 29 lambs av 50 at \$5.25.

Bishop, B. & H. sold Parker, W. & Co. 16 lambs av 75 at \$4.25; to Sullivan P. Co. 7 do av 80 at \$7, 33 do av 70 at \$6.65, 6 sheep av 110 at \$3.50, 21 lambs av 52 at \$5.25, 7 do av 45 at \$4.50; to Hammond, S. & Co. 19 do av 60 at \$6.25, 62 do av 75 at \$6.75, 38 do av 70 at \$6.50, 13 sheep av 110 at \$3.25; to Thompson Bros. 22 lambs av 60 at \$6.50, 23 do av 80 at \$5.25, 18 sheep av 125 at \$3.50; to Nagle P. Co. 35 lambs av 65 at \$6.60, 45 do av 70 at \$6.25, 1 buck weighing 150 at \$3.50, 8 sheep av 125 at \$3.50, 6 do av 90 at \$3, 9 do av 120 at \$3.50; to Hayes 20 lambs av 50 at \$3.75, 12 do av 62 at \$4.75; to Thompson Bros. 15 yearlings av 75 at \$5, 17 sheep av 95 at \$3.50; to Fitzpatrick Bros. 54 lambs av 75 at \$6.75, 49 do av 60 at \$6.25, 18 sheep av 105 at \$3.50, 13 do av 110 at \$3.25, 21 do av 80 at \$3.25, 10 lambs av 75 at \$6.75; to Sullivan P. Co. 17 do av 80 at \$6.75, 31 sheep av 65 at \$1.50; to Thompson Bros. 25 lambs av 60 at \$6; to Harland 54 do av 60 at \$6.25; to Young 17 do av 70 at \$4.50.

Lamb market closed very dull and 25c lower than the opening prices.

Hogs.

Receipts, 2,268. Market 25@30c higher than last week.

Range of prices: Light to good butchers, \$8.70@8.80; pigs, \$7.75@8.25; light yorkers, \$8.65@8.75; stags one-third off.

Bishop, B. & H. sold Hammond, S. & Co. 150 av 200 at \$8.90, 210 av 190 at \$8.85, 400 av 180 at \$8.80, 320 av 160 at \$8.75, 210 av 140 at \$8.50, 207 av 160 at \$8.60.

Haley & M. sold Parker, W. & Co. 70 av 190 at \$8.85, 90 av 180 at \$8.80, 140 av 160 at \$8.75.

Spicer & R. sold same 156 av 175 at \$8.40, 50 av 190 at \$8.75.

LIVE STOCK NOTES.

Dissolution of the National Packing Company indirectly had the effect of imparting to the Chicago horse market a temporary activity. The Hammond Packing Company and the Anglo-American Provision Company auctioned off 64 head of horses and mules, and opening sales were made at \$450@600 per head, but late sales were not so good, and the average prices realized for horses and mules was \$208 per head. Armour and Swift were the principal buyers, closely followed by the Independent Packing Company and Libby, McNeil & Libby.

The ruling high prices have been drawing great numbers of hogs to western and eastern markets prematurely for some time past, until now there is a shortage of matured swine, while a greatly increased eastern shipping demand in the Chicago market has resulted in a remarkable boom that carried prices to unexpected heights. Of course, such booms in a short space of time, such as that of the recent week, when hogs shot up as much as 60c per 100 lbs. for the best grade of light shipping hogs in the Chicago market, are followed by increased runs temporarily and reactions in values, but the owners of thrifty hogs need have no fear as to the future, for hogs are the very best of property and are sure to sell high for months to come.

The scarcity of beef insures a good demand for fresh pork and cured hog products, and it will pay farmers well to convert their corn into hogs. It has been estimated by good judges that disease killed off fully a million hogs during last autumn, and the shortage in western packing operations for the present summer season is known to every farmer and stockman. No big runs of hogs continuously are expected at Chicago before along in November, the old crop of hogs having been closely marketed.

A firm located at the Chicago stock yards that handles sheep and lambs exclusively advises its country patrons as follows: "We advise our friends in the feeding belt to go on the markets and buy the fat sheep at present prices, take them out and put them on grass, as they are cheaper than anything else they can buy. Fat ones are cheaper than the thin ones, as you cannot put the fat on as cheaply as you can buy it. We hope our friends who can handle some sheep will not overlook this fact, as wethers positively cannot sell so much out of line with other products very long. We believe that everyone that goes to the country will make money. There never was a time when sheep were selling so much out of line with other meats, and we are unable to explain why. Wethers should be selling for \$5.50 per 100 lbs. here to be in line with beef, pork and lamb. Breeding ewes are very scarce, and choice young ewes are almost impossible to get."

K. W. Brown, of the Galloway Breeders' Association, says: "There is more or less trouble in getting pure-bred cattle to fill up association sales this fall. The reason is that breeders who have stock to cull out are doing so on the market at these war-time prices, and the promising cattle of breeding value they want to hold onto themselves."

Advices received from Peoria, Ill., say there are lots of young hogs left in that part of the country and a bumper corn crop can be put to good uses in fattening hogs. Similar reports come from different parts of Missouri.

CROP AND MARKET NOTES.

Livingston Co., Aug. 26.—The weather seems to be one shower after another and it has been almost impossible to get the cats in fit condition to draw. Oats that have been threshed are yielding well and they are plump and heavy. Corn is making a good growth but a large percentage of it will not get ripe, owing to the poor start that it got earlier in the season. Wheat is a very poor yield and the quality is very inferior. It will be difficult to get seed of good quality to sow this fall. Rye is yielding well and of fair quality. Not much plowing done yet owing to the fact that farmers have been unable to get their oats off the ground. A large acreage has been left for clover seed but unless we get different weather it will probably not fill well.

Washtenaw Co., Aug. 23.—One of the most strenuous oat harvest that farmers have had in years is drawing to a close. Oats have been wet continuously for the last three weeks and are very considerably damaged in straw and grain. Oats that have been threshed are turning out fairly well. Corn is also making good growth and with a late and warm fall will make nearly an average crop. A large amount of stubble plowing done so early in the year. A large acreage of fall grain will be sown, the moisture in the ground making especially favorable conditions. Hogs making a high price record, \$8 per cwt. being now offered on foot. Good beef steers worth \$6.50@7. Unfortunately farmers in this vicinity have very few of either. No doubt cheaper feeds will encourage greater production in both lines.

Ogemaw Co., Aug. 20.—Weather has been rainy two weeks, causing some grain to grow badly in the shock, but as a rule wheat and oats are pretty well taken care of and threshing is in full blast. Oats are turning out much better than was expected a few weeks ago and are of good quality. Prices on hay are up in the air and buyers are not contracting for future delivery. Potatoes look fine and beans will be a good crop if the frost holds off for a few weeks. Eggs are not plentiful, stores paying 18c; butter, 18c, with cream around 23c.

S. E. Mecosta Co.—Pastures are fine, best in years. Hay made a good growth but owing to poor seeding in past years, not as much of it as common, also much of it got wet in curing, some spoiled entirely. Oats a fair crop, would have been better but for smut, which has caused a loss of 25 per cent in some cases. Corn is very backward, some not earing at all. Very little likely to mature good. Wheat acreage small, less than half a crop, quality poor, and some grown. Early potatoes good; late potatoes and beans not very good. Stock of all kinds pretty well sold out of the county. Berries have been a fair crop. A few cherries and pears. A fair crop of apples. Butter, 20c; eggs, 20c; potatoes dropped from 1c to 75c.

Branch Co.—Threshing progresses very slowly, weather wet and many oats still in shock. Wheat very poor, much was plowed up more did not yield enough to pay for the seed sown, very few good fields. Oats a big crop, yields of 50, 60, 70 and even 100 bushels per acre being reported. Oats sown as late as May 20 yielded a good crop. Hay a fair crop but much of it very weedy and the acreage was light. Corn generally late and uneven. Poor seed and wet, cold weather have kept it back. A late, hot fall would result in some good fields but average is low. Second crop of clover growing finely, too wet for it to fill well. Wheat, \$1; oats, 28c.

Sanilac Co., Aug. 23.—It has been almost impossible to get anything done in the line of harvesting on account of so much wet weather. Some farmers just

finished haying. Not so very heavy rain-falls but no drying weather. Oats and barley have been cut and in the shock for more than two weeks and are badly damaged inside, very few are stacked or in the barn at this date. Beans have made a rapid growth but have made no progress toward ripening. Nothing less than 30 days of dry, sultry weather without frost will make any beans this season. Great weather for preparing fall wheat ground. Corn a good crop; cultivating finished. Late potatoes doing well. Price of new hay has started at \$10 per ton. Clover not well filled. Apples are plentiful; no market for them yet. Berries, red, \$3.25; black, \$3.50, delivered.

Ohio.

Carroll Co., Aug. 20.—We have had plenty of rain lately. Most farmers are done harvesting. Threshing is begun now. Oats turning out fairly, but rye and wheat were poor crops. Most of the corn is late but looks good. Timothy seed is cheaper than for some time. Prices are from: \$2.50 to \$3; wheat, \$1.10 per bu; corn, \$1; rye, \$1; oats, 55c.

SEED WHEAT.

"Pride of Turkey" hard winter wheat, exempt from Hessian fly, yields 30 to 40 bushels per acre. "Harvest Queen" soft winter, early, stiff straw, yielded 35 bushels per acre this year. Ask your local dealer for samples and prices.

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For Sale—by owner, 240 acre Stock and grain farm, 150 acres improved, balance timber and pasture with running water. 2 1/2 miles from markets. 8-room house, 40x60 barn. \$55 per acre, half down, balance on time. Box 40, R. No. 1, Barryton, Mich.

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will save you time and money in buying a farm. Come now while crops are growing. MICHIGAN FARM HOME CO., Greenville, Mich.

Profitable Farms in Ogemaw, best hay and stock county in Mich. Also grains, potatoes and fruit, \$25 to \$55 per acre. Write for list. WINSLOW REALTY CO., West Branch, Mich.

WHY PAY RENT when you can buy the Best Real Estate in Michigan at from \$7 to \$12 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. Stafford Bros., (owners) 15 Merrill Bldg., Saginaw, W. S. Michigan.

CENTRAL MICHIGAN. Write for list of stock and Grain Farms, also our booklet "Facts about Central Michigan", giving complete information regarding the finest farming district in Central Michigan. HOLMES REALTY CO., Lansing, Mich.

FOR SALE—Three quarter sections of Presque Isle County, Mich., clay soil, corner, ing at school house 5 1/2 miles south of Millersburg. Well watered, well grassed and easily cleared. Price \$10 an acre—easy terms. Also partly improved farms at \$15 and \$20 an acre. High class land only. JOHN G. KRAUTH, Rainy Lake Ranch P. O., Millersburg, Mich.

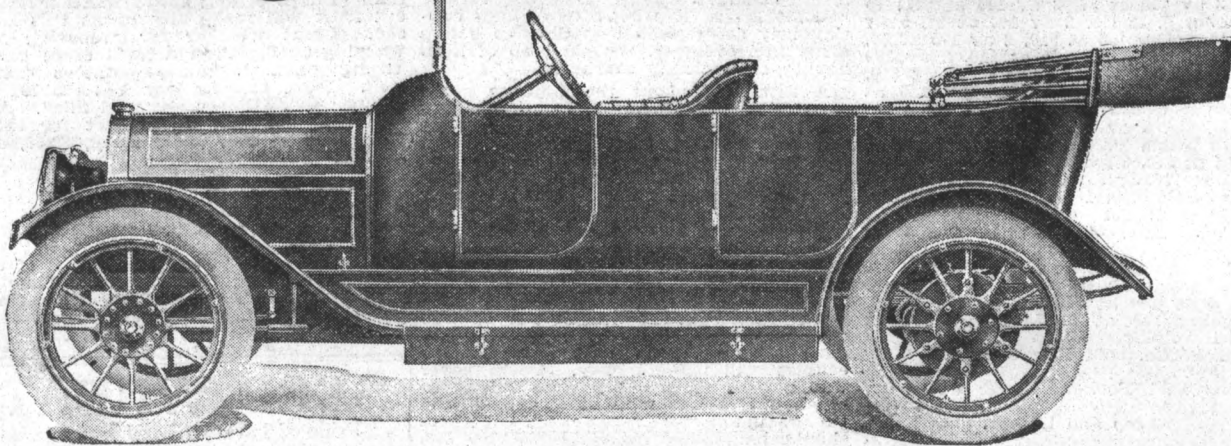
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Michigan "40" Completely Equipped \$1,585



Some Features

Four-forward-speed transmission
Oversize tires—35x4½
Electric lights and dynamo
Center control—left-side drive
Motor 4¼x5½ inches
Extra effective brakes—16x2¼ inches
Big, comfortable springs
Large over-capacity, giving big factors of safety
Pressed steel, full floating rear axle
Wheel base 118 inches
Firestone demountable rims—extrarim
Adjustable pedals
Adjustable steering post
14-inch cushions
Hand-buffed leather upholstery, filled with best curled hair
50-inch rear seat—inside
Nickel mountings
Genuine cellular type radiator
Electric horn
\$50 Jones speedometer—four-inch dial
Best mohair top, side curtains and envelope
Windshield built in
Foot rail—robe rail
Complete tool equipment—tool chests under running board
Axles sufficient in strength for 80-horsepower car.

The Fight of the Forties

A War That Is Bringing Out Cars and Values Unmatchable

The greatest contest ever known in Motor-dom is raging now among the 40-horsepower cars. There are 72 makers, each doing his utmost to outdo the others. Six of these cars,

backed by millions of money, are in a fierce race for supremacy. The Michigan "40" is one.

This means cut prices on wonderful cars, and you should be careful to get the advantage.

Prices Cut in Two

This war comes about because the demand is now turning to "Forties," in an overwhelming way. Men are finding out that the "Forty" alone combines economy with sufficient room and power.

So 72 makers have entered this field. Hundreds of the ablest engineers are working now on "Forties." And this rivalry is bringing out the best cars ever built. Also the greatest values.

Since this war began some makers' prices have been cut in two. "Forties" are selling, with

splendid equipment, for what stripped "Thirties" sold for when this war began.

For this fight will hinge on price. Better cars can't be built than the best of the "Forties." Better equipment is out of the question. There are six or seven cars in the "Forty" field which no man can claim to excel. The best brains in the industry have built them.

So the main question is: Who can give most for the money! The result is such values as never before were offered in automobiles.

None but the highest-priced cars in this country yet have over three.

The electric lights and dynamo—a feature which costs you \$125 when offered by others as an extra. Oversize tires—35x4½. Those tires, as an extra, would cost you \$50 more than the tires on most "Forty" cars.

The cushions are 14 inches deep. The rear seat is 50 inches

wide inside. The springs are extra wide and long. The brakes are extra strong. The axles are twice sufficient.

There is center control and left-side drive, like the best of next year's models. The upholstery is hand-buffed leather, filled with the best curled hair. The body finish calls for 22 coats of paint.

All This for \$1,585

This splendid car, with all these rare features, this unusual and costly equipment, is offered for \$1,585. We defy any maker to meet it.

It now remains for you to make your comparisons. Compare every feature, one car with another. Find out in this way who gives most for the money.

Compare only cars built by able men—men of great reputation. Those cars are bound to be right. Then measure up what each car gives as compared with the Michigan "40."

We have made these comparisons—made them with each of the 72 cars which compete with us. We have found, as you will, that no other offer in the "Forty" class begins to compare with the Michigan.

The Michigan "40" is simply bound to win out with any man

who makes any sort of comparison. It is due to yourself that you make it.

Get Our Book

The way to begin is to write for our catalog—a very remarkable book. Compare the specifications—compare the equipment—with any rival in this class. Compare the fame of the engineers.

Then see the car and test it. Our dealer in your town is now ready to show it. And the car will be a revelation.

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The Michigan's Offer

After four years of preparation the Michigan "40" now takes the lead in this fight. Year after year the best men we know have worked at perfecting this car. Since the start they have worked out 300 improvements.

They have sent out in test cities 5,000 cars, and watched each car's performance. Now they all agree that nowhere, at any price, is there a better car built than the Michigan.

W. H. Cameron is designer-in-chief. For years he was chief engineer for the Willys-Overland Co. John A. Campbell is our body designer. His body designs have been used by kings.

Each part and detail is in charge of an expert—the ablest man we know for the purpose. And the car they have built is perhaps the finest example of modern motor car engineering.

Note the Rare Features

To this perfect car we have added all the late features, some of them rare and very expensive.

For instance, the four-speed-forward transmission, as used today in the best European cars.

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Owned by the owners of the Michigan Buggy Company—for 30 years builders of Michigan vehicles; over 500,000 of them. Everybody knows them.