

# MICHIGAN FARMER

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## FARM NOTES.

### Hard vs. Soft Tile.

A few words in regard to tile drainage. Several in this vicinity claim that soft-burnt tile are as good, if not better, than hard-burnt. They claim that they absorb more water. What do you say? What is your opinion of cement tile? It is a good plan to cover the tile with straw to prevent the loose dirt from entering the joints?

Kent Co.

G. W. R. C.

There is no difference in the immediate results secured from the use of hard or soft burnt tile in the laying of tile drains since the water enters the tile at the joint rather than by penetration, even where soft tile is used. Cement tile give the best of results and are conceded to be as good as any kind of clay tile and are given the preference by many. There is no object in covering the tile with straw or any other material in ordinary soils if they are properly laid, the joints being made as close as possible, especially at the top. If properly laid to grade they will not fill with sediment, but if unevenly laid there will be trouble from this cause no matter what precaution may be taken in laying them; hence, the grade stakes in the tile drain should be carefully marked and the tile should be so laid as to have no depressions in the drains, causing them to fill up with sediment.

### Weeds and Yields.

Practically every farmer realizes that weeds in the cultivated crops reduce the yields materially, but few appreciate the fact that when the land is allowed to become foul with weed seed, the grain crop suffers to a corresponding degree. Some investigations recently made by Professor W. C. Palmer, of the North Dakota Station, throw an interesting light upon this problem. To get some idea of how much weeds might reduce the yield of grain crops, he selected a field that was weedy with pigeon grass and when the wheat was ripe and ready to harvest he measured out a square yard at several places, pulled the weeds carefully so as not to disturb the wheat, and weighed the weeds in order to determine the amount of weeds per acre, and the moisture which would be consumed in their growth. The results as announced in the press bulletin, are as follows:

The weights of the weeds without roots were 91 ozs., 58 ozs., 64 ozs., 56 ozs., and 60 ozs., making an average of 66 ozs. per square yard. The first one is quite a little above the average. If that is left out the average will be 60 ozs. to the square yard, or 3 3/4 lbs. This would make 14,520 lbs. to the acre. A sample of weeds was dried and gave 21 per cent dry weight, or 3,049 lbs. of dry matter, 1 1/2 tons, or enough to reduce the yield of wheat 25 bushels, provided wheat could have made as good use of the moisture and plant food. One thing is certain, and that is that the growing of these weeds used up 2,100 tons of water, the equivalent of 18 inches of rainfall and that is rain that was actually in the soil where the wheat could have secured it. There is no place for

the weed. It is an expensive thing to have on the farm.

### Top-Dressing with Clover Chaff to Get a Seeding.

We have a 10-acre field that is rather run down on which we failed to get a good seeding with oats the past season. Will we be able to get a seeding by top-dressing with clover chaff (both alsike and June) without sowing any nurse crop? If so when is the best time for top-dressing? Should the ground be disked in the spring after top-dressing for best results?

Lapeer Co.

D. C. M.

The inquirer does not make it entirely plain whether he expects to utilize the seed not hulled from the clover chaff in seeding this land, or whether the chaff is simply to be used as a top-dressing and clover seed sown. If the former it would, in the writer's opinion, have been better to disk the ground up thoroughly this fall before applying the chaff, and then either disk lightly or roll the ground as early as possible in the spring after the chaff has been applied. In case seed is to be sown other than that which will be contained in the chaff, it will probably be better to disk the chaff in next spring and then sow the seed and go over the land with a weeder or roller.

undoubtedly it is much easier to get a seeding without a nurse crop on any soil that is comparatively free from weeds, and there should be every prospect for success in seeding this land, as suggested in the inquiry.

### The Cost and Value of Ensilage.

Will someone please tell me what ensilage, made from good mature corn, is worth per ton? Also, how many tons a silo 14x30 ft. and which has now settled 5 ft., would contain?

Gladwin Co.

G. B.

The value of a thing may be properly estimated in two different ways, viz: its cost, or its value for the purpose for which it is used. The cost of growing a crop of corn and putting it in the silo has been the subject of investigation at a number of experiment stations and is variously estimated at from \$1.95 to \$2.50 per ton where a normal crop is grown under favorable conditions. There is no doubt, however, that silage is worth very much more than this as a succulent feed for live stock in general and dairy cows in particular. In the cow testing associations which are operated in Michigan, the value of ensilage fed in tests made of dairy cows, is figured at \$3.50 per ton, which appears to be the consensus of

## THE COST OF RAISING A BUSHEL OF WHEAT.

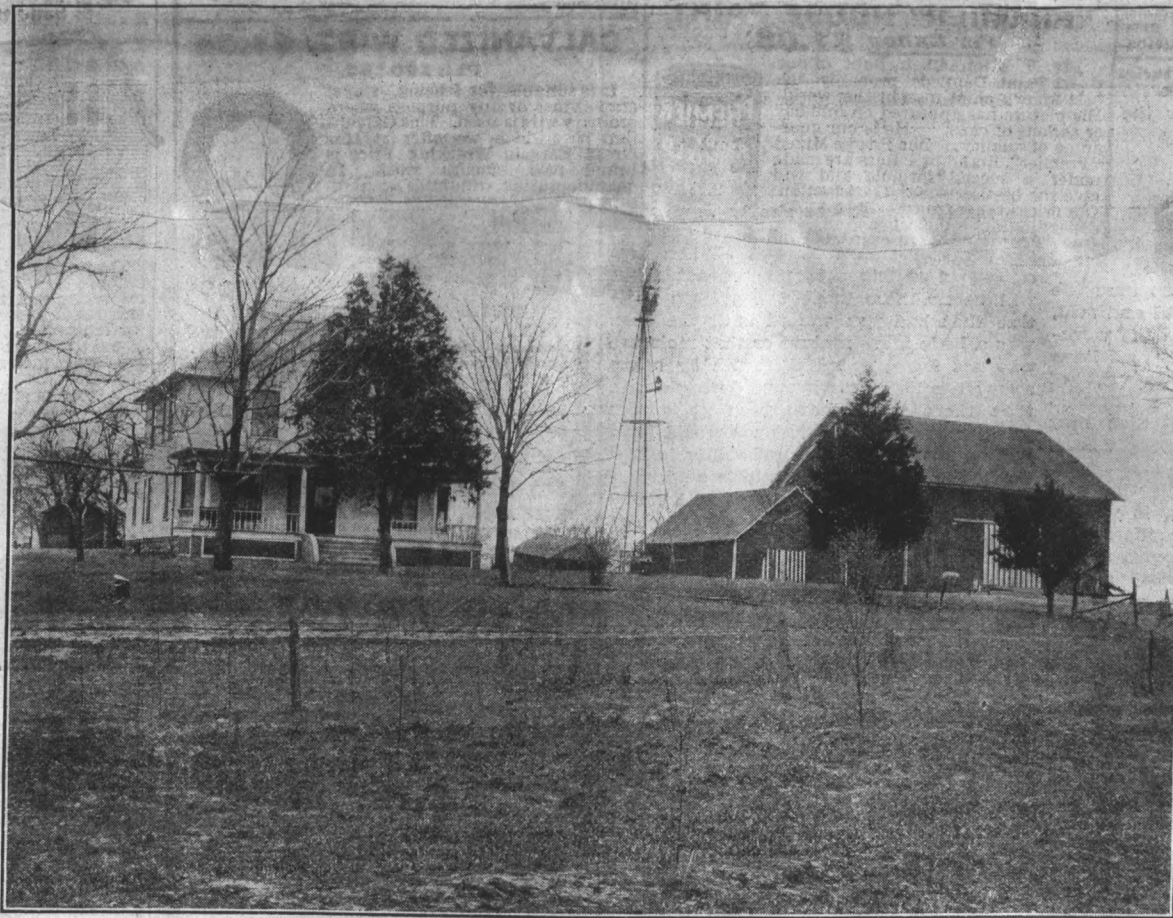
At no other time in the history of the country has there been as much interest centered in some of the different branches of agricultural pursuits as at the present time. The economists, as well as the philosophers, seem to be bending their efforts toward solving some of the difficult agricultural problems. In many cases they seem to be vying, one with the other, each trying to delve deeper than the other and render more assistance to the tillers of the soil. At times it looks as though people who aim to be wise, look upon the farming classes as subservient to their will, and think that they should, from necessity, accept volunteer advice from them in order to solve some of the intricate problems which the farmers themselves have been unable to solve, after many years of anxious thought and varying experiences.

During the past season those who raise wheat have been receiving a good deal of volunteer advice, and a good deal of criticism. Perhaps some of the criticisms are merited, and if listened to might do some good in the future. But I believe that average farmers look with a good deal of suspicion on the advice of theorists, and prefer to cling to facts that have been established by experiments, and hard-earned experience.

The wheat crop seems to be a "free-for-all" subject. No matter if a man is a stock broker, a professional man, or whatever his occupation in life may be, if he is alive to the doings of the day, he is ready to catch on to the various changes in the business world which will influence the price of wheat. The wheat in the markets of the civilized world seems to act as a kind of a barometer that very readily reflects a stringency in the monetary markets, or rises in price in response to the conditions that stimulate the manufacturing and general business interests of the country. We are the greatest wheat growing nation in the world and feel the pulsations of depression or stimulation very readily.

Since the present era of agricultural prosperity began, there have arisen many false prophets and self-constituted philosophers who seem to take delight in gloating over the immense profits, and enormous incomes which they claim are being received by the farmers of wheat-growing districts. They neglect to mention the toil, hardships, privations and disappointments that have to be endured, and only dwell upon the glaring brilliancy of wealth accumulations that have come to the lot of those fortunate enough to live on a farm. They seem to want to convey the idea that the land in our great and glorious country needs only to be tickled with the plow and in due time will laugh with a golden harvest that is sure to swell the volume of the bank accounts which are accredited to the fortunate farmers.

During the past year there has been considerable discussion as to the possi-



The Neat, Well-located Farm Yard and Buildings of Mr. Jerue, of Van Buren County.

The writer has never had any experience in getting a seeding by sowing clover chaff on the land, although some farmers claim to have had excellent results from this method. There is no doubt, however, that the addition of clover chaff or any other vegetable matter to the surface of the soil will prove beneficial to the seeding, no matter at what time of the year the same is applied, and regardless of whether it is left on the surface or disked in as suggested in this inquiry. There is something about a light mulch of vegetable matter which has a beneficial effect upon the soil, particularly when left over winter, aside from the fact that it is beneficial in conserving the soil's moisture, which will be needed by the young clover plants.

opinion among experts and dairymen interested as to the practical feeding value of good corn ensilage. A very practical discussion of this particular phase of the ensilage question was considered in the able contribution by Dr. Robison in the Practical Science department of the October 28 issue, on page 375, under the caption, "Economical Production."

The approximate capacity of a silo 14 ft. in diameter and 30 ft. high, would be 91.4 tons. This would be the amount contained, providing the silo were well packed as it was filled so as to reduce the settling to a minimum. Five feet would not appear to be an excessive amount for the silage to settle. The silo doubtless contains from 80 to 90 tons of silage.



bilities of wheat production in the United States and, farther, the cost of producing a bushel of wheat. There are some who seem to take great pleasure in making the difference in the cost of raising a bushel of wheat, and the selling price, as wide apart as possible. They seem to aim to reach heights sublime and in the end they sink to the level of the ridiculous.

In the year book of the Department of Agriculture for 1899 may be found, in substance, the statement that between 1830 and 1896 the time of human labor required for the production of a bushel of wheat was reduced from three hours to ten minutes, while the cost of the labor required for this purpose declined from 17% to 3 1/2 cents.

I would like to ask, where, in this great country of ours, and at what date, was wheat ever raised at a cost for labor not greatly exceeding the figures named? It may be a pleasure for some to play with figures, denominated statistics, to tickle minds that are hungry for something startling, but when statements are published for the enlightenment of the farmers, let us have the facts, plain and simple.

What will average farmers say when told that 3 1/2 cents represents the labor cost of growing a bushel of wheat when it has cost them 10 cents per bushel for threshing their crops, which is in addition to the cost of plowing and fitting the ground, sowing the seed, watching the crop, cutting, shocking, hauling, stacking or storing in mows, and finally hauling to market before the returns are realized. Think of the sturdy pioneers who felled forest trees, logged and cleared the brush away to get a little open surface on which to sow some wheat, when it required harrowing six or eight times to dig up enough dirt to cover the seed; who cut their crops with a sickle or a cradle, threshed them on an open space of ground with a flail, and hauled the grain a long distance to market in an ox cart. Did they do it all at a maximum cost per bushel of 17% cents?

The figures quoted do not seem to belong to our own country. When repeated they sound more like the prices for labor in oriental countries where the tillers of the soil are mere serfs—slaves to aristocratic masters.

Practical farmers fully understand the difficulty in trying to answer the question as to the cost of raising a bushel of wheat. The variations in the different cases are almost innumerable. The soil, the difficulty or ease with which it can be prepared for the crop, its fertility, the climatic conditions which make the plant food available for the crop, the weather conditions in general from the time the crop is sown until it is secured and sold, the varying price of labor and the working of the machinery used, etc., all have their telling influences on the cost of production. I think that one thing is certain. Farmers do not feel that they are getting rich very fast raising wheat, even at present market prices.

As to fixing the figures on the cost of raising a bushel of wheat, it will be left to the self-styled philosophers who consider themselves endowed with supernatural knowledge and who swarm around the corner grocery to settle the great questions of weather and national affairs; or to the figure-manipulating statisticians, whose conclusions are reached from the summing up of the multifarious guesses made by a multitudinous array of guessers, which are sorted, sifted, averaged and reduced to the fineness of a "sliver of a fraction" and are then sent out to instruct, but which oftener astonish, the masses.

Wayne Co. N. A. CLAPP.

#### THE FARM CROPS.

##### The Wheat Crop.

Our 1911 crop of wheat was the poorest we have grown for many years, for which condition we have the Hessian fly to blame. About the only consolation we can get from the crop is that it could not have taken much from the soil. The average was about 15 bushels per acre. Many fields in the neighborhood did not go half this amount, in some cases the yield not being sufficient to pay for harvesting and threshing.

The new crop is now in the ground, but as a whole, has been sown later than usual, fully as much being sown in October as in September. Most farmers waited for cooler weather, having learned a hard lesson last year. Then the rains came on, so the ground was not suitable to work for some time, which made the seeding later than it would otherwise

have been. We sowed our corn ground with a grass seeder and disked it in with a cutaway harrow. The ground continued so wet that we could not get it in shape to drill so we adopted this method. We have quite a nice even stand, and by lapping half the ground was left fairly even, and by turning the disk toward the shocks the wheat was covered closer to the row than could have been done with the drill.

The wheat buyer reports that the fly was quite prevalent last week, and he found them on the wheat stalks, and feared the results would show up later if the warm weather continued. With a sudden change to cooler, their work may be checked, though we have had no hard frosts as yet to check them. If we have done the best we could, it is useless to worry about the fly as we can not help matters now.

##### Late Potatoes.

Farmers have been trying to dig late potatoes as best they could between showers. The crop is better than was expected, though the stand is poor. Buyers are offering 40 cents delivered at car, but few are selling. The quality is quite good and size quite uniform, but many are damp and hardly suitable to car.

Calhoun Co. S. B. HARTMAN.

##### CORN JUICE LEAKS FROM SILO.

I am having some trouble with one of my silos and thought I would write you about it and see if you can suggest a remedy. A liquid has been running from the bottom of my smallest silo ever since it was filled. It is not running as much now as at first but is running a good deal yet. I never had silage do that way before and can't imagine what the trouble is. An answer through the Michigan Farmer will be greatly appreciated.

Washtenaw Co. J. M.

Nothing is the matter with the silo, and nothing in particular is the matter with the corn silage. Your corn contained a little bit too much moisture when it was put into the silo, it was a little bit green, and contained too much juice and the pressure in the silo presses this juice out of the bottom. I have had this happen several times during the course of my silo experience and it always comes when we put in corn that is a little bit immature, or it may be that the corn was out in the rain after it was cut and was soaked when put in. At any rate there was too much moisture in filling the silo.

The same thing happens when you put beet tops into a silo. Last year the juice from the beet tops in my beet top silo ran out and ran all over the yard. One would think that something certainly was the matter, but it was simply this excess of moisture in the beets and the pressure from above forced it out. When this excess of moisture is pressed out there will be no more trouble, but I am positive that had you waited until the corn was a little more mature or that moisture was not incorporated therewith by being allowed to lie on the ground during a rain that there would have been no excess juice to run out and that you would have had better silage. The probability is now that your silage will be a little acid, perhaps more acid than it ought to be, and yet it will be fairly good silage. You need have no fear in using it.

COLON C. LILLIE.

##### CLEARING STUMP LAND.

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C. T. H. B.

The H. W. Johns-Manville Co., have moved their Birmingham, Ala., office from 1220 Empire Building to 606 Chamber of Commerce Building. This office will continue under the management of Mr. W. H. Fleming, who is well and favorably known throughout this section of the country, having been connected with this company for a considerable time.

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## POULTRY AND BEES

AFTER FIFTEEN YEARS' EXPERIENCE WITH INCUBATORS.

About fifteen years ago I bought my first incubator. They were not so plentiful then—probably would not find over a dozen in a day's drive. While the incubator had even then passed beyond the experimental stage, it was still looked upon with a great deal of suspicion by a majority of farmers. This is all changed now, and the utility of the incubator is almost as generally recognized today as that of the self-binder, the hay loader and the cream separator.

The incubator had an uphill fight to gain its rightful place in the estimation of the public. Much ridicule was heaped upon it and much facetiousness indulged in at its expense. The farmer's wife who purchased an incubator reaped a whole harvest of witticisms and "I told you so's" when her inexperience brought her hatch to grief and the garbage pail; and dire prophecies, when she had a good hatch, of the chickens all coming to some bad end. But this has all become history, except in isolated instances, and today you will find mighty few progressive poultrymen who are not disciples of the incubator. They have been "shown" that the incubator was right on the "dollar route."

There are still people who contend that the "old hen" is best; that she doesn't burn any oil; that she never goes out nights and lets the temperature go down to ruin, etc.; that the incubator is too great a care; that the incubator chicks are, in their motherless state, an even greater one. Some contend that the chicks do not possess vitality; that they are slow to mature; that they never come to a full "chickenhood," or rather to a full "henhood" or "roosterhood," that there is a mysterious something lacking in the incubator chicken—just what, even they don't exactly know, but it is not natural, anyway.

I wish to say that my experience, covering a period of fifteen years, has been highly satisfactory. I have had setbacks, I have had poor hatches, I have even had great chicken losses, but it was always caused by carelessness, ignorance or unforeseen misfortune, entirely apart from the responsibility of the incubator.

### Make Early Chicks Possible.

The advantage possessed by the incubator over the hen in producing a large flock of early chicks is one of the greatest of all. Every intelligent or experienced poultryman recognizes this. He also recognizes that the vitality of the early chick is pre-eminent; that, everything else equal, they have a start, and gain on that start, over any hatched later in the season.

Of course, there may be cases where half-starved or overworked fowls, late in winter or early in the spring, will produce eggs of poorer vitality than they will produce later in the season, after they have recuperated. These cases are, however, not worth mentioning in the aggregate.

I cannot too strongly emphasize the advantage of early hatching. It is but the rule that holds good in all of nature's doings, both in animal and vegetable production. It is the early crop that counts, in this latitude at least.

A mistake that a lot of people make is that of buying too small an incubator. A large one takes but little more care and fuel than a small one. Suppose you wish to raise 150 or 200 chickens—a very common farm flock. Why not get a 250 or 300-egg machine? Then, if you get one good hatch you are through for that season, and, with the right kind of care, a uniform flock is assured.

It is just as easy to care for a flock of 200 to 300 as a smaller one, or, if not precisely just as easy, it is a whole lot easier than spreading the hatching and brooding over a whole summer and fall, and then not get your full quota of chickens, or quality, either.

### Care of the Chicks.

I think there are more mistakes made in caring for the chicks than are made in handling the incubator. An incubator can give "never so good" a hatch and have its reputation assailed by one who has killed a good hatch by "fool" care. A great many people make a practice of giving the hatches to broody hens. In some cases this is very successful, but on the whole, I do not recommend it. There are several reasons; one is lice;

there is another, that is lice! and yet another, that is lice!!

There are surprisingly few poultrymen who realize the extent of lice infection. The hen may live and thrive after a fashion when so infested, but give her a flock of young chickens and the results are usually disastrous to the chickens. Then their owner sends up a wail about "poor vitality of incubator stock."

Again, it very often happens that a bunch of broody hens, destined to do the natural for the orphans, object to these terms of motherhood. Then there is real trouble and dead chickens. Well, it would take a pretty brilliant liar to blame the incubator under these conditions, but some make mental reservations to that effect, nevertheless.

Now, I fail to see the profit in raising chicks under hens. You have to feed the chicks anyhow, and the hen with them, and she generally seems to think her especial duty in the matter is to gobble the choicest bits herself. She is mighty little to be depended upon as a protector against the elements, but if allowed to roam she can be depended upon to drag her flock through the dews of early morn. These early morning walks may be healthy and promote an appetite, but they usually result in from one to half a dozen missing chickens. This is often allowed to go on until she gets down to one. This one she usually raises. Isn't this so, you advocates of the "hen mother?"

Isabella Co.

WM. J. COOPER.

### MAKING A HOME MARKET FOR HONEY.

Many farmers who have honey to sell ship it to distant markets when the people in their town or neighborhood ought to be eating it. Because it is not brought to them, or their attention called to it, they do not use it. All people like good food, and they will buy and use good honey just as they will fresh eggs and the best butter, and will become steady customers of the one who brings it to them. I have worked up a market in this way and created a demand for honey where there was none to speak of before.

The first and most important consideration in building up and keeping a home market is the quality of the honey. Under no circumstances do I attempt to sell anything but well ripened honey. It should also be of the best possible color. Of course, we shall have to dispose of some dark honey, but our customers should have a fair opportunity to sample it, and it should be sold at a lower price than the whiter goods. I leave as much as possible of the dark honey in the brood-nest, but even then I have two or three thousand pounds of it to dispose of in an ordinary season. I find that my customers prefer it at the lower price, and as they understand exactly what they are getting there is no excuse for complaint. In making my fall sales I usually have amber, white, and dark honey in the same load, which gives customers a fair opportunity of seeing the difference in price and of determining the difference in quality. They govern themselves accordingly. In this, as in all matters pertaining to the marketing of honey, absolute honesty is the best policy. One price to all should be the rule.

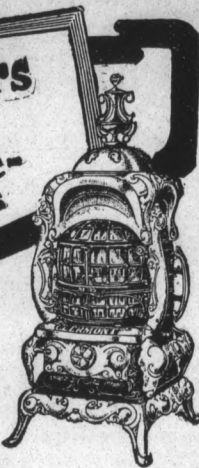
A reputation for honest and square dealing will also help us to deal with those who are unduly suspicious of adulteration in honey. There are still some ignorant enough to suppose that granulation of honey is positive proof of the presence of sugar or some other foreign substance. I label it all "Pure Honey," and on the label are printed directions telling them what to do if it granulates. It is also necessary to supplement this with verbal explanations in many cases. How much of it is believed by the customer depends largely upon the amount of confidence placed in the salesman. I have found it profitable in many cases to leave a copy of a honey leaflet which explains clearly the subject of granulation and explodes some of the popular myths in regard to adulteration.

But most important of all is to become acquainted with customers and to win their confidence so that they may be more ready to accept the explanation of these matters. After long years spent in building up a home market, I am commencing to reap the fruits of my labor, and have secured a long list of regular customers who depend upon me for their annual supply of honey.

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## LIVE STOCK

### RATIONAL METHODS OF STOCK FEEDING.

That the economical feeding of live stock is of great importance no one for a moment will deny, yet how few farmers we find who are at all acquainted with the principles which are involved, or understand the cause of which they, in their practice, see only the effects. They learn from experience that some kind of food contains greater fat producing properties than others, yet are content with this imperfect knowledge and pay no attention to an investigation of the causes of these differences.

Of course, it is not to be expected that every farmer can conduct scientific investigations of the various kinds of animal foods, but there is no good reason why he should not keep in close touch with the experimental farms and agricultural colleges and keep posted on their results instead of blindly following the old routine adopted by his forefathers without even an effort or desire of improvement.

It is not sufficient for a feeder to know that some kinds of grain, forage and roots possess fattening properties exceeding those of others, but he should understand why this is so and be able to mix his stock feeds so that he can obtain greater results at the smallest possible outlay.

It is not only necessary that a feeder should understand the values of the various foods he uses so that he can use them in a judicious manner, but he should understand the principles by which they operate and provide nourishment to his animals and thus be enabled to employ those containing the most desirable elements for each particular branch of feeding, and also be enabled to go into the feed markets and buy grain foods that will prove economical and efficient.

It is not my purpose to discuss this question scientifically but to discuss the two classes of animal foods and how to utilize them in the most profitable and efficient manner.

#### Albuminoids, Protein or Nitrogenous Foodstuffs.

These foods are the meat and milk making foods, and their base is nitrogen. This element is nearly pure in the white of an egg, and it predominates in albumin, gluten, gelatin, fibrin, casein and all proteins, both vegetable and animal. This protein is the expensive element and the element which is deficient in the generality of home-grown stock foods. Hence we should make a special effort to produce foods on our own farms that are rich in this element, such as clover, alfalfa, cowpeas, soy beans, rich pasture grasses and other forage and fodder crops that are rich in protein.

#### Carbohydrates or Carbonaceous Foods.

These are the heat and fat producing foods, and their base is carbon. This element predominates in the diamond, coal, wood, fibre, starch, sugar, oil, resin, etc. These foods are cheaper than the protein foods, and most of our home-grown foods contain an excess of these carbohydrates. The proper balance of these two classes of foods for young and growing animals and milch cows is about one part of protein to six parts of carbohydrates. The ration for each 1,000 pounds of live weight is 24 pounds of dry food a day, of which 15 pounds must be digestible, and 2.5 pounds of this must be nitrogenous or the equivalent of this. Thirty pounds of clover hay is about an equivalent. In order to more fully explain the subject I will quote a few tables and try to show their relative values when fed singly or in combination with others. Below is given the institute ratio of some of the so-called nitrogenous foods:

Skimmed milk	1 to 1.9
Buttermilk	1 to 2.6
Cottonseed cake	1 to 1.8
Brewers' grains	1 to 3.0
Hempseed cake	1 to 1.5
Red clover	1 to 2.8
Alfalfa before bloom	1 to 2.3
Flaxseed	1 to 3.1
Linseed cake	1 to 2.0
Rape cake	1 to 1.7
Malt sprouts	1 to 2.2
Sunflower seeds	1 to 1.3
Pasture clover	1 to 2.5
Peas	1 to 2.9
Field beans	1 to 2.3
Pea meal	1 to 3.0

These foods should be balanced with more carbonaceous ones; or they will injure the animal or go to waste. The nitrogenous element goes to make meat,

muscle, casein or cheese. These foods are the most expensive and difficult to obtain, hence they are seldom overfed. It has been clearly demonstrated that the fats in milk do not come from carbonaceous foods but from a proper combination of these with nitrogenous foods. All concentrated foods should be fed with care and caution. The aim of the feeder should be to feed both bulky and concentrated foods at the same time. The wise feeder will grow a variety of both classes of foods to supply the needs of his animals and buy such as he cannot grow on his own farm to feed in connection with what he may be able to grow at home. It will pay, not only as a gratification to his animals, but as a true economy from the money side of the question. The attention of the farmer should be devoted to the science of feeding animals in an economical and efficient manner.

There is another class of foods that are fairly well balanced as far as protein and carbohydrates are concerned, but these foods must be utilized with coarser foods to give the stomach proper stimulus of distension to keep its contents loose so that the gastric juices may act on and digest them. When we feed two classes of foods that are not properly balanced there is a waste. True economy consists in the feeding of a properly balanced ration and one the animals will eat up clean. The various foods may be balanced by feeding them alternately as well as in combination, but when feeding some of the more highly concentrated grain foods it is often desirable to utilize some of the more bulky foods as a divider in the ration, so that the juices of the stomach may obtain a more favorable action on the fine particles of food and prepare them for more perfect digestion and assimilation. While feeding dairy cattle we have found that they are enabled to make better use of their grain foods when they are fed with ensilage. In this way the ensilage acts as a divider and helps to separate the particles of grain food and assists in the work of digestion. The juices also act upon the grain food and assist in the work of digestion. There are some kinds of grain food that are made more palatable by the use of a divider, such as middlings, low grade flour, oil and other foods that are inclined to form a sticky, doughy mass that makes them unpalatable to some kinds of farm animals. Cut clover and alfalfa can be used to advantage as a divider of grain foods, and when horses are being fed heavily of grain it is many times safer to mix the grain with cut hay to prevent them from becoming gorged with too much food. Swine also obtain great benefits from clover, grass and other supplementary foods while they are being fed corn meal and other rich, concentrated foods that have a tendency to form a doughy, sticky mass in their stomachs. We must plan to make all our rations palatable as well as balanced. Some animals do not like one kind of food as well as another, and a careful feeder will study the likes and dislikes of his animals as well as their capacity to consume the various rations at a profit, and plan his system of feeding to meet the individual needs of the animals that are being fed.

Another point that we should keep in mind, and to illustrate it we will consider alfalfa. Here we have a food that is fairly well balanced, but if anything it contains a little too much protein, so we add a little corn ensilage or timothy hay to make a balanced feed, but when we feed it we do not get as good results as our figures show. What is the reason? Simply that the ration contains too much coarse, woody, indigestible fibre, and it requires too large a waste of the animals' energy to eat, digest and assimilate the ration. Thus we see it may be better to supplant the alfalfa hay with concentrated grain food.

As a general proposition the great problem is to find foods rich in protein to supplement the carbohydrates, but in feeding skim-milk we face a different problem, for here the carbohydrates have been removed and the protein of the whole milk condensed into the skim-milk so we find it economical to feed corn and other feeds with skim-milk to young and growing animals. Many practical feeders use whole corn with excellent results. Professor Henry, of Wisconsin, without doubt the highest authority on feeding farm animals, found that the best results came from feeding not to exceed five pounds of skim-milk with one pound of corn. For calves that are eating hay, the proportion of milk may be larger.

Another fact that is not recognized

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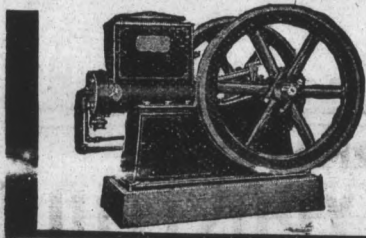
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among farmers in general is that early cut and properly cured hay contains from 20 to 50 per cent more digestible nutrients than late cut hay. Among the foods that are classed as well balanced foods may be named the following, giving the nutritive ratio of each:

Cow's milk	1 to 4.4
Wheat-meal	1 to 5.7
Wheat-bran	1 to 5.6
Millet	1 to 5.4
Red-top	1 to 5.4
Alsike	1 to 4.9
Quack grass	1 to 5.2
Turnips	1 to 5.8
Cottonseed	1 to 4.6
Wheat	1 to 5.8
Red clover	1 to 5.7
Barley-middlings	1 to 6.0
Beet leaves	1 to 4.0
Buckwheat-bran	1 to 4.1

All these foods should be fed with others, or alternately, so as to make them palatable and prepare them for perfect digestion. Some may be fed alternately with good results but care should be taken to feed a wide variety and not two foods alone.

Next we will consider the carbonaceous foods. If not fed other food the animals will gorge themselves and yet crave the nitrogenous elements which these foods are deficient in. We must keep in mind that these foods contain chiefly fat and heat-producing elements. If the animals are exposed to the weather they will require more of these foods than if kept in a warm barn or stable. The following is a list of some of these foods with the nutritive ratio of each:

Cream	1 to 30.5
Corn-bran	1 to 10.3
Wheat-middlings	1 to 6.9
Pumpkins	1 to 18.4
Buckwheat grain	1 to 7.4
Corn	1 to 8.6
Oats	1 to 6.1
Barley	1 to 7.9
Rye	1 to 7.0
Carrots	1 to 9.3
Sugar beets	1 to 17.0
Rutabagas	1 to 8.3
Potatoes	1 to 10.4
Artichokes	1 to 8.3
Cornstalks	1 to 34.4
Oat straw	1 to 29.9
Rye straw	1 to 52.0
Corn ensilage	1 to 12.0
Sorghum	1 to 7.4
Fodder oats	1 to 7.2
Hungarian grass	1 to 7.1
Fodder rye	1 to 7.2
Blue grass in bloom	1 to 7.5
Timothy	1 to 8.1
Orchard grass	1 to 6.5
Meadow hay in bloom	1 to 8.0
Apples and pears	1 to 43.0
Corn-cobs	1 to 71.2
Oat-chaff	1 to 33.8

Many of these carbonaceous foods are more valuable than others owing to their mechanical condition. Some of the root crops may be utilized as a source of protein up to a certain amount a day and take the place of protein foods. Root crops can be more profitably fed if the animals are being fed no other form of succulence. There are numerous protein feeds on the market, and I would advise every feeder to keep in close touch with his nearest experimental farm and agricultural college and read the bulletins concerning these feed problems and know the value of various kinds of foodstuffs.

New York. W. MILTON KELLY.

## THE INTERNATIONAL LIVE STOCK EXPOSITION.

Once more we have arrived at that period of the year when farmers from every section of this country and Canada begin thinking of the International Live Stock Exposition, which will be held in Chicago from December 2 to 9. This show has come to occupy a position among the live stock breeders of America as high as has the great Royal Show of England been emulated by the producers and breeders of stock in the British Isles. No adequate estimate of the educational value of this great show can be made. Here not only do we find exhibited the best individual animals as well as flocks and herds that the continent produces, but we also come in touch with the world's best judges of live stock and see them actually choosing, in the judge's ring, those animals which most closely conform to their ideals.

Michigan farmers have patronized this great exposition liberally in the past and have been close students of the great work which the organization has accomplished. We are yet to learn of a single person who has been disappointed in what he has seen and learned at the International. This fact alone should be sufficient to encourage those who have not heretofore enjoyed the privileges offered, to plan on attending the show this year. Many a young man has received a new revelation as to the possibilities in the production of live stock by the exhibits at former shows.

There is every promise that the entries

this year will be well up to the standard of former years, and indeed, there is reason to believe that the general exhibits will excel, inasmuch as it has become necessary to select a "sifting" committee whose duty it will be to pass on the animals entered for certain classes for the purpose of rejecting such individuals as, in the opinion of the committee, appear to be unworthy of consideration. The scope of the show is so comprehensive that none who are interested in the production of meat animals will be disappointed in not finding their favorites well represented. Should you listen to our appeal and for the first time attend the International, we are certain that you will afterwards thank us for pressing the matter "home."

## LIVE STOCK NOTES.

Fortunately for the interests of farmers and the country at large, a fine, large "crop" of fall pigs is reported, and it is safe to say that they will receive the best of care and feed. Pigs in clover or on pasture during the summer period did not thrive well, as the drought made poor feed, and later sickness broke out in Illinois, greatly decimating the supply and frightening many farmers into hurrying their little pigs to market without delay.

A. L. Duncan, known widely as one of the most successful of Illinois stock feeders, says he has all the confidence in the world in the future high market for fat hogs. He recently marketed at Chicago a consignment of 54 head of steers that averaged 1,437 lbs. and sold for \$7.90 per 100 lbs. He says: "I have recently met feeders from Nebraska, Kansas, Missouri and Illinois, and they all told me the same story of fewer cattle for feeding the coming winter because of high-costing thin cattle and prospective dear-priced feed. They also stated that matured hogs were pretty well marketed and that the presence of disease or fear of it among young swine was of such an extent that the 'crop' of pigs and shoats has been materially reduced by free marketing in recent weeks. There should be no surprise if prime beef steers touch \$9.00."

There are a good many farmers in Michigan, Ohio, Indiana, Iowa, Illinois, Wisconsin, and other near-by states who are going into breeding sheep, and of late the supply of choice young breeding ewes offered at the Chicago stock yards has fallen well short of the active demand. The demand for feeders from the range country has also been extremely large, and the only thing that tends to hold it in check appears to be the lack of hay and other feeds in various parts of the middle west. Hay commands such high prices in the market, if choice in quality, that many farmers regard it as too dear to use freely on the farm, and the same is true of corn, in a measure. There is every reason to think that the coming winter will prove a profitable one for farmers who understand the sheep industry and make their flocks prime before returning to market. Of course, there are new beginners who go at it wrong and send in warmed-up flocks that net losses instead of profits, and in recent years they have formed a large class.

There is an abatement of swine plague in Illinois, where it has raged in recent weeks to a far greater extent than at any previous time in ten years. The Illinois State Board of Live Stock Commissioners is doing a great work in extending assistance to farmers in checking sickness among the pigs, and serum has been widely used with the best of results, although farmers say it is not always to be relied on as a preventive.

It is clear that the great decline in prices for hogs predicted months ago by some of the packers is not going to take place, and farmers should cease sacrificing their healthy growing young hogs. They have in many instances sold their pigs that were in perfect health, taking the view that with high-priced corn and low-priced matured hogs, it was the best policy to market their pigs without delay and have their corn for marketing. Now that the great bulk of the matured hogs have been shipped to market, and the future supply of hogs cut into severely by the sales of mere pigs, everyone is predicting high prices for matured hogs for months to come. The figures issued by the national bureau of statistics not long ago show plainly that the increased hog production does not begin to keep pace with the enormous increase in the population of the United States.

"Mike" Keenan, who has spent 35 years in the Chicago hog trade, says he has never known a time when choice fat medium and heavy hogs were as scarce at this time of the year. This tells a story of a growing scarcity of matured hogs, and he, as well as other leaders in the trade, looks for moderate receipts of matured hogs the coming winter and spring months.

The great scarcity of cattle for feeding in the southwest is expected to result in good importations into Texas from Mexico during the next two months. Southern Texas has plenty of water and grass.

Word comes from northern Colorado that sheep and lamb feeding operations the approaching winter are likely to show a falling off of from 30 to 40 per cent from last year, when the smallest number in several years was fed. In the southern part of Colorado lamb feeding is expected to be carried on extensively, however, the San Luis Valley having good crops of both hay and peas. The sheep men of that region are in the habit of turning big flocks loose in the pea fields, where they get as fat as butter.

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## VETERINARY

Advice through this department is free to our subscribers. Each communication will be published. Initials only will be published. Many queries are answered that apply to case in full; also name and address of should state history and symptoms of the disease. 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.

**Out of Condition.**—Nearly all my horses have rough coats, are out of condition, and I would like to know what to give them to build them up. F. L. G. Jasper, Mich.—First of all let us understand, thin live stock must be well fed and receive good care or they will not thrive, no matter what drugs you give them, they should have nourishing food. Good grooming always pays, besides, fresh air should be used freely; furthermore, a good bed is always a good investment. If your horses lack appetite give each one two tablespoonfuls of ground gentian and the same quantity of ginger at a dose in feed three times a day.

**Partial Displacement of Stifle Cap.**—Paralysis.—I have a cow eight years old that seems to have lame spells where one hind leg is peculiarly affected. She has been inclined to drag toe on ground for a few steps, then leg sort of jerks into place, then she goes sound. I have thought it a case of stringhalt. My neighbor's cows are in bad condition; a few have died, others now sick and will surely die. This disease seems to puzzle our local Vets. Cows show stiffness and loss of power, grow weaker and weaker, then die. A. J., Kinde, Mich.—The whole trouble is in stifle and she will be greatly benefited by applying equal parts turpentine, aqua ammonia and raw linseed oil once or twice a day. Either food or water supply is responsible for the death of your neighbor's cattle. Give each cow 1 dr. ground nux vomica at a dose in feed three times a day; this dose may be safely doubled without doing any harm. Salt them well. Another very useful drug to use is iodine of potassium twice daily.

**Abscess on Abdomen.**—Last spring I noticed a swelling on my sow's belly between two of her teats; this bunch increased in size until it became very large, then it broke open and reduced in size. This sow farrowed three weeks ago and since then this bunch has decreased in size. A sister to this cow also had bunches of a similar nature. C. A. D., Tecumseh, Mich.—Give her 5 grs. iodine of potassium at a dose in feed three times a day. Apply a saturated solution of boric acid to wound twice a day, also dust on some boric acid occasionally.

**Enlarged Glands.**—I wrote you some time ago about my two-year-old heifer having lumps on each side of the windpipe and you called it goitre. You prescribed for her, advised external applications of tincture of iodine and spirits of camphor, and to give her iodine of potassium. I followed this line of treatment and it has failed to reduce the bunches; however, they have not grown any larger. She is not sick. F. J. C., Hudson, Mich.—Clip hair off bunches and apply one part red iodine of mercury and four parts lard every few days. You must use your own good judgment as to how often and how much of the medicine you apply. Cattle are more susceptible to iodine than most people suppose, therefore it is not best to give too much of it, but if you find it necessary give iodine of potassium in larger doses than before.

**Indigestion—Acidity of Stomach.**—I would like to know how to treat horses that gnaw fences, and whatever is given them must be drugs which will not harm brood mares and young colts. R. H., Okemos, Mich.—Live stock that are inclined to feast on decayed wood, lick old bones, chew pieces of leather, rags and filthy rubbish usually suffer from some sort of stomach ailment and it is best corrected by changing their food supply, adding cooking soda, gentian, ginger and wood charcoal to each meal. Mix equal parts by weight and give each cow four tablespoonfuls of this compound powder at a dose two or three times a day. It is needless for me to say, salt them well.

**Stifle Lameness.**—Our eight-year-old cow fell, dislocating stifle joint. Our local Vet put it back into place, but cow drags her leg and I would like to know what to apply. H. A. P., Webberville, Mich.—Clip hair off stifle and apply cerate of cantharides once a week. If the joint is much swollen occasionally apply tincture iodine.

**Sitfast—Colic—Indigestion.**—My horse shows shoulder lameness caused by two bunches that have been on shoulder for sometime. Another horse has attacks of colic; would like to know what will prevent further attacks. F. A. B., Modest Town, Va.—If you can have the bunches cut out the horse will perhaps go sound soon after the wound heals; if you do not care to cut them, apply tincture iodine daily. Feeding a good quality of food in not too large quantities, and giving a tablespoonful ginger with each meal will help prevent colic.

**Pneumonia—Chronic Cough—Enlarged Throat Glands.**—My five-year-old black mare had distemper last spring, relapsed and suffered from pneumonia. Seemingly recovered but has coughed more or less ever since. She also has loose bunches in throat. J. O., Grand Rapids, Mich.—Apply tincture of iodine to enlarged glands three times a week and give 1 dr. iodine potassium, 1 dr. powdered opium and 2 drs. muric acid ammonia at a dose in feed three times a day.

**Subscriber, Sumner, Mich.**—See treatment for chronic cough this column.

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Herd, consisting of Trojan, Ericas, Blackbirds and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion ewe and bull at the International in Chicago, Dec. 1910. He is assisted by Undulata Blackbird Ito.  
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A fine young bull from an Advanced Registry dam. Beauty Pictoria Komdyke King No. 7850. Born Nov. 26, 1910. Sire, Willowbridge Bos. Dam, Anna Howntie Lenore who has an official record of milk 1 day, 84.3 lbs.; milk 7 days, 546.2 lbs.; butter 7 days, 20.25 lbs. She gave 14,972 lbs. milk in 307 days and has, given 101,652 lbs. milk in her first nine milking periods, averaging 325 days each, including the one at 2 years old. She has two A. R. O. daughters, one has an official record of 23 22 lbs. butter in 7 days at 4 yrs. 3 months old. Her dam gave 13,553 lbs. milk in 349 days and has three A. R. O. daughters. The sire of this young bull is a grandson of Beauty Pictoria, who has an official record of 30.51 lbs. butter in 7 days, and was the first 30-lb. cow of the breed to produce a 30-lb. daughter. He comes of large producers on both sides, is a fine individual, nicely marked with a little more black than white. Weight about 700 lbs. Price \$150.  
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## HORTICULTURE

### MANUFACTURE OF CIDER VINEGAR ON THE FARM.

The statutes of the state of Michigan require, among other things, that before a cider vinegar may be marketed it shall contain not less than four per cent of absolute acetic acid. It is, we apprehend, common knowledge that in the process of converting cider into vinegar, the cider first undergoes what is known as an alcoholic fermentation by means of which the sugar which is present in the cider is first converted into alcohol. After this conversion is more or less complete the alcohol then undergoes what is known as an acetous fermentation by which process the alcohol is in turn changed into acetic acid. Most cider, when fermented, will produce not less than four per cent acetic acid if the fermentation and conversions are more or less complete. The minimum strength which the law permits, namely four per cent, is for the purpose of establishing a definite strength, or a minimum strength, for the pure article. This does not mean that any vinegar which contains four per cent acetic acid may be sold, but it does mean that any pure vinegar which contains four per cent acetic acid may be sold.

It has been common practice for many years for farmers to lay down during the apple season from one to four or five barrels of cider with the idea of ultimately converting that cider into vinegar. This product they have recognized as absolutely pure in that it contained no other product than cider. Frequently this product, when marketed, will be found deficient in acetic acid and on that account grocerymen at the present time hesitate to buy the vinegar produced by the farmer because they are afraid it will not come up to the standard required by law. Farmers, knowing that their product is absolutely pure, have not been able to understand why at times their product was deficient in strength. We have found many times, in investigating this matter, that the trouble lay in not having a complete fermentation of the sugar in the alcohol in the first instance, so that the vinegar when analyzed would show a considerable amount of unconverted sugar. Sometimes the sugar would be all converted into the alcohol but the alcohol would not be changed into acetic acid, and here again the result would be a difference in the total quantity of acetic acid in the vinegar.

The difficulty here has consisted in the imperfection in the process of manufacture. A very common custom is to take the barrel of cider to the cellar, or basement, where it is rather cold and the temperature is too low to permit of the rapid working of the yeast plant which converts the sugar in the cider to alcohol. In fact, the operation is so slow that it will take some times many years before its conversion is complete. The same difficulty prevents the change from alcohol into acetic acid. If the cider is stored in a warm room it will be only a short time before the sugar is completely changed into alcohol and if it is kept in the warm room with the barrel freely exposed to air, the further change into acetic acid will be quite rapid. Remove the bung and plug with raw cotton.

The method of manufacture of cider vinegar on a quick scale in the vinegar factories is to fill a large vat with beech shavings and allow the alcoholic liquid to percolate drop by drop through this vat of shavings. When it comes out at the bottom it will have been changed completely into vinegar. On a small scale this may be done by getting an ordinary tight pork barrel which has been thoroughly cleaned, filling it with broken pieces of corn cobs or with beech shavings, and after pouring on the corn cobs or shavings some vinegar in order to get the shavings inoculated with the ferment, the fermented liquid is then allowed to run through the barrel in a very fine stream, (drop by drop, is better), and usually when the product comes out at the bottom it will be found to have been quite completely changed into vinegar. If it is still quite sweet it may be run over the generator a second time.

If there is any doubt now about the product conforming to the standard, a sample may be forwarded to the Michigan Farmer and it will be examined in the Practical Science laboratory without charge.

FLOYD W. ROBISON.

### THE APPLE MARKET.

Never before have growers given the attention to marketing their fruit that they have this season. Surely good things will come from the thought given the question, although they may result only after a struggle with "the powers that be." Produce papers are taking a different attitude toward the apple market and are now falling in line with the conservative statements of the agricultural press, and we believe, as we have recently stated in these columns, that those who are not anxious to dispose of their good fruit immediately will secure more satisfactory prices than they can get at the present time. The extended wet weather has reduced the amount of fancy fruit in the large apple producing sections and windstorms have worked toward the same end.

At Louisville, Ky., large quantities of apples are coming in but only a small percentage is fit for storage purposes, it being stated that the storage houses will not have one-half the volume that was put away a year ago. In a survey of the crop of western New York, it was found that over half of the apples have been blown from the trees by the severe winds. Some orchards from which it was expected heavy pickings would be secured the owners are failing to get more than one-third of the estimated yields. Red apples seem to be particularly short. In the Hudson River Valley where a "bumper" crop has been growing, rains, winds and freezing will reduce it to a nominal one and just now the growers are straining every muscle to get the windfalls to the market that they might secure some returns from them. As a result, the apple market in New York is easy. However, fancy fruit is commanding reasonable figures, selling up to \$4 to \$4.50 per barrel. At Boston there exists a good demand for fancy red table apples while other kinds are selling slow. The Chicago dealers are also on the watch for red apples and last week quotations were advanced for that kind. At Pittsburgh it became necessary to reduce values in the regular run of this fruit in order to move the large consignments of the lower grades; fancy kinds, however, stood the market well with prices substantially maintained.

Shipments of apples from Grand Valley, Colorado, will fall short of the shipments of 1909 by several hundred cars. In Wayne county, New York, York county, Pa., and New Jersey, reports of large yields are made, but complaint is also entered to the effect that heavy windfalls will reduce the amount of good fruit to be put on the market.

### WINTER PROTECTION OF THE FRUIT TREES.

Were the annual losses to the various tree industries, both in the nursery row and those planted out, to be tabulated in readable form it would reach into astounding figures. I recall one winter several years ago when engaged in the tree business, that the damage to the nursery stock in and about Rochester, N. Y., by the mice alone was estimated to exceed a million dollars. So we say that while we have a young tree insecure from these enemies it is too early to quit.

The problem of protection against the mice is comparatively easy; but as to rabbits is far more difficult of solution, as they are well up in the pruning business as well as girdling the bodies. An eastern grower of considerable repute told me that he was surprised at one time to find many of his young peach trees, especially yearlings, trimmed almost to whips; and it was only by patient watching and careful investigation that he was able to place the mischief upon the rabbits. They would sit up and as far as able to reach, clean up the tender growth of limbs to a finish. The bodies from the ground to the starting of the tops is easily protected against both intruders in one and the same way; but when we have to protect both body and top it is not so easy. Some years ago we saw it stated upon what we believed to be undoubted authority, that rubbing the bodies well with hard soap late in the fall was absolute protection against the rabbits. We have not tried the remedy, as fortunately we have been in a locality for several years, comparatively free from the trouble. But if effective, then we believe that thorough spraying late in the fall and again in winter, if need be, with a heavy solution of whale oil soap would meet the requirements.

Wayne Co.

J. E. MORSE.

## RED

It's the Red Blood Corpuscles that Proper Food Makes.

An Ohio woman says Grape-Nuts food gave her good red blood and restored the roses of youth to a complexion that had been muddy and blotchy. She says: "For 10 years I had stomach trouble which produced a breaking out on my face. The doctors gave it a long Latin name, but their medicines failed to cure it. Along with this I had frequent headaches, nervousness and usually a pain in my stomach after meals."

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"The headaches, stomach trouble, and nervous weakness disappeared almost like magic, which showed that when the cause was removed and good food and drink used nature was ready to help."

"My blood was purified and my complexion became like a young girl's while my weight was increased from 90 to 120 pounds in a few months—good, solid, firm flesh, where it used to be soft and flabby."

"I recommended Grape-Nuts and Postum to one of my friends, who was afflicted as I had been. She followed my advice and in a short time was restored to complete health and in about 8 months her weight increased from 100 to 148 pounds."

"Our doctor, observing the effect of Grape-Nuts and Postum in our cases, declared, the other day, that he would hereafter prescribe these food products for gastritis." Name given by Postum Co., Battle Creek, Mich.

Read the little book, "The Road to Wellville," in pkgs. "There's a reason."

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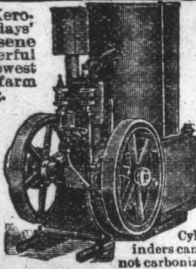
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## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### NATIONAL DAIRY SHOW.

The sixth annual meeting of the National Dairy Show, which closed November 4, was by all odds the biggest and best ever held, and it was a truly national show in every respect. After several moves in the search for an ideal location, the show was this year brought back to the International Amphitheatre, at the Union Stock Yards at Chicago. Here, in the home of the great International Live Stock Exposition, the National Dairy Show promises to equal if not surpass its great rival as the biggest event of the year in the live stock world. The mammoth amphitheatre was crowded to the limit and both cattle and machinery were turned away for want of space. There were nearly a thousand head of cattle in competition for prizes, coming from all parts of the country, and the products and machinery exhibits were larger than ever before.

The time has passed when the National Dairy Show must make excuses for deficiencies and lack of interest and attendance. It has passed the experimental stage and is established as one of the greatest shows of the year. It has been termed the greatest of all conservation movements. Its problems are the problems of all classes and all people. The development of the dairy cow, the utilization of farm-grown feeds in the production of food for human consumption, the manufacture and marketing of that food and the ever-present problem of greatest return from the soil with the least expense of soil fertility all center in the dairy industry. And this movement has just begun. As our population increases and the area of production becomes more thickly settled, the demand for more and better dairying must increase. There will be little room for the special beef animals in congested areas and less for the poor dairy cow. Intensive farming calls for the highly developed dairy breeds, and constant improvement in production of dairy products, these are "bread and butter" problems for both city and country people.

The big event of the show was the attendance of President Taft on October 30. His brief address was well received by a large and appreciative audience. The President's silver trophy for the winner of the students' cattle judging contest was awarded to Russell Jensen of the South Dakota Agricultural College.

The judging contest was one of the best of its kind ever held. There were 30 contestants and the competition was unusually keen. The Kentucky State University team won first with a score of 3,849 out of a possible 4,800 points. The team from the Ohio College of Agriculture was second with a score of 3,675 and the team from the South Dakota State College took third place with 3,593 points. The Kentucky team won the special Guernsey and Holstein trophies and the Maryland team was first in judging Ayrshires and Jerseys. Russell Jensen of the South Dakota team did remarkable work, standing first in judging Ayrshires and Holsteins and second in judging Jerseys. In addition to the President's trophy he won a \$400 scholarship.

The cattle entries included 153 head of Ayrshires from six different states, 65 Brown Swiss from two states, 18 Dutch Belted from Arizona, 214 Guernseys from seven states, 200 Holstein-Friesians from seven states, 142 Jerseys from ten states and 14 Dexters from two states. It was without a doubt the greatest gathering of pure-bred dairy cattle ever in one show in this country. The Guernseys demonstrated their growing popularity by quality as well as numbers. The top honors of the breed went largely to W. W. Marsh, of Iowa; W. S. Dixon, of Wisconsin, and Wilcox & Stubbs, of Iowa. The Holsteins were represented by some of the best herds in the country. The Zehrings Bros.' herd from Ohio, competed with the famous show herds owned by the Pierson Stock Farm, of Michigan; A. L. Williams, of Wisconsin; E. A. Vandervort, of New York, and others. The Jerseys were not shown in as large numbers as some of the other breeds, but they furnished some of the best quality and keenest competition in the show. The prize cattle from the Elmendorf farm of Kentucky, the Thomas W. Lawson herd of

Massachusetts, the Lasater herd of Texas and the T. S. Cooper & Son's herd of Pennsylvania, competed for every honor.

An interested visitor at the show was John A. Perree, secretary of the Royal Jersey Agricultural Society of the Jersey Islands. While particularly interested in the Jersey show he expressed himself as agreeably surprised at the general excellence and quality of all classes shown. He said he expected to find good Jerseys here, but he did not expect to find the perfection of finish in which they were shown. One of his observations may well be considered by some of our breeders. He expressed the opinion that some of our herds were kept on the show circuit for too long a time. He thought this applied particularly to the young animals, as the long strain of travel and care under show feeding and management put a strain on the young animals that would seriously interfere with their later development. Some of the young cattle shown were too valuable to be subjected to such treatment, and some, he thought, had already shown signs of "going stale" from the long show season which they were just completing. He was impressed with the American tendency to increase the size of the Island Jerseys. He thought this might be due to the difference in feeding, the difference in the character and composition of our feeds, etc., or to a desire on the part of our breeders to bring the jerseys more nearly to the weight of our heavier dairy breeds. While he did not feel justified in questioning the wisdom of this tendency he was not ready to admit that increased size meant increased production.

The machinery exhibit surpassed that of all previous shows. Sixty-three companies showed farm and creamery equipment, including about everything that is connected with the dairy industry. There was a great show of heavy machinery such as is used in the manufacture and handling of products in a large commercial way. There was less of the small practical equipment which would appeal to the smaller dairymen and dairy farmers. The manufacturers of this smaller equipment may well take a lesson from the manufacturers of the heavy machinery and exhibit at this show.

The departments looking after the exhibits of dairy products were filled and the entries showed exceptional quality. There were 103 entries of dairy butter as compared with four entries last year. There were 55 entries from Illinois, 21 from New York, five from Michigan, four from Manitoba, three from Ohio and 15 from other states. Nine entries scored above 95 points, Miss Margaret Raab, of Indiana, winning first with a score of 96; Mrs. Frank Grant, of Illinois, was second with 95½ and L. H. Bailey & Sons, of Ohio, were third with 95.3-5. There were 651 entries of creamery butter and about 100 entries of milk and cream.

The dairy shows are setting a new standard of purely educational features. The show this year has never been surpassed in the variety and extent of this department. The Dairy Division of the United States Department of Agriculture gave demonstrations in herd management and feeding especially adapted to farm conditions. The demonstration was accompanied with daily talks on dairy subjects by leading authorities. The dairy division of the University of Illinois had a very instructive exhibit dealing with herd selection, testing, feeding, stabling, and diseases of animals. The Chicago Health Department exhibited charts and photographs illustrating the effects of right and wrong uses of milk, care of milk and butter, sanitary condition of eating and sleeping rooms, etc. Demonstrations by models and actual operations were made of milking cows by machinery, ice cream and butter making, refrigeration, model working dairy, model barns and stables, model milk houses, etc.

Meetings of important dairy and breed organizations were held throughout the show. These were well attended and instructive programs rendered. The National Dairy Union, the American Dairy Farmers' Association, the National Creamery Butter Makers' Association and the American Dairy Institute held meetings at which were discussed a wide range of questions of importance to the various phases of dairy work. One day was set aside as wage earners' day for the entertainment of the laboring classes of the city. John J. Mitchell, vice-president of the American Federation of Labor gave an address dealing largely with the greater need of co-operation between organized labor and farmers.

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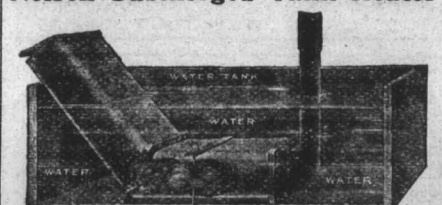
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## BETTER DAIRY PRODUCTS MEAN BETTER PRICES.

There is no line of work on the average farm that demands as much consideration as the care of cows and their milk. It is often remarked that there is more filth and less care in dairying than in any other occupation. The dairyman doesn't care because he intends selling the milk or its product and the consumer doesn't see any dirt, so he thinks that it is all right. The milk is oftentimes handled by several persons before it reaches the city consumer and his chance of securing a pure, clean product is very small. If the consumers would trace back and see where their milk and butter comes from they would probably have something to say that would wake the dairymen up to a realization of their duties to the people who use their products. The dairyman who consoles his conscience by the fact that he strained the milk but tries to forget that straining will not remove any of the soluble filth that may be in the milk, is working against his own interests.

The dairyman must have clean cows if he expects to have clean milk. A cow will lie down on the floor of her stall to rest, without regard to what filthy matter may be upon that floor. Very often her udder and teats will lie upon a heap of manure for several hours and then her keeper will milk her without cleaning any of the filth from her. It goes without saying that that pail of milk will not be very clean. The stalls should be kept as clean as they possibly can and the cows should be brushed and the udder and teats washed and wiped with a clean towel before milking. Any chance of filth getting into the milk will be avoided and the dairyman can get top prices for his products if he lets the people know of their cleanliness.

A great many dairymen injure their business by buying cows of unknown value and health from other parties. Some will sell a good cow as soon as she becomes dry and buy one in her place that is fresh, and more times than not she is of less value than the one he sold. This continuous bringing into the herd of new cows is very apt to bring disease in also. A great many herds have been ruined by just such a practice as this. Another evil often practiced is selling the milk too soon after a cow is fresh. For several days after a cow is fresh her milk is ropy and wholly unfit for use. The dairyman who would sell this milk, especially for children to be fed upon, ought to be prosecuted and we feel sure that the law provides no penalty that is too severe for him. The milk from a fresh cow should go to the calf for three weeks but how many dairymen are willing to sacrifice a small per cent of their profit for the benefit of the calf. All of this results in a grade of milk that is of variable quality, much of it unclean and a great deal of it wholly unfit for human use being offered for sale in the cities. That this is the case, in view of the fact that city consumers are ready and willing to pay a higher price to the dairymen who will provide them with a pure article seems unreasonable. Any dairyman who will seek out such customers and supply them with what they want can certainly build up a trade that will more than repay him for the extra attention given to his herd.

The best quality of milk is secured from cows that receive a good supply of wholesome food. Each cow in a herd seems to have peculiarities of her own. Food that is eagerly eaten by one is often rejected by others. If a cow rejects one thing give her something else that she seems to prefer. As great a variety of foods as possible should be given as this tends to keep the cows in a more healthy condition. If a cow is a big eater see that her appetite is satisfied for such cows are usually the best producers and, of course, will require more food than an inferior animal. If at any time a cow does not eat well or seems to be ailing in any way, her milk should be thrown away as it is not fit for use. A wise dairyman breeds his own cows and then he can bring them up in a way that he thinks best for producing a good dairy animal. The buying of fresh cows is a practice full of dangers both to the dairyman's business and to the consumers of the milk or products made from it.

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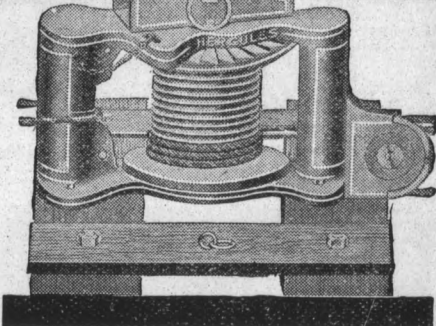
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DETROIT, NOV 11, 1911.

## CURRENT COMMENT.

The bulletin of agricultural statistics for September, issued by the International Institute of Agriculture, at Rome, affords official world data in regard to the production of cereal crops in the Northern Hemisphere. The figures as expressed in percentages between the estimated production this year and the production last year affords the best basis for comparison. The production of wheat in the present year in the group of countries included in the bulletin, which represents about four-fifths of the world's total production, is 100.5 per cent of last year's production. This year's crop is greater than that of last year in Spain, Great Britain, Italy and India, but is smaller in Prussia, Roumania, European Russia and the United States. The production of other cereal crops in the countries included in the bulletin, compared with last year, are as follows: Rye, 96.4 per cent; barley, 99.5; oats, 88.9; corn, 86.6.

These figures are of especial interest when compared with the estimates which have been published regarding this year's wheat crop by private authorities. The differences brought to light by this comparison which in some instances vary considerably, illustrate the value of the work which is being accomplished by the institute in the compiling in one report of the official figures of the production for the entire world.

With the approach of the season for the assembling of congress in regular session, we are reminded of the impending report of the national tariff commission touching its investigations relating to Schedule K of the tariff law. This is an issue of more than ordinary interest, not alone to wool growers but as well to every purchaser of woolen goods, and indeed to every producer and consumer of any sort of commodity.

Upon the character of the report rendered by the tariff commission on this question will depend the country's verdict touching its future usefulness in the scientific solution of the tariff problem. It would appear that plenty of time has intervened for a most exhaustive scientific study of this phase of our tariff law, and unless the forthcoming report is so complete as to fully elucidate

this vexed problem and so concise as to be easily understood by the citizen of average intelligence, the "scientific" and "logical" method of tariff revision will not be further popularized. Mere generalities, such as have served as campaign arguments to befog, rather than clarify the public understanding of these matters, will not suffice in this case, nor do we apprehend that such will characterize the report.

We do believe, however, that if the report is all that might be desired in the way of furnishing accurate information on this phase of the tariff problem, it will show that the first cost of the raw material, as paid to the producer, with the tariff premium or that portion of it which he may receive added, is but a minor factor in the cost of the finished article to the ultimate consumer, while by far the larger factor of its cost is the expense of, and profits from, its distribution. In other words, we believe it may be revealed that here is another instance in which modern methods of distribution and marketing have imposed upon the public a burden which has been wrongly attributed to the too high cost of the raw material.

With these possibilities in view, every Michigan Farmer reader, and particularly every wool grower, will await the report of the tariff commission with the interest which an issue of such widespread importance merits.

## What Complicates Our Labor Problem.

In ancient and mediaeval days and even modern times, the slave furnished the common source of labor for the great civilizations that mark the progress of the race. It was not until the 19th century that the law of division of labor, as known to present economists, became a factor in industrial affairs, but so thoroughly and rapidly has it entered into the organization of our scheme of production, that in a single century methods have been entirely revolutionized, and today the agriculturist, who has found his business not so amenable to the new order, is suffering because the laboring man has forsaken him, for without the help of laboring men the farmer fails to secure from his land the maximum of profit consistent with permanent agriculture.

The division of labor has degraded the all-around man's productivity and developed the specialist in order to provide greater economic production. Good agriculture prohibits the extensive application of this law since it is the all-around man that the farmer needs. The farmer, therefore, requires a man who possesses a greater degree of application and a greater breadth of understanding than is required of an employe in almost any other branch of our industrial order. This condition is complicated the more when one recognizes that agricultural wages, as they now prevail, are not commensurate with the value of a man's services in other lines of industry and in proportion to wages paid elsewhere. Figures gathered by the commissioner of agriculture of Vermont show that the common rate of wages in a number of factories is 19 cents an hour for nine hours of work per day, or a rate of \$45.50 per month of 234 working hours, whereas, the average wages on several dairy farms in that state are 13 cents per hour of 11 hours per day, or \$39.50 per month of 302 working hours.

It will be seen from this that there is an inducement for laborers to migrate from the farm to the city where they can be employed in large shops at what appears to them to be more attractive wages, and since these shops are likely to retain the efficient workmen and discharge the inefficient, who return to the farms again, it falls to the farmer's lot to receive back the more undesirable portion of this migrating class of workmen. Consequently, the present law appears to place inefficient labor where the most efficient is needed.

Capital is needed in running a farm to the best advantage as well as in any other business in which one may be engaged. In fact, a larger amount of capital is needed in farming to the best advantage than is the case with many other large businesses for the production of a like profit. A very large proportion of farmers are hampered by the need of more capital, yet the greater proportion of them cannot be blamed for this condition. The beginner does wisely in securing a farm, even if he cannot equip it as he would like or as well as it should be equipped for a maximum of good results in its operation.

But as the profits from the operation of that farm accumulate, his first thought should be in perfecting its equipment rather than in adding to the area of his farm. Of course, a farm of reasonable area can be operated more cheaply in comparison with the smaller farm, because the cost of necessary equipment is not so very much larger and the per acre cost is considerably smaller.

However, it will generally be found that with the increased area which comes from the purchase of more land, the need for equipment keeps pace with the increased area of the farm and the man who once gets the habit of farming without the proper equipment is altogether too likely to continue that practice and it is a noticable fact that some men who have acquired this habit keep on adding to their acres until they may well be termed "land poor," instead of adding to their equipment, which would place them in a position to reap the largest possible benefit from the land they already own.

There is every prospect, of course, that the land may increase in value, while the equipment will deteriorate with use, but it will be noted that the price of land in any community depends not a little upon the character of the farms in that community. If they are well provided with buildings, well equipped with the necessary implements for good farming, well fenced and well stocked with improved live stock, they will be occupied by prosperous farmers who like their business and who place a high value upon their land, so that every farmer is under obligations to himself and to his community to so conduct his farm as to add to the attractiveness of the community as a place in which to live.

Experience has shown that at least one-half as much money should be invested in equipment and buildings as in land, and on the smaller farms yet larger proportions will be required to be so invested for best results. Consequently, it will be wise for every farmer, who has been hampered with a lack of capital to properly conduct his farm, to give attention to these details of farm management as well as to the home comforts which are desirable for himself and his family, before adding to the area of land which he may own. This, however, does not necessarily mean that it is not desirable to accumulate land, especially for the man who has children growing up who may desire to follow them in the occupation of farming. This is a commendable ambition, but it should not be allowed to warp one's better judgment with regard to the immediate conduct of his business.

## HAPPENINGS OF THE WEEK.

### National.

A movement is on foot to construct a stone road from Detroit to Saginaw. Dr. Guy Porter Benton was recently inaugurated as the twelfth president of the University of Vermont.

At least three persons are dead and five injured as a result of a bridge span collapsing near Auburn, Cal., last Saturday night. The victims were building a caisson when the concrete pillars gave way.

Public sentiment has become so strong in Lansing against the Sunday opening of the moving picture shows, that the proprietors of these places closed them on Sunday last.

Calbraith P. Rodgers practically completed an ocean-to-ocean journey with a biplane when he arrived at Pasadena, Cal., November 5. He is the first to accomplish this great feat with a biplane. The distance covered was 4,231 miles and the actual flying time was 4,924 minutes; his journey began at New York city. There were a number of mishaps to his biplane on the trip but none so important as to cause any long delay.

Elections are being held in several states this week. In Massachusetts the republicans have made the tariff an issue in an attempt to defeat the election of Gov. Eugene N. Foss, democrat. Louis A. Frothingham is the republican candidate. State tickets will also be elected in Maryland, Kentucky and New Mexico. In none of these states, however, has a prominent national issue been brought forward in the campaign. New Mexico will choose its first governor at this election. California also holds an election in which women will have a chance to vote in all counties of the state, except in San Francisco, where the regulations of the city's registration is such as to make it impossible for the women to register for this election.

The employers' liability and the workmen's compensating commission, appointed by the last congress, are in session in Washington now to consider the desirability of a law for the insurance of employes against accidents, and are holding their final meeting this week. Representatives of the interstate railways are present and will be heard. It is expected that a measure will be framed to present at the coming session of congress.

The 59th annual meeting of the Michigan State Teachers' Association was held in Detroit last week, when the largest delegation that has ever attended the association's gatherings, was recorded.

So many were present that it became necessary to hold auxiliary meetings to accommodate the visitors. Some of the best talent afforded by the country gave addresses. The teachers went on record as being unanimously in favor of adopting the Bible as a text book in the schools. The elections resulted in the selection of the following officers for the coming year: President, E. E. Ferguson, Bay City, first vice-president; Prof. E. A. Lyman, Ypsilanti; second vice-president; Miss Anna Bernard, Mt. Pleasant; third vice-president, W. R. Wright, Benton Harbor; treasurer, L. A. Butler, Boyne City; executive committee, Miss Cornelia Hulse, Grand Rapids, and J. F. Thomas, Detroit. The dues were raised from 50 cents to \$1.00 a year.

The United Daughters of the Confederacy will hold their 18th annual convention at Richmond, Va., this week, when it is expected that 600 delegates from 32 states will be present.

### Foreign.

A fire consumed several large business places in London, Canada, last week. The estimated loss amounted to \$850,000.

It is believed that a counter revolution has been prevented in Mexico by the discovery of documents, evidently signed by prominent men of the Republic, and being used among dissatisfied politicians and others to stir up prejudice against the new government and administration. Several small outbreaks have been quieted by the federal troops.

The revolutionists in China are coming forward with plans looking toward the final organization of a republic which will control the territory of both shores of the Yangtse Kiang. Since the southern part of the empire has not participated strongly in the revolution, effort is now to be made by the revolutionists to capture the imperial forces there, if possible, without any bloodshed, since the success of the rebels has greatly modified the attitude of those who originally were strong in favor of imperial government. The Chinese fleet which aided in the campaign against the rebels, has returned to Shanghai with only four ships, which are in a pitiable condition. The other ships were lost while en route, the soldiers, however remain loyal. Yuan Shai Kai, who has been offered the premiership of the empire, has refused to accept, even though assured the support of the national assembly and of General Chang, who has command of the Lan-chau troops. Chinese reports indicate that 50,000 persons were killed in the siege and capture of Hankow.

A decree has been signed by King Victor Emmanuel II, of Italy, declaring Tripoli and Cyrenaica to be placed under the full and entire sovereignty of Italy. Laws will be framed making definite regulations for the administration of public affairs, but until such laws can be formed and officials detailed to enforce them, affairs will be carried on by royal decree. The powers have been notified of the annexation and given assurance that their interests will be protected in the territory involved. Turkey protests to the United States that the action of Italy is in violation of the Hague pact, and asks that this country interfere. The matter is now up to Secretary of State Knox at Washington, to answer the protest. Owing to the nature of the struggle in Tripoli, the situation is reported to be extremely serious and is described as a reign of terror, since the place came into Italian hands.

## CROP AND MARKET NOTES.

Eaton Co., Nov. 4.—Weather cool and cloudy most of the time, with snow squalls. First snow Oct. 26, just enough to whiten the ground, mercury down to 20 degrees twice so far. Corn husking the order of the day, other crops about all secured, though it took a lot of hustling to get the late beans in, with so little sunny weather. A good many not harvested until the very last of October. The crop will be short. Potatoes turned out better than expected. There was a very poor stand owing to the dry weather in the spring. One of the farmers here who was short, early in September contracted his winter's supply at \$1 and now regrets his haste. Wheat is looking fine, and pastures holding out good. The large amount of rain has done considerable damage to the corn fodder, which is hard, considering the high price of hay. Wheat, 90c; rye, 92c; corn, 68c; oats, 44c; beans, \$2.10; potatoes, 50c; butter, 25c; eggs, 22@30c; hogs, \$5.50; calves 5@7c.

Ogemaw Co.—The recent cold snap caught some of our people napping, some roots and potatoes out and silos not all filled, but for the most part work is pretty well along and a good lot of plowing done. Several cars of potatoes have been shipped out at 40@45c, but they were mostly unripe and not fit to store. Most farmers expect to get considerably more than present prices and will hold in pits for a time. Cattle and hogs are down, pork being down to 5c on foot. Butter and eggs are scarce and dealers don't get enough for home use at 23c for butter; eggs, 24c. Shelled corn is selling for \$1 per bu; good hay, \$15@16. Pasture is still good.

### Ohio.

Wayne Co., Nov. 6.—The weather has been very wet. Not nearly the usual acreage of wheat sown on account of wet weather. Lots of potatoes to dig yet; the yield is not more than half a normal crop. Corn husking is in progress; larger part of crop remains to be husked; yield is pretty good. Pasture is nearly all gone and quite a few farmers have begun to feed their stock. Wheat has dropped from 95c to 92c per bushel. Buyers are offering 30c per basket for corn out of the field. Shippers are offering 50c for potatoes. Oats are 40c per bu. Hay balers are offering \$15 for good clover hay, and \$18 for timothy. Butter, 25c; eggs, 24c.





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"PEER-HO"

## THE NEW AGRICULTURE OF THE SOUTH.

The Mason and Dixon's line has passed from the country's map, not only as the boundary line of serious political differences between the two sections of our country commonly described as the north and south, but also as the dividing line between the rapid advancement of agriculture upon the one hand and its slow but gradual rehabilitation upon the other. In the period which marked the rapid agricultural growth of our nation, during which such rapid strides were made in the North and West for the economic betterment of American agriculture, the South was in the process of the reconstruction of its soil and economic system, the result of which was a period of stagnation so far as agricultural improvement was concerned. In that great section of our country the one mule farmer was the rule and corn and cotton the staples, with the tobacco crop an important factor in some sections.

The lack of application of science to the agricultural problems of the country was evidenced by the gradual exhaustion of the soil and material losses by soil erosion on the rough and exposed lands. But in recent years there has been a great change in this regard, partly due to the steps taken by the agricultural department of our government in the agriculture of the South, but more largely to the enterprise of the railway lines traversing that section of the country in bringing in the more progressive farmers of the North and West as permanent settlers in the various sections of the country, including all of the states generally designated as the south, and particularly those east of the Mississippi river.

With the introduction of more scientific methods, the adaptation of leguminous crops in their rotations, and with the better equipment and greater energy which this new blood brought to southern agriculture there has been a great evolution, and what may properly be termed a "New Agriculture of the South" has been developed. A favorable climate has been an important factor in the reward which has repaid the energy thus expended and today the valuable agricultural opportunities which are open throughout the south are becoming well recognized by a great many northern people who have heretofore considered them as negligible.

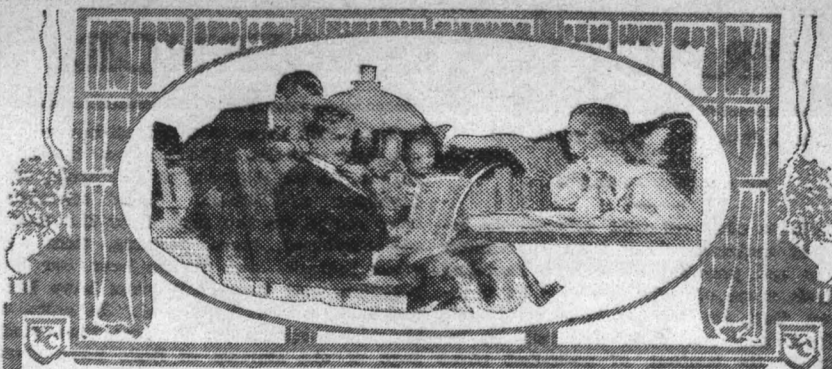
With a commercial improvement which is keeping pace with the agricultural development, this great section of our country is again coming into its own and is sure to keep its balance with the most favored sections which circumstance permitted to reach an earlier development. With the defeat of the Canadian Reciprocity Pact, the disengaged farmers of our northern and western states might well turn their attention to the opportunities afforded throughout the South where good lands may be purchased at reasonable prices and where the agricultural opportunities are better than any which they might have found in the great northwest, even under the advantages which reciprocity would have afforded them. In those sections, however, as elsewhere where agriculture is being rapidly developed, the investor should be careful in the selection of lands. Unfortunately, few sections are so universally good from an agricultural standpoint that one may not make a poor investment in supposedly good agricultural lands, and it is always better to consult some unbiased authority with regard to the particular section in which bargains may be offered. The commercial organizations of the cities, the industrial agents of the railways, or better yet, the immigration commissioners of the state, where such an office is maintained, will furnish reliable information, and it is better to be "sure you are right" before "going ahead."

Wayne Co

H. B.

## MICHIGAN LADY WINS NATIONAL PRIZE ON CORN PRODUCTION.

In competition for a \$50.00 gold prize which was offered by Ross Bros., of Massachusetts, for the heaviest yield of Eureka ensilage corn from an acre, the grand prize was won by Mrs. H. Will Harris, of Lenawee county, Mich., who has received the reward of \$50.00 in gold. Her yield which won this prize as reported by the above named firm, was 68 tons and 800 pounds from an acre, or more than a sufficient amount to feed seven cows for one year. Her nearest competitor, a B. G. Blake, of Massachusetts, had 47 tons and 76 pounds and the smallest yield secured by any of the eight competitors who made the best showing was 22 tons, 1,120 pounds. The weight of the green corn from the acre is said to be vouched for by two prominent local officials, who did the weighing.



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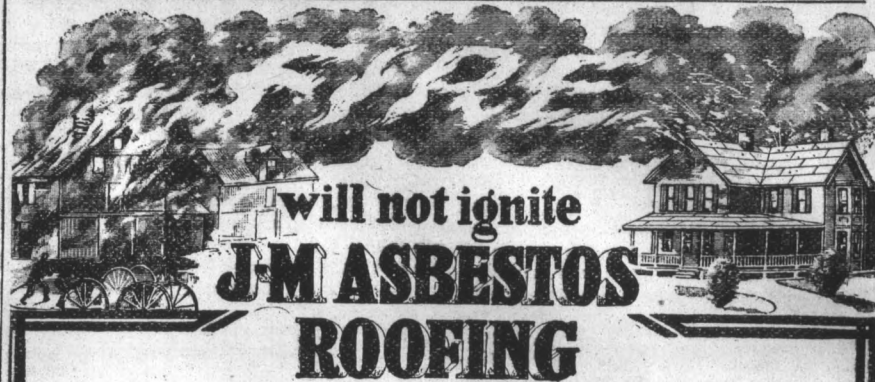
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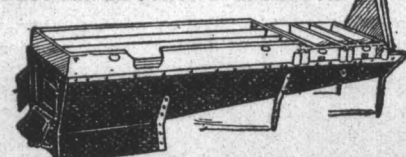
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## PRACTICAL SCIENCE.

## ANALYSIS OF THE SOIL.—II.

BY FLOYD W. ROBISON.

We have observed that an entirely intelligent understanding of any particular soil is not possible through a chemical analysis alone of that soil. We have observed that no matter how completely equipped any particular soil may be insofar as its content of so-called plant food constituents are concerned that unless its physical condition, etc., are most favorable, that in part, at least, the great importance of its most favorable chemical condition is nullified thereby. In a similar way it is true that for certain very desirable crops, at least, coupled with the best mechanical or physical and the best chemical condition of that soil must be an active flora of various types of bacteria.

As we stated before, when it was discovered that a chemical analysis alone did not furnish the information which was desired regarding the soil, the chemist became discouraged with the possibility of predicting in advance the probable behavior towards crops of that particular soil. Certain specialists have maintained that the best clue to the condition of fertility of the soil can be obtained by chemical analysis of the crop which is grown upon that soil. For example, it would be assumed that if corn were growing on a soil that a chemical analysis of the corn plant would furnish the best clue to the fertility condition of that soil. We think the fallacy of this argument is quite apparent on its face. To secure the most favorable growth of corn without doubt to our minds, a more or less balance, which we may call perhaps a physiological balance, of that soil is desirable. It may be assumed, then, that if a crop of corn is grown at all on such a soil that it will, insofar as it is capable, act upon the so-called mineral ingredients of soils in a more or less regular manner. If that soil is deficient in any one of the ingredients which go to make this balance, the result will show in the diminution of plant growth rather than in an abnormality of plant growth insofar as the different plant food constituents are concerned. The analysis of the plant does not convey the information desired.

Again, it is exceedingly probable that the failure of the crop on a particular soil may not be due to the deficiency in the phosphoric acid, potash and lime, or nitrogen and humus. It is possible that a deficiency in any one of these ingredients may throw the soil constituents out of balance and thus the soil solution which nourishes the plant would not be in its most favorable state of equilibrium.

In selecting a soil for farming purposes there are two points which should be duly impressed upon us. First, the permanent productive capacity of that soil, and second, the immediate productive capacity of the soil. There are multitudinous examples of virgin soils which will withstand for several successive years the removal of a practically maximum crop, and yet which may be shallow and of little use in permanent agriculture. Were we to judge these soils by their immediate productive capacity, so to speak, we would be greatly deceived thereby. On the other hand, there are many soils of far-reaching possibilities whose immediate productive capacity is very low indeed. This soil has a much greater future than is the one with the low permanent productive capacity and high immediate productive capacity. We may judge of the permanent productive capacity of a soil quite closely by a comprehensive analysis of that soil. I wish to emphasize again that by the analysis of the soil we do not limit ourselves to a purely chemical analysis but according to the scheme outlined heretofore. We may judge of the immediate productive capacity of a soil by an estimation of either its water soluble plant food constituents, or the so-called available food constituents. In determining the fertility of the soil our analysis will include a study of the soil proper, that is, the first six inches of the soil; the analysis of the sub-soil, or the second six inches; and the study of the nature of the sub-strata which lie underneath the soil.

It has been observed (Bureau of Soils, Bulletin 22), that soil solution, or the capillary water of the soil, is more or less constant for any particular soil. It

is true that these deductions have been severely criticised heretofore by such authorities as Hilgard, of California, and Hopkins, of Illinois. Their criticisms have rested on the ground of the methods employed, more perhaps, than any other feature, and it has been our impression that these criticisms have been more or less well founded. In spite of the above criticisms, however, these findings of the Bureau of Soils have given an added impetus to soil investigation and indirectly have resulted in a great deal of good. Without doubt, an analysis of the natural soil solution will furnish an important index to the immediate productive capacity of the soil.

One reason to our minds why, from the experiments of the Bureau of Soils in this matter the soil solution was found in their short duration periods to be more or less constant, was because of what may be called the zeolitic function of the soil. By this zeolitic function we mean the capacity which such a soil has of fixing the soluble constituents of that soil. Were it not for this zeolitic function it may easily be seen that improved drainage would necessarily mean the facilitating of the waste of plant food constituents in the soil.

To make it plainer, perhaps, if to a given quantity of soil we pour on a solution of phosphoric acid in a water soluble condition, if now we attempt to imitate rainfall condition and pour quantities of water on this soil to which the soluble phosphoric acid has been added, we may, perhaps, be surprised to find that the phosphoric acid is not readily washed out of the soil. The soluble phosphoric acid has been fixed or rendered more or less insoluble, or perhaps reverted, due to the zeolitic function of the soil.

As far back as 1864, two German agricultural chemists, Ulbricht and Schultze, ascertained that it was well nigh impossible to exhaust a soil by repeatedly leaching with water. Both King and Hilgard have substantiated these findings. After the first extraction, or leaching which may, perhaps, represent in a measure the first cropping of the virgin soil the remaining leachings should as a rule show lower concentration of plant food constituents, but after one or two croppings this concentration becomes quite uniform and will retain its uniformity of lower concentration until the immediate productivity of that soil has been considerably lowered.

We give herewith the results of the analysis of a low productive capacity soil which had been leached for perhaps five or six times, and Ulbricht's figures for the concentration of plant food constituents.

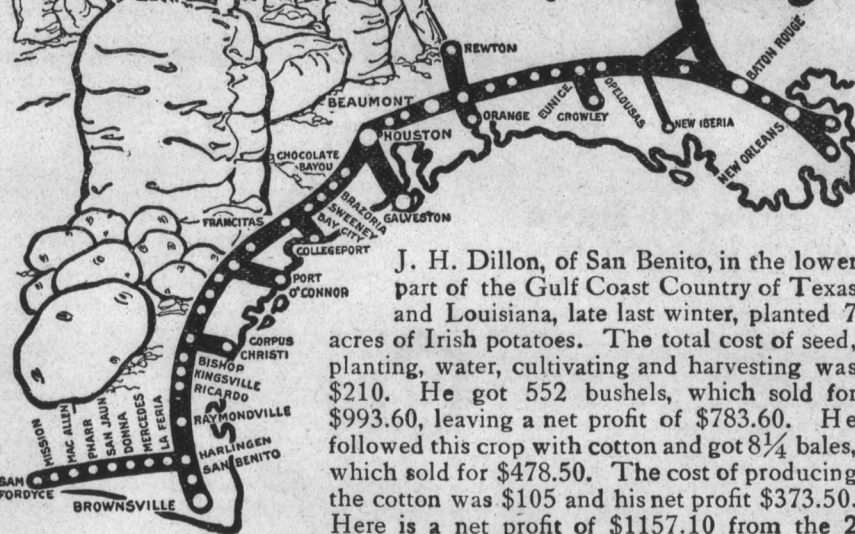
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	First Extract.	Second Extract.	Third Extract.	Fourth Extract.	Fifth Extract.
Potash .....	7	6	7	7	..
Soda .....	41	11	26	17	..
Lime .....	96	70	55	48	62
Magnesia .....	14	10	9	7	8
Phos. Acid .....	2	..	..	1	..
Total .....	158	99	97	80	70
* Trace.					

## ECONOMICAL PRODUCTION.—II.

In pursuing the investigation relative to the effect of silage on reducing the grain ration in the feeding of dairy cows, conducted at the Ohio Experiment Station, it is commendable that this same experiment was later extended to fattening steers. The problem in so far as the fattening of animals where marketing is concerned is entirely different than the one involved in the economical production of milk. There is a certain finish which is desired by the buyer, which finish is determined by mere expert judgment, and which cannot be weighed as milk can be weighed, neither can this finish value be so clearly shown as is the cost in the marketing of butter-fat. Without doubt, however, the conditions in the food which would produce most economically one pound of butter would be apt to produce economically meat as well, but whether it would leave the carcass with the finish most desired for market purposes is another thing. Carmichael, at the Ohio Station, attempted to ascertain the effect of corn silage in the fattening of cattle. It is desirable to emphasize again that in the adjustment of feeds the feeder has the most important

# \$1157<sup>10</sup> net from 7 acres and another Crop coming



J. H. Dillon, of San Benito, in the lower part of the Gulf Coast Country of Texas and Louisiana, late last winter, planted 7 acres of Irish potatoes. The total cost of seed, planting, water, cultivating and harvesting was \$210. He got 552 bushels, which sold for \$993.60, leaving a net profit of \$783.60. He followed this crop with cotton and got 8¼ bales, which sold for \$478.50. The cost of producing the cotton was \$105 and his net profit \$373.50. Here is a net profit of \$1157.10 from the 2 crops on this 7 acre farm, and he is now growing

a third crop—Fall potatoes—which will be marketed before Christmas. This is something to think about, you northern farmers who are limited to one crop. Here is a man growing 3 crops in 1 year and making a good living on 7 acres. You'd be surprised the way everything grows in the

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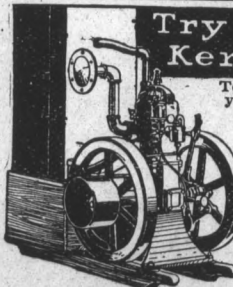
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lever to success in the economical production of meat.

The following ration was selected at the beginning of the experiment: One lot of 20 steers being given a succulent ration containing corn silage and one lot of 21 steers being given a dry feed. The steers receiving corn silage received the following ration when on full feed:

Shelled corn, 17 pounds; cottonseed meal, 2½ pounds; corn silage, 25 pounds; together with what dry roughage they would eat. The lot receiving dry feed received 20 pounds shelled corn; 2½ pounds cottonseed meal and whatever roughage they cared to eat. At the beginning of the experiment the silage-fed lot received shelled corn, seven pounds, increasing gradually until 17 pounds, the full feed, was given. The cottonseed meal was fed at the beginning, one-half pound, increasing until 2½ pounds were fed. In the dry-fed lot the shelled corn began at seven pounds and gradually increased until 20 pounds was given, the cottonseed meal being the same as with the silage-fed lot. The dry-fed lot, of course, consumed more of the dry roughage than did the silage-fed lot. The main point of difference in the two rations then was really in the amount of roughage which was consumed by the steers. The results of the experiment seemed to indicate that where silage was used in the place of roughage in the ration and did not take the place of the grain portion in the ration, there was very little difference in the finish of the animals at the end of the experiments.

On the Pittsburg market the steers from the silage-fed lot were kept in a pen by themselves and the dry-fed lot were kept in a pen by themselves. The expert buyers, however, did not favor one over the other so far as finish was concerned. The average daily gain for each steer was almost exactly the same in both lots. The cost of the gains, however, was quite markedly different. Taking everything into consideration, the final profit per steer of the silage-fed lot was \$5.97, while the profit per steer of the dry-fed lot was \$3.99, showing quite a marked balance in favor of the silage-fed lot. It will be remembered that, in the discussion last week, on the influence of silage on the economical production in the ration, it was shown that silage could quite advantageously take the place of grain where grain was high. In these experiments on the fattening of cattle, silage has been shown to be of quite material advantage in replacing the roughage portion of the ration, and this year, with hay and roughage commanding the exceedingly high prices which they do, it would seem that much could be gained in replacing a considerable portion of that roughage ration with corn silage.

FLOYD W. ROBISON.

#### LABORATORY REPORT.

To what is the deep yellow color of some cakes sold in bakeries due?

Wayne Co.

SUBSCRIBER.

We have repeatedly called the attention of women's clubs to the fact that in many bakeries an imitation egg color is used in cakes in place of eggs. This product is usually a coal tar dye and perhaps if it be one of the certified dyes it cannot be considered especially harmful. However, when a cake is colored yellow we think that the consumer has a right to consider that color due to egg which has a definite food value. If it is not egg, but an artificial color, then we think that cake has been made to "appear better and of greater value than it really is" and this is one of the definitions for adulteration under the law.

Artificially colored cakes or other products to imitate the color from eggs are clearly unlawful.

An additional laboratory report will be found on page 415, where Dr. Robison explains the manufacture of cider vinegar upon the farm in reply to a query recently sent to this office, asking for information along this line. Requests for further information on the manufacture of vinegar will be answered insofar as available knowledge can be had. Should questions arise as to whether certain vinegars meet the requirements of the state law, they can be satisfactorily answered by sending a sample of the material to The Farmer for analysis.

#### CATALOG RECEIVED.

We have received a neatly printed catalog issued by the "New Way" Motor Company, of Lansing, Mich., which is now being distributed. Detailed information regarding the "New Way" twin cylinder engine, the Bosch high tension gear-driven Magneto equipment, together with colored scenes showing the "New Way" in operation, may be found in this neat catalog, a copy of which any reader of this paper may possess by writing to the above company.

## GRANGE

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

#### THE NOVEMBER PROGRAMS.

##### Suggestions for Second Meeting.

Song—Grange chorus.  
Book review—by a man.  
Recitation—"Give thanks for what?"  
Experiments made this year and results: 1. With crops; 2. with stock; 3. with poultry; 4. with cooking; 5. with home and farm improvements.  
Music, by Grange orchestra.  
What is worth reading in my favorite paper—by a woman.  
Recitation.  
Tableaux, illustrating Thanksgiving.  
Exhibit of fruit, each person bringing three or more specimens—in charge of Pomona and Steward.

#### POSSIBILITIES OF THE GRANGE.

With the kindling of the autumn fires and the lengthening of the evenings, the hours of labor shorten on the farm and the hope of mental improvement revives. Herein lies an opportunity for the Grange which we ought not to neglect. If we could but determine upon a few definite things that need doing in the way of lecturer's work, and then set ourselves to the task, we might make real progress.

It is not a hard thing to do either. I fear sometimes that we are failing to grasp, in large measure, the opportunities that the Grange affords us. Perhaps it is because we do not appreciate the need of things that the Grange might do for us, but it seems more likely that we are in need of a revival of faith in our order. This faith might be strengthened by an appreciation of the sterling worth of the thousands of men and women inside the Grange gates.

The officers and executive committee of the State Grange have always done their work well, perhaps never better than they are doing it today. As individuals they have sometimes differed, but this was inevitable, and their differences have been, almost without exception, in the spirit of fraternity. The finances of the order have been managed with exactness and with perfect honesty and, in short, the entire record and administration of Grange affairs in Michigan is clean. But, while this is true, the glory of the Grange is not alone, nor even principally, in its officers who have faithfully discharged their duty, but in the thousands of men and women, scattered over Michigan, who compose its membership. It is for the betterment of these that the Grange exists. It is they who are the Grange, and in everything for which the order stands they are practically a unit. They desire to improve their farms, their live stock, their orchards, their dairies. They want better home surroundings. They are working for better conditions in the community, for better schools and better country churches. The ideal of each progressive man and woman in the Grange includes a better township, a better county, a better state and nation, and so the Grange is striving for higher citizenship. They want the initiative and referendum because it elevates the individual and tends to make "government of the people, by the people, and for the people," more nearly a fact.

These are some of the great objects of our order and to their accomplishment we may well give our best efforts. I have said that we were agreed in these things, and this is true. In these important particulars the thousands of Grange members in Michigan are united, and thus we must continue if we would reap the best results. The defeat of an individual, or the elevation of another to office, is of secondary importance so long as the work progresses satisfactorily. We should permit no man to divide us into parties and factions. Life is short, opportunities for labor are fleeting and we should rally, one and all, not to a standard built of human ambition but around an ideal which includes the great objects of our order.

W. F. TAYLOR.

#### CALHOUN POMONA PATRONS MEET WITH NEW SUBORDINATES.

Calhoun County Pomona held its first meeting with the new Granges of Partello and Rice Creek, at the Rice Creek church, Thursday, Oct. 12. Rice Creek Grange has made a promising start, its membership now numbering 70. A short business meeting was held in the morning, after which a bountiful picnic dinner was served in a most hospitable manner. An inviting program, enlivened with animated discussions and witty remarks, filled the afternoon hours very pleasantly.

Orwin Adams, Pomona master, talked on "The Value of a Grange to the Community." He greeted the new Granges with appropriate words of encouragement and instruction. He said that the Grange is the best organization for providing general educational advantages in a rural community, as it takes in both sexes, young and old.

"Making the Farm Home Convenient and Attractive" was the title of an interesting paper read by Mrs. Laura Minges, of Battle Creek. She said, in part, that a home to be attractive must give forth an atmosphere of comfort, peace and love. It will reflect the personality of the home-maker, being made beautiful by her artistic touches and the careful selection of simple furnishings. The man of the house looks upon his home as a haven of rest. To the woman it is a place where her love of beauty may have free swing. The writer urged the use of convenient appliances and named several devices, such as carpet sweepers or vacuum cleaners, self-heating flat-irons, convenient water systems, drainage from kitchen sink, and good washing machines as labor savers. The patent dish-washing machine was also fully discussed. These conveniences should be used so that the housewife may economize time and strength, thus giving her an opportunity to cultivate flowers, read and rest, and give thought to her personal appearance and the adornment of her home. A plea was made for flowers, for music, for art and for simplicity and quiet colors. These elements constitute the home beautiful, from which radiates an influence which helps to mould the souls and characters of the future men and women—the little ones who live there.

Recitations were pleasingly rendered by Fannie Wilson and Blanche Hotchkiss, of Rice Creek, and excellent chorus numbers were offered by Rice Creek members also. The closing paper was read by F. E. Garratt, of Pennfield, and merited much applause and many expressions of praise. The subject, "Civic Righteousness," was handled with marked ability.

#### Seventh Annual Products Contest.

Washtenaw Pomona patrons will hold their annual products contest in the Masonic Temple, at Ypsilanti, Tuesday, Nov. 14. The aim of these annual events, the first of which was held six years ago, has always been educational but they have continually widened in scope. Special attention is now paid to the work of boys and girls under 18 years of age. This year all such young exhibitors are invited to dinner as guests of the Grange. Following dinner, Prof. Jeffery, of M. A. C., will make the awards on the corn exhibits and talk on "Modern Corn Culture," and Miss Swingle, of Ann Arbor, will make the awards on the baked products and talk on "Modern Corn Cookery." Prizes have been provided for almost every kind of field, garden and orchard crop as well as for bread, butter, pie, cake and various kinds of needlework.

#### COMING EVENTS.

Ohio State Grange, at Columbus, Nov. 13-15.

National Grange, forty-fifth annual session, at Columbus, Ohio, Nov. 15-24. Seventh Degree session, Nov. 16.

#### Pomona Meetings.

Ingham Co., with Capital Grange, Friday, Nov. 17. J. C. Ketcham, state speaker.

Lenawee Co., at Adrian, Thursday, Dec. 7. Annual meeting and election of officers.

## FARMERS' CLUBS

#### THE FAIR AS A SPECIAL FEATURE OF CLUB WORK.

As the reports of the Farmers' Club Fairs, held by the different local Clubs throughout the state, are received and published in this department, it will be noted that the correspondents are in practically every case enthusiastic with regard to this special feature of Club work. There seems to be little difference in this regard whether the Club has been holding a fair for many years, or whether the report is of the first effort in this direction. In either case there is promise that the feature will be made a permanent one in the particular Club for which the event may be reported. It will also be noticed that the scope of the exhibits at these Club fairs vary considerably in different localities where they are held, while the program feature is more or less an important factor in the fair meetings in the different Clubs.

However, there is unanimity of opinion regarding the benefits to be derived from such a meeting by any local Farmers' Club. It would appear to be profitable to every member who is interested in the development of the work of his Club to carefully read the reports of these fair meetings which are published in this department with a view to gaining ideas from them which may be put into practical operation in his own Club, to the end that this special feature of Club work may be made to contribute to the welfare of the reader's local organization, as it

has to that of many other Clubs of the state.

We regret that reports have not been forwarded by the corresponding secretaries of all Clubs which have held a fair this year, but those which have been published are sufficient in number and strong enough in character to be most convincing evidence of the value of Club Fairs as a special feature of Club work in any local Farmers' Club of the state.

#### FARMERS' CLUB FAIRS.

##### Washington Center Club.

The Washington Center Farmers' Club of Gratiot county, held their tenth annual fair, October 12, at the home of Mr. and Mrs. C. N. Curren. The weather was ideal for such a gathering and the roads were very good. Two large banners stretched across the buildings announced that all were welcome to the Farmers' Club Fair. Flags, bunting, crepe paper, evergreen branches and autumn leaves converted the inside of the building into a bower of beauty. A tent was erected for the poultry, and some very fine Barred Plymouth Rocks, White Leghorns and Rhode Island Reds were on display. Every department was well filled, there being more than 200 entries. The display of apples was especially fine, including nearly every variety known in this part of the state, and would have been a credit to a state or county fair. The exhibit of canned fruits and jellies was fine, and the corn exhibit was very good, also vegetables and grains of all kinds, all of which merit especial mention. One squash weighed 33 lbs.; a sugar beet weighed 20 lbs. Cornstalks measuring eight feet in height and corn 8¼ inches in circumference were also among the exhibits. A Chinese exhibit included a robe, opium pipe, fan, umbrella, comb, ginger jars, and in fact nearly everything but the Chinaman. There was also a display of 500 souvenir postal cards, a plate of paw paws, hickory nuts and black walnuts, quilts and fancy work, amateur photography, alfalfa and clover, roots and all.

More than 100 partook of the chicken-pie dinner. In the afternoon a good program, consisting of papers, recitations and music, was given. The interest in the fair seems to be increasing every year, and this was one of the best the Club has ever held. The next meeting will be held at the "Cottonwoods," with Mr. and Mrs. W. C. Long on November 9, at 10:00 a. m. The meeting closed with singing.—Mrs. J. F. Kiser, Cor. Sec. Napoleon Club.

Although it was a very busy time of year, a large number of members and friends of the Napoleon Farmers' Club gathered at the town hall Saturday, Oct. 21, for the annual fair. After the exhibits had been arranged, all went to the Baptist church where dinner was served. Upon returning to the hall some time was taken up in viewing and judging the exhibits, after which the meeting was called to order and an interesting program rendered, the chief feature of which was an address on "Dairying," by Prof. A. J. Anderson, of M. A. C.

The exhibits were many and of very fine quality. Those on the gentlemen's side were judged by Murray Hess and Z. T. Williams. Some idea as to the variety of products is gained from the awards made, which were as follows: W. J. Nichols, first prize on wheat, Greening, Snow, King, Wine, and Northern Spy apples, Hubbard squash, rice popcorn and kohlrabi; second on oats and Lee's Favorite potatoes. Herman Mellencamp, first prize on oats, Noxall potatoes, Baldwin apples; second on Bellflower apples.

Dan Watson, first prize on pumpkins. Will Greenwood, first prize on Japanese pumpkin, second on yellow popcorn.

M. E. Russell, first prize on Early Breakfast, Maule's Early, Early Michigan, Sir Walter Raleigh and White Star potatoes, citron, endive, sunflower, shell beans and winter radish.

Eugene Bromley, first prize on Lee's Favorite and Russet potatoes, yellow dent corn, Bellflower apples, and turnips. Wm. Russell, first prize on carrots, parsnips, cucumbers, radish; second on cabbage.

Will Watson, first prize on melon, yellow popcorn; second on rice popcorn. Lorris Russell, first prize on mixed gourds, twelve varieties, and pair bantams.

Mrs. Wm. Hall and Mrs. A. J. Hoagland acted as judges of the ladies' exhibits and awarded prizes as follows:

Mrs. E. Bromley, first prize on fresh strawberries, Pocket lemons, canned vegetables.

Mrs. R. D. Palmer, first prize on grapes and mixed bouquet of flowers, and pieced sofa pillow.

Mrs. W. J. Nichols, first prize on cauliflower, flowering pepper, orange pie, pumpkin and raised biscuit.

Mrs. Wm. Russell, first prize on canned fruit, jelly, embroidered pillow cases, arrangement of bouquet of dahlias, and embroidered sofa pillow.

Mrs. E. A. Harrington, first prize on yellow pie-pumpkin, and Sugar Trough gourds.

Mrs. G. W. Butler, first and second on drawn work, variety and perfection in bouquet of dahlias; second on embroidered pillow cases.

Mrs. A. A. Hackett, first prize on outline work of sofa pillow.

Mrs. M. E. Russell, first prize on crochets.

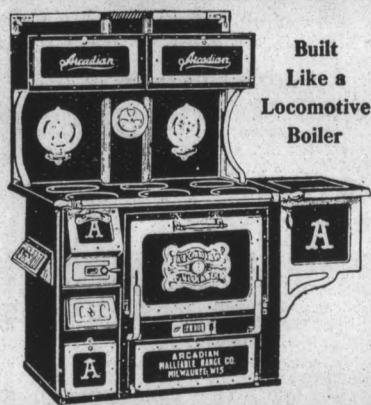
Mabel Lester, first prize on cabbage.

Marjorie Lester, first prize on cross-stitch sofa pillow.

The Club adjourned to meet with Mr. and Mrs. Wm. Russell on the third Saturday in November.



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## Woman and Her Needs At Home and Elsewhere.

### BACK TO THE CITY.

DEAR HOUSEHOLD EDITOR:—I have noticed that occasionally a woman writes to this page and frees her mind, and as mine is filled to bursting just now, I thought I would try this way of letting off steam. I don't dare talk to my neighbors, and talking to my husband isn't any relief, it is too common.

I have always lived in the city until a year ago. All that time I have had a "dream country" in my mind with a beautiful home of my own where I could bring up my boys and girls close to nature's heart and let them absorb learning from every brook and stone, leaf and flower. I call it a "dream country" because it was made up only of what I had gathered from books and poems. I read avidly everything on country life, revelled, in my imagination, in its simplicity and ease, saw my children growing strong and rosy, heard them calling every flower by name and saw them feeding the birds from their hands while they lovingly pointed out to me the different species.

A year ago we moved to the country and set about the establishment of our Paradise. But in one short year I have discovered that my "dream country" was after all only a dream, and that the real thing is as different and inferior as one could imagine.

I discovered that my city bred children knew more about the wild flowers than these native sons of the soil. The little country boys perhaps knew the names of one or two. Our boys could tell 30 at sight. And where the country boys knew only the names of the wild birds, ours could tell all about their habits, how the nests are built, the manner of caring for the young, all the little peculiarities each displayed and, in fact, dozens of things the country boy had never heard.

All these things our lads had learned in trips to park and field with their teachers. The teachers in the country school never dare take their charges afield. Parents send their children to school here to "learn to write and figure, not to go traipsin' around the woods tearing their clothes and wearing out their shoes." Far from learning more of nature, our children will learn less than they did in the city unless their father or I go with them on their pilgrimages.

In the matter of strength, too, our boys are vastly the superior of these country boys. Exercise in the gymnasium and directed outdoor sports have developed their muscles. The country boys are fatter, but it is fat caused by over eating. Their muscles are undeveloped for their only exercise is the chores they do night and morning, and the younger ones do not do enough to really help them develop. In a matter of endurance our boys are so far ahead of the country lads that it is really pitiful, for combined with their regular exercise they are eating only strength-giving foods, milk, eggs, cereals, meat, potatoes, whole wheat bread, etc., while their new playmates gorge on pie, cake, greasy fried cakes, soggy bread, salt pork and the like, all of which they bolt without the formality of chewing at all, to say nothing of the prescribed "32 bites."

But this is not the worst. Our children have learned more downright badness here in this one short year than they could have learned in ten had we stayed in the city. I have read all about the bad, vile boy of the city streets, and the good little, pure little boy of the country. In fact, it was those two boys who helped me decide to move to the country. But, after an acquaintance with both I must say I prefer the city youth. I can keep my children from associating with the bad boys in town and everyone will applaud. If I forbid them to play with the boys here I am called stuckup and accused of thinking myself better than my neighbors. So I must let my boys play with these lads, whose minds seem to be given over only to speculation on the mysteries of life, on which they put the worst interpretations. Instead of committing to memory bits of poetry and

grand and noble thoughts, these boys are learning immoral couplets and bits of indecent doggerel. It is no wonder the teacher can never get them to learn a bit of pure poetry to recite last days. Their minds are too filled with other things.

We are going back to the city in the spring, if not before. Going before our boys are entirely ruined. Perhaps we are too late now. At any rate, it will take years to efface the things they have learned in "God's pure country." Hereafter, when I read that, I shall give thanks to God that if he did make this particular bit of country He let man make the beautiful, wonderful city.

A DISILLUSIONED MOTHER.

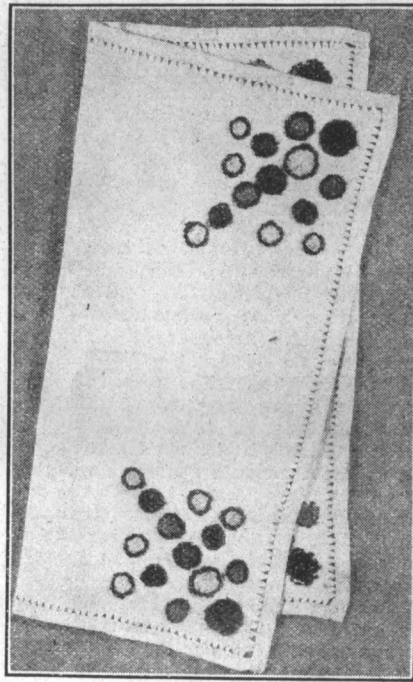
Oakland Co.

### JEWEL AND BEAD EMBROIDERY. No. 12.

BY MAE Y. MAHAFFY.

Jewel work has long been a prominent feature in dress trimmings, and is utilized in combination with fancy stitches in various other forms of embroidery, but its usage the past season has become remarkable, owing largely to the popular craze for bead trimmings. The use of beads in embroidery designs almost invariably calls for some jewel work, and hence both forms are just now in the lead for trimmings. Since they are always splendid features, no matter what fad may be to the fore, it is well for every needleworker to understand just how to make the best of both beads and jewels in an ornamental way.

The jewel work is little more than a raised satin stitch, described previously under the head of "Solid Work or Satin Stitch." This solid work was found in many forms of embroidery, is, in fact, the



foundation of most of the finest decorative needlework used today. The jewels may take the form of small vari-sized disks, as in the little dolly shown, or that of ovals, hexagons, and other jewel-like shapes. Silk produces the best results, but now that so many attractive colors are obtainable in cotton floss it is quite possible to secure very good jewels by a discriminating selection of this cheaper material, though the richness and brilliancy of the silk is certainly more appealing. The jewels may compose the entire design, or, as noted above, they may be intermingled with almost any other stitchwork to splendid advantage, whether on linen or some heavier fabric.

A tray of gems in a jeweler's window will give one delightful ideas as to the possibilities in the color line. To be sure, it is not essential that a studied application of exactly copied colors should be aimed at; the same leniency is allowed in this field as in any of the other embroideries, but consideration of the real gems will suggest harmonious schemes of color which cannot fail to be appreciated. Sometimes the jewels are of such

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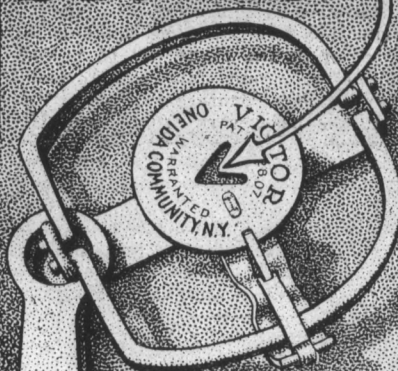
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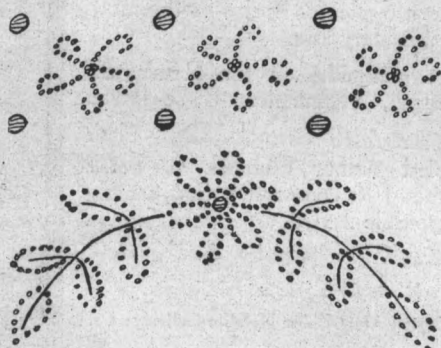
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size that it is practicable to shade them a trifle, but as a rule they are best worked in one shade, the mingling of colors and tints being achieved by massing groups of the jewels, each in its own particular coloring. Then, too, pleasing results are often arrived at through the use of the vari-colored or shaded floss, though this must be used with care, as any marked change from one shade to another while working a given jewel will produce startling results. Select about the same tone in all the different colors, daintier, more artistic effects thus being attained.

In the disks, work across in one direction in the satin stitch first to form the padding, and cross these stitches closely and smoothly for the outer embroidery. By beginning the outer work in the center and working out to the edges alternately it will be found very easy to preserve the contour of the circle, a very important item. In the ovals the padding may be placed lengthwise, with outer stitches straight across, or the padding may be slanted diagonally in one



Designs Suitable for Beading.

direction, and the outer layer of stitches be placed on exactly the opposite slant. This latter is perhaps the most effective method. The padding must always be made especially heavy near the center, so that the desired rounding figures will result. After the solid work is placed fine outline stitches in black, rich brown, or in a shade darker than that of each jewel, are worked around each, the exact forms being carefully maintained.

In doing bead embroidery fine needles and silk thread of the same shade as the material or of the beads will be needed. As to the background fabrics there seems to be no limit. Naturally, one would expect to see bead work on non-washable fabrics only, but washable gowns, waists, etc., are ornamented quite freely in the same fashion. However, silks, marquises, chiffons, voiles, challies, and similar materials will prove better adapted to the work. When washable goods are embellished in this way attention will need to be given the laundering process. No rubbing of the beads is allowable, and in ironing the article must be placed on a heavily padded surface, and as little weight placed upon them as is practicable to prevent breakage.

Two designs suitable for beading are shown, but almost any embroidery design may be beaded, particularly those for French knot or cross-stitch work. In the latter, each of the crosses is represented by a bead, while in the former the French knots are replaced by beads. As a rule, outlining or couching is combined with the bead work, and frequently some solid work. It is not wise to stamp the regular embroidery patterns on any material for bead work, as the beads will not cover all the stamped lines. The pattern may be basted underneath transparent fabrics and readily followed. On others use the design stamped on tissue paper basted over the material, working right through both, and when the beading is completed tear the paper away.

The beads are sewn down to the goods with as short stitches as possible so that the thread will not show beyond the bead, the thread being carried along on the wrong side. The beads are placed quite close together when a small size is used, but larger ones may be spaced a bit. The centers of flowers are formed of groups of beads, of one larger bead or sequin, or of a jewel in satin stitch. They may be in many-hued, iridescent effects, or any color combination may be followed, if more than one color is desired.

#### GRAHAM BREAD AND NUT LOAF.

BY ELLA E. ROCKWOOD.

Making graham bread, or brown bread, as it is now more commonly called, is in many homes a sort of bugbear to the cook, who hesitates to attempt it because she is not quite sure how it is going to

turn out. An excellent loaf can be made by adding to the ordinary "sponge" sufficient graham flour to make a soft loaf, kneading it until smooth but not at all hard. Let this rise and bake slowly 40 to 45 minutes.

A quicker method of making brown bread does away with yeast and substitutes baking soda as a leavening agent. The following is a tested recipe and the amount will make one loaf:

Two cups of buttermilk, one cup of graham flour, one cup corn meal, one-half cup of white flour, one-half cup of molasses, two teaspoonfuls of soda, one teaspoon baking powder, one-half teaspoon salt. All measures level. Raisins may be added if desired. Mix and place in a greased bread pan. Bake very slowly so as not to form a thick crust. Or the loaf may be steamed 45 minutes and finished in the oven.

Another most delicious bread is called nut loaf. Like the former, this bread is sometimes made with yeast. But here is another recipe that calls for baking powder instead, and is easily and quickly prepared. By following instructions closely failure is impossible as all measurements are accurate.

Four cups white flour, one-half cup of granulated sugar, four teaspoons (rounding), baking powder, one level teaspoon salt. Mix all together dry or put through a sieve, then add one cup chopped hickory nut meats. Beat two eggs and add to them two cups sweet milk. Pour over the dry ingredients, beat well and put into a buttered bread pan. Let stand 20 minutes to rise then bake slowly about 45 minutes.

This makes delicious sandwiches for any social function yet is sufficiently simple and inexpensive for the family table, where it is sure to prove a favorite.

#### SHORT CUTS TO HOUSEKEEPING.

When making mincemeat, try grinding the apples unpeeled, very fine, in the food grinder. The work will be much lessened and the apples have a better flavor. —M. A. P.

Perhaps good housekeepers will not approve of my plan of making work seem lighter but here it is and you may take it for what it is worth. After dinner I pile my dishes neatly on the table and go at once to my sewing and work until the nervous strain commences. Then I drop the sewing and wash dishes. I find the sewing much easier in this way. —E. L.

For your loose machine band, drop on a little castor oil, then turn the wheel quickly and the band will contract. —D. T.

In these days of high-priced brooms try sweeping your kitchen floor with your mop. Have the cloth shorter than usual and barely damp. A little experience will enable you to do better work than with a broom as it takes fine dust as well as litter. —Mrs. W. C. M.

A piece of screen cut to fit over the pipes under your register will greatly prevent the dust and dirt entering. Also anything can be easily rescued that might be dropped through the register. —Mrs. G. A. R.

When making fruit cake heat your food cutter as hot as boiling water can heat it and fasten it in position and run your citron, orange and lemon peel through it while hot and it will not clog. Repeat heating if necessary till needed candied peel is cut. —Mrs. J. R.

A hot knife will cut soft cake and will not get sticky as a cold knife always will. —Mrs. J. R.

When frying eggs put a few drops of water in two or three places after eggs are in the spider, and cover them a few minutes. They will not have any hard rims. —L. C.

A good deal of glistening can be obtained on imitation cut glass by washing it in a strong solution of soap powder. Let this dry on it, then rub with a soft cloth. —Mrs. C. P. S.

When making jelly if the pulp is first drained in a colander then the liquid strained through a jelly bag it will not take nearly so long. If, after the jelly is cold it is not quite as hard as wanted, set it in a sunny place, covering with a cloth to keep out dust, yet allow the moisture to evaporate. It may take several days to get as hard as desired but it is much more satisfactory than to boil it again. —Mrs. R. S.

Quick route to nice baked potatoes: Prepare in the usual way for baking, plunge into boiling water that has been salted, cook rapidly until nearly done, then finish in the oven. —K.

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## HOME AND YOUTH

WHEN THE YEAR GROWS OLD.

BY MILLIE GRISWOLD REILEY.

When the year grows old,  
And the trees of green  
Have turned to gold,  
And the squirrels are seen  
To store their nuts  
In the hollow hold,  
The turkey struts  
In his manner bold.

When the days are brief,  
And the evening's long,  
We drown our grief  
With a laugh and song.  
We heed the call  
Of the winter gray,  
And store up all  
For a stormy day.

When the grate fire glows,  
And we're gathered round,  
The jolliest group  
That could be found,  
Then we laugh with glee  
At the stories told.  
Oh, happy are we,  
When the year grows old.

THE RELIABLE BOY.

BY RUTH RAYMOND.

Thomas Clark sat down in the woodshed to rest his tired back after splitting a large pile of wood. Tomorrow would be Thanksgiving, and the family (all but Thomas) was going to Grandpa Brown's to keep the day. Tom's father had said that very morning, "Someone must stay at home and look after things, and our Tom is reliable. Ben or Fred would forget something, and they would be sure to go to the neighbors to play the most of the day; but Tom'll be right here, and he never cares much about holidays anyway."

The lad wondered how his father knew, since he could not remember to have ever had a holiday.

A change had been coming over the youth of late. He was becoming discontented and discouraged. While he sat thinking about the unpleasant things of life, a brood of turkeys went strutting by. He picked up a stick and threw it at the gobble. "They will have turkey at grandpa's for dinner tomorrow, but ham will be good enough for me," he murmured. As he spoke he noticed his teacher passing in front of the house on her way to her uncle's, where she was to spend the holiday.

Tom joined her, walking down the road.

"Glad you came out, Thomas. I was just deliberating whether or not to come to the door and inquire for you. I've been at the schoolhouse straightening up before our short vacation. Where are you going to spend Thanksgiving?"

"At home, I believe, splitting wood and doing the chores, while our folks go to Glenwood to spend the day at grandpa's. Being reliable, I must stay at home."

This was said with such bitterness that Miss Forest was surprised. She had never heard her favorite scholar speak in this tone before. Looking at him closely she thought she understood his trouble. The lad was fast growing into manhood and was beginning to long for his place in the world.

"You are very reliable and everyone depends upon you. I do, for you do help me so much with the big boys. You are a born leader, and where you go they are sure to follow."

Thomas looked pleased as she continued: "When I first came to this school, where there were so many unruly boys, I was quite discouraged, for I saw they looked upon a slip of a girl like me with disdain. There was rebellion in their faces, but when you entered the schoolhouse door they all took notice to see how you treated the situation. I watched your face and saw that you were a boy I could rely upon to do your very best, and I have found you a friend in every emergency. We have a school to be proud of, Thomas."

"Thank you, teacher. It is good of you to praise me so much, but one does get tired of being—just a good boy."

The teacher laughed. "You are right, and you should have your share of pleasure with the rest, but be patient and it will come out all right I am sure."

Feeling much better, Thomas bade her good-bye and hastened back to the barn to do the evening chores.

Thanksgiving dawned fair but cold. The inmates of the farm house were early astir and while Thomas looked after the stock the others dressed for their journey. His mother had prepared his lunch, which was set upon the

kitchen table. Everyone was happy; even Thomas whistled at his work, though there was sadness in his heart. "Don't work all day," his mother said when they were ready to depart. "You might go over and play with the Green twins for a spell." Thomas laughed. The Green twins were four years younger than he, but mother did not seem to remember that he was getting to be a big boy and not in a mood for childish games. "I'll manage all right, mother," he answered, seeing she was afraid he would be lonely.

About eleven o'clock a boy came with a note from his teacher. It was an invitation for him to dine with her at her uncle's at 2:00 o'clock. The lonely lad was much pleased and hastened his tasks that he might be ready on time.

When he dressed for his first dinner out, how he longed for a pair of long trousers like other boys of his age wore; his legs seemed so big and awkward. At the appointed time he appeared at Mr. Genung's and was welcomed by the family, including the teacher. Dinner soon followed and was all that a Thanksgiving dinner should be, including roast turkey. There were several young people present, and Thomas, who was always at ease, enjoyed himself to the utmost. This was what he had longed for, to be among those who understood he was not a child, but almost a man.

Games followed music and singing, and then Mr. Genung proposed to take the guests for a ride in his big touring car, but Thomas excused himself as it was time for him to be at home. "Always reliable," said his teacher, as she gave him her hand at parting. "It is the better way, my friend."

Thomas was soon at home and doing chores after having changed to his working clothes. The stock on the farm all liked the lad, who was always kind to animals. His especial care was the big colt which he had halter-broken and was looking forward to saddle-breaking. But he had heard his father telling one of the neighbors that he thought of selling the colt, providing the man who wanted him decided to give the price. This was one of the things which had made Tom discontented. He wanted that colt some day for his very own.

When Thomas entered the barn to attend to the horses he thought he smelled smoke. Where could it come from? He rushed about the barn, looking everywhere, until suddenly a bright flame burst into view in an almost empty corner of the hay-loft. Picking up a pail of water which stood on the floor, he ran up a ladder to the loft and, by using his meager supply of water to the best advantage, managed to extinguish the blaze. Then he stamped out the sparks that were struggling to get another start. It was the work of but a moment, yet he felt weak when it was done. He realized how near he had been to having a big fire and at a time when his father was away. His reliability might have been questioned had anything serious happened.

Where the lad had poured the water he found a whiskey bottle nearly empty. He decided that a tramp had been resting in the loft. Seeing Thomas returning home, he had probably thrown down a lighted cigar and left the place without being seen.

He now busied himself with preparing supper for the family, which would be coming soon and would doubtless be hungry. It was nine o'clock when they came and his mother was very glad to find a good cup of tea awaiting her. Everybody talked at once but Thomas did not tell them about the fire until the next morning, as he thought it might make his father nervous. The next morning he took his father to where the fire started and was praised for the way in which he had prevented a conflagration.

A few days after this Mr. Clark was driving past Mr. Genung's house when the teacher came out and asked the privilege of riding to the village. "Glad to have you," said the farmer. "You are a little woman, but you do manage the big boys fine. I'd like to know how you do it, Miss?"

"Your Thomas helps me," she answered, smiling. "I could never teach those boys but for him."

"Yes, Thomas is reliable," proudly answered the father. Then he told about the fire and how quickly it had been extinguished. This gave the teacher the chance she had hoped for, and when she parted with Mr. Clark he thanked her for her kind suggestions and promised to act on her advice.

The following day, breakfast over, Mr.



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Clark announced his intention of going to the town where they did their trading. Fred and Ben proposed at once to accompany him. "No," said the father, kindly but firmly, "Thomas is going this time." Everyone was surprised, as this was quite out of the ordinary.

The happy boy was soon ready and rode away in a strange frame of mind, but on their return he was wonderfully changed. He came in whistling a merry tune and, depositing a bundle on the table, called excitedly to his mother.

"Come, quick, mother, and see my new suit—long pants, overcoat and everything just grand. I'm going to wear it to church tomorrow; and what do you think. Father says I may go to Newark right after Christmas to spend the holidays with my old friend, George Stanly. And say, Mother! I'm going to have the big colt for my very own."

"I am sure father is doing just right," his mother answered. "We have been rather slow in understanding that you are almost a man; but now I believe you are going to be just as happy as such a good boy deserves to be."

The teacher soon learned of Thomas' good fortune and entered heartily into his plans for the vacation. "You will not be spoiled by all these nice things I am sure, and you will never regret being reliable again, will you?" she questioned.

"No," he answered, "but I am glad that a reliable boy can have a good time once in a while, same as the others."

#### THE UNIVERSITY OF HARD KNOCKS.

BY ORIN E. CROOKER.

The present generation of farmers is sending its boys and girls to college more largely than has been the case at any time in the past. The farmer of today is not so generally skeptical of the benefits of "higher education" as were his own father and grandfather. He realizes the value of "book learning" and has come to see some of the deficiencies of his own education which he acquired in the "University of Hard Knocks."

Still, the "University of Hard Knocks" has turned out many a man of sterling worth and character. The value of its degree is everywhere recognized as of most practical utility in this work-a-day world. To be able to count oneself among the alumni of this school of learning is to be able to point to no visionary, theoretical course of training but to a fund of experience gathered by practical acquaintance with the activities of life.

Knowledge is of questionable value if it be not capable of practical application. The man whose knowledge is only theoretical usually lacks the ability to put what he knows into practical effect. He may know when and why to plow and cultivate, but if he lack the skill to follow his team and turn his furrow evenly, his "book learning" must necessarily await the acquisition of sufficient practical experience to make it truly effective.

Many a boy in college today is being crammed with book knowledge to the neglect of the practical side of his education. He may or may not survive the training he is undergoing. Some men develop into "educated ignoramuses," while others are practical geniuses—not knowing so much why a thing is done but able to do it if put to the test.

Experience, is, after all, the best teacher. Fortunate, indeed, is the young fellow who is so situated that he can go to college and gather understandingly from the fruits of wisdom that are so abundantly set before him. But he who has gained his experience and knowledge in the "University of Hard Knocks" is not to be looked down upon. He has learned to do, and that is the main thing. He may not be able to tack a long string of degrees after his name but, in the slang phrase of the day, "he can deliver the goods." And what the world wants most of all is a man who knows how to do things.

Degrees and titles are all right in their place, but they will not make a practical genius out of an educated fool. We never see a man's name with a string of degrees written after it but that we think of the traveler who walked up to the desk of a hotel, seized a pen, and, with many flourishes, wrote his name in the register as follows: Josiah Coperthwaite, A. B., M. A., Ph. D., S. T. D., L. L. D. The next man to register was a son of the Emerald Isle. He took one look at the hieroglyphics before him and wrote without a tremor: Fat Finegan, H. O. D., Ca. R. good boy as you have always been deserves to be."

R. L. E. R.  
It is not difficult to tell which one of them had gained his degrees in the "University of Hard Knocks."

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#### "YOUR APPLIANCE CURED ME."

Rose City, Mich.,  
Sept. 20, 1911.

Dear Mr. Brooks.

Dear Sir:—I received a letter from you some time ago. Have neglected to answer it but will do so now. Being a well man I suppose I did not think to answer it as soon as if I had been afflicted in the way I was before I got your Appliance. I want to thank you right here for the great benefit you have done me. Your Appliance is a God-send to anyone who is afflicted with rupture. I cannot speak highly enough to recommend it and will go to the justice of the peace and take my solemn oath that your Appliance cured me.

Yours very truly,  
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The above is C. E. Brooks, who has been curing rupture for over 30 years. If ruptured, write him today.

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Dear Sir:—I write you these few lines to let you know what your Appliance has done for me. I had been ruptured for two years and could not get a truss that would hold me. I tried different ones but none would answer the purpose until I received your Appliance. After wearing it about a year I am cured and my rupture does not come down or bother me in any way. I will gladly recommend the Brooks Rupture Appliance to anyone who is in need of such a thing. Many thanks for what you have done for me.

Yours sincerely,  
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healthy, mature animals and the best growth and development of the young stock. Prompt removal of liquid and solid manure from the horse barn means comparative freedom from thrush, grease heel and scratches. Consequent freedom from the escaping ammonia means freedom from weak and sore eyes. These are sufficient reasons why you should have a Manure Carrier.

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down grade. It never fails to come back. The trip is enclosed, no litter can prevent it from working properly. Special equalizing spring at dumping post prevents severe jolts. Automatic guard makes it impossible for wheels to jump the track. The box is water-tight, saving the liquid manure. Bail offers a firm handhold—no ropes, springs, catches, or any mechanism to hurt you.

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## MARKETS

## DETROIT WHOLESALE MARKETS.

November 8, 1911.

## Grains and Seeds.

**Wheat.**—There was no market on Tuesday owing to the elections held in the several states and many cities. Prices have continued the decline begun two weeks ago. It appears that the recent bulge and present decline are largely due to the manipulations of big holders. It seems that an attempt was made by large buyers to corner the May option, during which attempt there was a general advance in quotations due to the buying of the speculators, but when it became apparent that this future could not be cornered, the speculators who had loaded themselves heavily began to sell. At first, innocent outsiders took the offerings readily, but soon they realized that the big men were getting out from under when nobody wanted to buy and every broker stood ready to dispose of his holdings, with the result that prices have declined. Another reason for the decline is that the government seems determined to bring action against large brokers and incidentally make an investigation of the methods employed in the "pits." Should this occur, all desire to be without grain, or at least, only hold that which is necessary to meet regular demands. The spring wheat crop of the northwest is being marketed rapidly and it is expected that the crop will soon be in the elevators, as it is short. The visible supply shows an increase of over two and one-half million bushels, primary receipts are heavy. Flour is about steady; mills are busy. A year ago the price for No. 2 red wheat was 92½¢ per bu. Quotations for the week are as follows:

	No. 2	No. 1	
Thursday	96¼	98¾	1.03½
Friday	96	98	1.02½
Saturday	96¼	98¾	1.03
Monday	95¼	97¼	1.01½
Tuesday	95¼	97¼	1.01½
Wednesday	95¼	97¼	1.01½

**Corn.**—In spite of the decline in wheat, corn has been able to maintain the prices ruling a week ago. This is due to the strong position of this trade and the damage done the crop by continuous heavy rains. In Missouri the state report shows there has been a shrinkage of several bushels since the crop has been harvested, due to the above cause, and this condition prevails throughout the greater portion of the corn belt. Much of the corn is so bad that it is hardly fit for feeding purposes. While the price is restricting the use of the cereal, there is a comparatively liberal amount being used by feeders, due to the general understanding that well finished cattle will be scarce later in the season. One year ago the price of No. 3 corn was 51½¢ per bu. Quotations for the past week are:

	No. 3	No. 3	
Thursday	76	76½	
Friday	76	76½	
Saturday	76	76½	
Monday	76	76½	
Tuesday	76	76½	
Wednesday	75	75½	

**Oats.**—The quotations for this cereal have been steady with the closing prices of last week. There has been a fair demand for the cereal which keeps the market steady. One year ago the price for standard oats was 34½¢ per bu. Quotations for the past week are:

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

**Beans.**—Prices have declined on the local market the past week. The reason for the change is that consignments are in poor shape and contain too much moisture, making the shrinkage large and endangering their keeping quality. The amount handled locally, however, is not large at present, farmers being inclined to hold where they feel safe in doing so. Following are the quotations:

	Oct.	Dec.	
Thursday	2.32	2.30	
Friday	2.32	2.30	
Saturday	2.32	2.30	
Monday	2.30	2.28	
Tuesday	2.30	2.28	
Wednesday	2.28	2.26	

**Clover Seed.**—There is an active demand for seed and prices are maintained at those of a week ago. The price dropped 1½¢ on Friday last, but recovered the following day. Alsike is steady. Following are the leading quotations:

	Prime Spot.	March.	Alsike.
Thursday	12.40	12.50	10.50
Friday	12.25	12.35	10.50
Saturday	12.40	12.50	10.50
Monday	12.40	12.50	10.50
Tuesday	12.40	12.50	10.50
Wednesday	12.40	12.50	10.50

**Timothy Seed.**—There is no change in this product. Prime spot nominally quoted at \$7.20 per bu.

**Rye.**—Rye has again declined and is now selling 2¢ below the price of a week ago, or at 97¢ per bu. for Cash No. 2.

**Flour, Feed, Potatoes, Etc.**

Flour.—There is a fair demand for flour, with prices unchanged.

Straight ..... 4.10  
Patent Michigan ..... 4.75  
Ordinary Patent ..... 4.40

Feed.—All grades steady with last week.

Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$29; fine middlings

\$32; cracked corn, \$30; coarse corn meal, \$30; corn and oat chop, \$28 per ton.

**Hay and Straw.**—Hay has advanced particularly the lower grades. Straw remains steady. Quotations are: No. 1 timothy, \$20@21; No. 2 timothy, \$19@20; clover, mixed, \$18@19; rye straw, \$9.50@10; wheat and oat straw, \$8.50@9 per ton.

**Potatoes.**—Prices here and at primary points out in the state indicate a steady market for potatoes. They are being delivered to the big markets in quantities that satisfy the current demand but not in such abundance as to burden the trade. Car lots on track are quoted at 60@62¢ per bu. in bulk, and 65@67¢ in sacks.

**Provisions.**—Family pork, \$19@19.50; mess pork, \$16; medium clear, \$16@17.50; hams, 14¢; bacon, 12@13½¢; pure lard in tierces, 9½¢; kettle rendered lard, 10½¢ per lb.

## Dairy and Poultry Products.

**Butter.**—The supply of butter is shrinking and since storage people were frightened into not putting away much of the surplus last spring and summer because of threatened legislation and the expectation of free trade relations with Canada, the demand is boosting prices, which have advanced all over the country, to an unusual altitude for this season. Quotations are: Extra creamery, 32¢; firsts, do., 31¢; dairy, 21¢; packing stock, 20¢ per lb.

**Eggs.**—The current receipts here and at the other big markets are growing smaller and prices are advancing. The increase here amounted to 1½¢. Fresh receipts, case count, cases included, are now quoted at 26¢ per dozen.

**Poultry.**—Chickens of all grades have suffered a decline in values due to a fair supply and to the habit of buyers who usually make a dent in quotations just previous to a holiday that they may secure stock at reduced values and then sell when the increased demand pushes quotations up. Other poultry is steady except geese, which are higher. Prices are: Live—Hens, 9@10¢; turkeys, 14@15¢; geese, 10@11¢; ducks, 12@13¢; young ducks, 14¢; spring chickens, 11¢; No. 2 chickens, 8¢ per lb.

**Cheese.**—Michigan, old, 16@16½¢; Michigan, late, 15½@16¢; York state, new, 16@16½¢; Swiss, domestic block, 19@21¢; cream brick, 15@16¢; limburger, 12@13¢.

**Veal.**—Market steady. Fancy, 10@11¢; choice, 8@9¢ per lb.

## Fruits and Vegetables.

**Cabbage.**—Steady. Selling at \$1.50@1.75 per bbl. for home-grown.

**Onions.**—Steady; 80@90¢ per bu.

**Pears.**—75¢@1 per bu for average offerings.

**Apples.**—Market steady with offerings sufficient to meet the present demand. Average offerings are going at 50@75¢ per bu; Snows are selling at \$2.50@3 per barrel.

## OTHER MARKETS.

## Grand Rapids.

The potato market is higher and buyers are paying 50@55¢ at loading stations. The farmers are selling freely and the movement of stock out of Michigan is quite heavy. Local buyers are paying \$1.50@1.75 for apples. The egg market continues firm at 26¢ for fresh stock. Dairy butter is also worth 26¢ and is very scarce. Wheat is off a little, No. 2 red bringing 90¢ and No. 1 white 87¢. Rye is worth 84¢; oats, 48¢, and old corn 79¢.

## Chicago.

**Wheat.**—No. 2 red, 94½¢—96½¢; Dec., 92½¢; May, 99½¢ per bu.

**Corn.**—No. 2, 73@75¢; Dec., 62½¢; May 63½¢ per bu.

**Oats.**—No. 2 white, 48@48½¢; Dec., 46½¢; May, 49½¢.

**Barley.**—Malting grades, \$1.00@1.26 per bu; feeding, 75@95¢.

**Butter.**—The advance at Elgin added strength to this market but up to Wednesday quotations had not been advanced. Creameries, 24½@31¢; dairies, 22@28¢ per lb.

**Eggs.**—Offerings continue light and all grades are higher, the better qualities showing a 2@3¢ gain. Quotations: Prime firsts, 25@27¢; firsts, 22@24¢; at mark, cases included, 17@20¢ per dozen.

**Potatoes.**—Market very firm with quotations showing a gain of 5@8¢ over this time last week. Michigan stock is now quoted at 73@78¢ per bu; Wisconsin, 70@75¢; Minnesota, 73@78¢.

**Beans.**—Pea beans are higher; prices being firmly maintained on all kinds. Choice hand-picked pea beans quoted at \$2.47@2.57 per bu; prime, \$2.36@2.43; red kidneys, \$2.75@3.25 per bu.

**Hay and Straw.**—Hay is steady and unchanged. Rye straw slightly lower. Quotations: Choice timothy, \$22@23 per ton; do., No. 1 \$20@21; do., No. 2 and No. 1 mixed, \$19@20; do., No. 3 and No. 2 mixed, \$14@18; clover, \$15@17; do., No. 2 and no grade, \$8@13; rye straw, \$9.50@10.50; oat straw, \$9@9.50 per ton; wheat straw, \$7@8 per ton.

## New York.

**Butter.**—Steady; quotations practically unchanged. Creamery specials are quoted at 33@33½¢ per lb; extras, 32@32½¢; firsts, 29@30½¢; seconds, 27@28½¢; thirds 24@26¢ per lb.

**Eggs.**—Firm at a general advance of 2@3¢. Fresh gathered extras, 36@37¢; extra, firsts, 32@34¢; seconds, 26@28¢; western gathered whites, 30@40¢ per doz.

**Poultry.**—Chickens are slightly lower. Western chickens, 11@12¢; fowls, 11@12¢; turkeys, 16¢. Dressed—Good stuff is 1¢ higher. Turkeys, 10@21¢; fowls, 7@16½¢; western chickens, 7@17¢ per lb.

## Boston.

**Wool.**—The amount of wool moved on the local market last week is estimated at 5,000,000 lbs., and this is less than the

amount exchanged the previous week. Prices for fleece wool are firmer although no marked advances are yet notable. The recent demand for ¾-fleeces has cared for a considerable quantity of that grade and left the market with practically no more bargain lots to sell. The shipments of wool from Boston from January 1 to November 2, inclusive, were 151,183,884 lbs., against 173,356,304 lbs. for the same time in 1910. The receipts for that period in 1910 were 238,958,666 lbs., whereas in the same period of the present year they aggregated 265,883,358 lbs.

## Elgin.

**Butter.**—Market firm at 32¢ per lb., which is a 1¢ advance over last week's quotation. Output for the week, 667,500 lbs., as compared with 674,200 lbs. for the previous week.

## THE LIVE STOCK MARKETS.

## Buffalo.

November 6, 1911.

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

Receipts of stock here today as follows: Cattle, 220 cars; hogs, 140 double decks; sheep and lambs, 150 double decks; calves 1,000 head.

With 220 cars of cattle on our market here today, and 35,000 reported in Chicago, it was a significant fact that there wasn't a single load of good cattle on our market, to fill orders here for a dozen loads of good prime cattle that could have been sold from \$7.75@8 per 100 lbs. Anything of any quality that showed fat sold from 10@20¢ higher than last Monday.

We quote: Best 1,400 to 1,600-lb. steers \$7.75@8; good prime 1,300 to 1,400-lb. do., \$7.25@7.50; do. 1,200 to 1,300-lb. do., \$6.50@7; best 1,100 to 1,200-lb. shipping steers \$5.75@6; medium butcher steers, 1,000 to 1,100 lbs., \$5.25@5.65; light butcher steers \$4.75@5.10; best fat cows, \$4.50@5; fair to good do., \$3.50@4; common to medium do., \$2.25@2.75; trimmers, \$1.50@2; best fat heifers, \$5.25@5.75; fair to good do., \$3.75@4.25; good fat heifers, \$4.50@5.25; stock heifers, \$3.25@3.50; best feeding steers, dehorned, \$4.75@5; common do., \$3.75@4; stockers, all grades, \$3.25@3.50; prime export bulls, \$5@5.25; best butcher bulls, \$4.25@4.75; bologna bulls, \$3.25@4; stock bulls, \$3@3.75; best milkers and springers, \$5@6; common to good do., \$2.50@3.5.

Our hog market was in an unsatisfactory condition today; the bulk of the choice quality mixed and medium weights selling at \$6.20; a few selected decks running to the heavier weights at \$6.25, and a very few fancy selected at \$6.30, while the choice quality yorkers ranged from \$6.15@6.20, and a good many very good kind of yorkers on down to 6¢ per lb. Light yorkers ranged from \$5.70@5.90, according to weight and quality, and the good quality pigs from \$5.50@5.60; the bulk of the good quality rough sows went at 5½¢. An oversupply is responsible for this decline today, and we think our market should react a little in the next few days. Late trade ruled fairly active at the prices, and the hogs were fairly well cleaned up except the late arrivals.

The sheep and lamb market was slow today; most of the choice lambs sold at \$5.75; few at \$5.80@5.85; wethers at \$3.50@3.75. There are a good many unsold market closing dull. Don't look for much improvement the balance of the week unless the runs are light Friday.

We quote: Best spring lambs, \$5.75@5.80; cull to common do., \$4.50@5; wethers, \$3.50@3.75; bucks, \$2.50@2.75; yearlings, \$3.75@4; handy ewes, \$3@3.25; heavy do., \$3@3.25; cull sheep, \$1.50@2; veals, choice to extra, \$9@9.25; fair to good do., \$8@9; heavy calves, \$4@5.

## Chicago.

November 6, 1911.

Received today ..... 35,000 28,000 52,000  
Same day last year. 39,083 23,701 48,565  
Received last week. 58,675 141,877 176,596  
Same week last year. 81,710 105,445 152,961

Last week's good advance in prices of cattle resulted in greatly increased receipts today, the run including only about 4,000 western range cattle. Choice beefs were in comparatively small supply, and buyers paid steady prices, there being a good demand, and some fat steers sold at \$9, but they were not as prime as those sold last Wednesday at \$9.10 and \$9.15. Common and medium cattle, including butcher stock, as well as steers, moved off slowly at reductions of 10@15¢.

Hogs were in limited supply today and sold actively at advances of 5@10¢, the top being \$6.55. Inferior to prime light hogs weighing 135 to 195 lbs. went at \$5.70@6.35, and choice hogs weighing around 245 to 295 lbs. sold highest, stags going at \$6.35@6.75 and boars at \$2.75@2.25. Mixed lots of pigs weighing 110 lbs. and under sold at \$4@4.90 and selected pigs weighing 100 to 130 lbs. at \$4.95@5.40. Owing to the large receipts of pigs last week, the average weight of the hogs and pigs declined to 203 lbs.

Sheep were about steady today, and an exceptionally prime consignment of fed yearlings that averaged about 96 lbs., lambing about 200 head, brought \$4.75. Lambs on the mutton order were off 25¢ or more, with a \$6 top, but feeders were active and unchanged.

Cattle got such a blow week before last, when \$5.739 head were received, that owners shipped in stock far less freely last week, preferring to wait for recoveries from the general slump in prices. This resulted in bringing about the desired reaction, and prices had several lively advances for the general run of the offerings, the poorest showing the least rise. Prime beefs made a new high record for the year Monday by

bringing \$9, while there were several sales Wednesday at that figure and sales also at \$9.10@9.15. No good steers have been selling below \$7.50, with choice lots bringing \$8.60 and upward, while medium to good cattle sold around \$6.25@7.45 and inferior to fair steers at \$4.40@4.20. Prime yearlings sold up to \$8.60, and butchering lots of cows and heifers brought \$3.30@6.90, a few going higher, and there was a sale of two head of fancy 1,325-lb. heifers at \$8. Cutters sold at \$2.80@3.25; canners at \$1.75@2.75 and bulls at \$2.75@6. Calves brought \$2.50@9 per 100 lbs., while milkers and springers had a fair sale at \$30@75 each, the demand being smaller than a short time ago. Western range cattle had their share in the upward movement, being offered much less freely, and there was a good demand, steers going at \$4.25@7.50 and cows and heifers at \$3@5.50. The range shipping season is nearing a close, and the average quality of the receipts is poorer than heretofore. The same holds true of fed cattle, there being a marked lack of prime beefs, and they are expected to go still higher. It seems a good time to feed well-bred cattle, and a good many have been going to the country, although prices advanced last week sharply for good lots. Stockers sold at \$3@5.20 and feeders at \$4.40@6, with very few stockers or feeders selling near top figures. Ohio has taken lots of good stockers, as well as medium to good feeders. The greater part of the cattle of all kinds have recovered their recent decline.

Hogs have shown a weak undertone much of the time recently, with liberal receipts, while the eastern shipping demand was variable, being on a limited scale on several days. The percentage of little and medium weight pigs marketed has continued very large, and buyers have refused to take them except at big concessions from prices paid for matured hogs. The pigs of extremely light weight were mostly sick or had been exposed to sickness, but many of the heavier weights were perfectly healthy and marketed simply to save feed bills. Shippers led off in paying advances for hogs whenever prices were moving up, and local packers invariably held back and tried their best to force prices lower for packing hogs. Choice hogs weighing between 210 and 300 lbs. were the highest sellers, and the spread in hog prices was the widest of the season. The best hogs sold Saturday 10¢ lower than a week ago.

Sheep and lambs were weak early last week under a liberal Monday run, close to 54,000 head sending the best lambs off to \$5.90 and thin lots suffering a considerable break, but later in the week lambs advanced materially under much smaller offerings. On account of much reduced receipts of range lambs, there was a much larger call for fat natives, and the demand for range feeder stock was lively at well maintained prices. The range shipping season is nearing its close and already the market has been receiving the promised strengthening in prices. Everything promises high prices during the coming winter season for fat stock, and farmers who understand making prime lambs for the market should make good money. The close of the week showed sheep and yearlings selling at about the prices of a week earlier, but lambs were much higher, bringing \$3.50@6.25, feeder lambs bringing \$3.25@5. Ewes sold at \$1.75@3.35; wethers at \$3.60@3.90; bucks at \$2@2.75 and yearlings at \$3.75@4.40. Breeding ewes sold at \$3.10@4, and feeders paid \$3.75@4.15 for yearlings and \$3.25@3.60 for wethers.

Horses have been meeting with an extremely small local and eastern shipping demand for a week past, and common and medium animals were apt to sell at lower prices, while all that kept better horses from weakening in value was their scarcity. Light weight drafters are selling at \$175@220 per head, with a better and heavier class salable at \$225@325, while wagon horses are worth usually \$160@200. Inferior to medium horses go at \$65@145.

## LIVE STOCK NOTES.

Thomas Cross, who for a period of seven years, was head of the cattle-buying force of the National Packing Co. at Chicago, and for nearly a year has been beef steer salesman for Clay, Robinson & Co., also of Chicago, predicts that good to prime cattle are sure to bring prices for months to come that will cause good cheer to pervade the camps of feeders, unless some unforeseen adverse condition arises. He believes that the time is at hand to stock up with good quality fleshy feeders, as the best are now available around \$3 per cwt. below tops for prime fat beefs.

In Missouri stockmen are finding their supplies of corn reduced by the long period of wet weather, and part of it is unfit even for feeding on the farm. T. C. Wilson, secretary of the Missouri Board of Agriculture, keeps in close touch with agricultural conditions all over the state, having more than 700 correspondents, nearly all of whom report much rotting corn and damage by worms. Mr. Wilson says summer drouth was not to blame for the reduction of the corn crop of the state from the average of 32.4 bu. an acre last year to an estimated yield this year of 29 bu., the damage having been done by seven weeks of continuous rainy weather. The late rains have so rotted the corn that two to three bushels an acre will be ruined.

Wellington Leavitt, of Swift & Co., at Chicago, a cattleman of keen judgment of values and conditions, says the time is coming, and is not far off, when the northwest will furnish the country with fat beef cattle the year around. "They have the breeding stock up there, and each year they are producing more feed. We need not fear that the northwest is going out of the cattle-raising business."



## 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.

November 9, 1911.

## Cattle.

Receipts, 1,499. Canners 10c lower; butcher cows fully 25c lower; all other grades 10c to 15c lower.

We quote: Extra dry-fed steers and heifers, \$5.50; steers and heifers, 1,000 to 1,200, \$5.50; do., 800 to 1,000, \$4.50; grass steers and heifers that are fat, 500 to 700, \$3.50; choice fat cows, \$4; good fat cows, \$3.50; common cows, \$2.50; canners, \$1.25; choice heavy bulls, \$4; fair to good hogs, \$3.50; stock bulls, \$2.75; choice feeding steers, 800 to 1,000, \$4.50; fair do., 800 to 1,000, \$4.50; choice stockers, 500 to 700, \$3.50; stock heifers, \$2.50; 3.25; milkers, large, young, medium age, \$4.00; common milkers, \$3.00.

Bishop, B. & H. sold Sullivan P. Co. 3 cows av 928 at \$2.50, 1 do weighing 900 at \$3.50, 1 bull weighing 1,080 at \$3.50, 3 canners av 913 at \$2.50; to Schlicher 4 cows av 970 at \$2.40; to Fromm 2 do av 730 at \$3.00; to Schumaker 8 steers av 844 at \$4; to Heinrich 11 do av 1,080 at \$5.40; to Mich. B. Co. 25 do av 1,000 at \$5.25, 14 do av 916 at \$5, 15 cows av 958 at \$3.25, 2 do av 1,000 at \$2.50; to Hammond, S. & Co. 2 canners av 940 at \$2.50, 1 do weighing 750 at \$2, 5 butchers av 784 at \$3, 2 do av 955 at \$4.50, 18 do av 600 at \$3.25, 15 cows av 900 at \$2.60, 2 do av 940 at \$2.25; to Fromm 5 butchers av 630 at \$3.10; to Goose 4 do av 970 at \$3, 6 do av 640 at \$2.60; to Sullivan P. Co. 5 cows av 954 at \$2.75, 1 do weighing 1,050 at \$3.75; to Heinrich 7 butchers av 626 at \$4, 4 do av 830 at \$5; to Schumaker 4 feeders av 925 at \$4.75; to Sullivan P. Co. 2 steers av 1,150 at \$3.50, 2 bulls av 1,100 at \$3.50, 3 canners av 970 at \$2.50; to Hammond, S. & Co. 6 butchers av 583 at \$3.50, 5 do av 940 at \$3, 1 bull weighing 1,000 at \$2.50; to Newton B. Co. 10 butchers av 879 at \$4.10, 1 bull weighing 1,130 at \$4.10; to Fromm 14 butchers av 543 at \$2.10; to Hammond, S. & Co. 1 cow weighing 1,040 at \$2.50, 2 do av 1,000 at \$3, 2 do av 710 at \$1.50, 1 bull weighing 1,320 at \$4, 1 do weighing 820 at \$3.50; to Sullivan P. Co. 12 steers av 972 at \$5.50; to Mason 1 cow weighing 1,080 at \$3.25; to Bresnahan 13 cows av 880 at \$2.35; to Lachuli 1 steer weighing 770 at \$1.25, 4 do av 900 at \$1.25; to Bresnahan 4 canners av 950 at \$2.40, 3 do av 800 at \$2.25; to Goose 13 cows av 777 at \$3.20; to Schlicher 21 butchers av 793 at \$3.35.

Spicer & R. sold Bresnahan, Jr., 9 stockers av 555 at \$3, 20 do av 691 at \$3.25, 10 do av 530 at \$3, 3 do av 453 at \$2.50; to Hammond, S. & Co. 1 cow weighing 730 at \$2.25, 3 do av 1,033 at \$3, 15 butchers av 515 at \$2.90, 1 bull weighing 1,150 at \$3.50, 1 do weighing 1,680 at \$4.25, 1 cow weighing 960 at \$3.25, 4 do av 947 at \$2.25, 4 do av 785 at \$2.75, 1 bull weighing 1,070 at \$3.75, 1 cow weighing 980 at \$2.25, 1 do weighing 930 at \$2.50, 3 canners av 813 at \$2.25; to Kamman B. Co. 30 butchers av 836 at \$4.40; to Sullivan P. Co. 2 canners av 865 at \$2.25; to Ratkowski 2 cows av 1,040 at \$3.40; to Watt 6 stockers av 611 at \$3.40.

Bohm sold Schumaker 3 stockers av 877 at \$3.80, 1 steer weighing 1,130 at \$5. Bohm sold Mich. B. Co. 1 bull weighing 1,300 at \$3.85. Haley & M. sold Kamman 34 butchers av 790 at \$4.20, 28 do av 575 at \$3.35; to Breitenbeck 4 cows av 980 at \$3, 8 do av 952 at \$3.15; to Regan 13 butchers av 536 at \$3.05; to Applebaum 2 cows av 1,100 at \$3, 4 butchers av 717 at \$3.70; to Ratkowski 3 cows av 890 at \$3.25; to Heinrich 11 butchers av 863 at \$4.30; to Sullivan P. Co. 1 bull weighing 870 at \$3.25, 2 cows av 885 at \$2.25, 5 do av 980 at \$2.60, 2 canners av 890 at \$2.25; to Mich. B. Co. 2 bulls av 1,260 at \$3.75, 21 butchers av 803 at \$3.90.

Roe Com. Co. sold Sullivan P. Co. 3 canners av 887 at \$2.50, 3 do av 850 at \$2.50, 1 bull weighing 1,080 at \$3.75; to Newton B. Co. 2 heifers av 565 at \$3.50; to Goose 3 butchers av 430 at \$2.

Receipts, 519. Market 25c lower than last Thursday. Best, \$8.50; others, \$4.75; milk cows and springers dull, \$5 head lower.

Spicer & R. sold Sullivan P. Co. 25 av 145 at \$7.25, 2 av 140 at \$8, 5 av 125 at \$7.

Haley & M. sold Mich. B. Co. 9 av 150 at \$7.50, 1 weighing 250 at \$6.

Bohm sold Friedman 10 av 150 at \$8, 2 av 115 at \$6.

Youngs sold Mich. B. Co. 21 av 150 at \$8.

Bishop, B. & H. sold Parker, W. & Co. 28 av 150 at \$8, 6 av 125 at \$7.75, 6 av 155 at \$8, 1 weighing 110 at \$6, 1 weighing 180 at \$8.50, 3 av 150 at \$8.50, 2 av 135 at \$5, 2 av 145 at \$8.50, 3 av 150 at \$8; to Hammond, S. & Co. 1 weighing 140 at \$8.50, 1 weighing 240 at \$6, 2 av 135 at \$7, 2 av 140 at \$8, 3 av 145 at \$8, 7 av 155 at \$8.50, 11 av 147 at \$8; to Mich. B. Co. 9 av 145 at \$8.25.

Receipts, 6,977. Market 10c to 15c lower than last Thursday. Best lambs, \$5.25; fair to good lambs, \$4.50; light to common lambs, \$2.50; choice and common, \$1.25.

Spicer & R. sold Sullivan P. Co. 59 lambs av 60 at \$4, 36 do av \$2 at \$4; to Parker, W. & Co. 5 sheep av 70 at \$1.34

do av 90 at \$2.40; to Mich. B. Co. 35 lambs av 60 at \$4.35; to Hammond, S. & Co. 21 do av 70 at \$5.

Roe Com. Co. sold Sullivan P. Co. 23 lambs av 47 at \$3; to Nagle P. Co. 111 do av 70 at \$4.50, 15 do av 68 at \$4, 61 do av 53 at \$5; to Hammond, S. & Co. 15 sheep av 50 at \$1.50, 77 do av 120 at \$2.75.

Johnson sold Nagle P. Co. 16 sheep av 50 at \$3, 146 lambs av 70 at \$5.

Barnard sold same 163 lambs av 80 at \$1.75, 16 do av 57 at \$3.50.

Haley & M. sold Hammond, S. & Co. 20 sheep av 80 at \$2; to Nagle P. Co. 10 sheep av 120 at \$3, 109 lambs av 77 at \$5.10; to Mich. B. Co. 25 do av 75 at \$1.75, 9 sheep av 110 at \$2.50.

Barnard sold Sullivan P. Co. 29 sheep av 125 at \$2.35.

Bishop, B. & H. sold Sullivan P. Co. 25 sheep av 110 at \$2.75, 2 do av 100 at \$1.50; to Mich. B. Co. 8 lambs av 50 at \$4.50, 95 do av 75 at \$5.15, 61 sheep av 105 at \$2.75; to Nagle P. Co. 208 lambs av 57 at \$4, 39 do av 75 at \$5, 123 do av 70 at \$5, 65 do av 75 at \$5, 66 do av 73 at \$5, 269 do av 74 at \$5.10, 65 sheep av 110 at \$2.75; to Hammond, S. & Co. 6 do av 120 at \$2, 37 do av 115 at \$2, 26 do av 116 at \$1.75, 27 do av 125 at \$2.75, 6 do av 60 at \$1.50, 12 do av 110 at \$2.50; to Sullivan P. Co. 57 lambs av 45 at \$2.50, 11 sheep av 95 at \$1; to Parker, W. & Co. 39 sheep av 80 at \$2, 4 do av 100 at \$2, 37 lambs av 70 at \$5; to Swift & Co. 30 do av 70 at \$5.15, 13 do av 75 at \$5.25, 100 do av 76 at \$5.25, 35 sheep av 115 at \$2.10, 10 lambs av 71 at \$5.20; to Fitzpatrick Bros. 54 mixed av 42 at \$3.50, 69 sheep av 80 at \$2.50, 23 do av 100 at \$2.75, 10 lambs av 96 at \$3.50, 11 sheep av 120 at \$3, 67 do av 90 at \$2.10, 132 lambs av 73 at \$4.80, 53 do av 70 at \$3.50; to Eschrich 34 do av 50 at \$3.50; to Hammond, S. & Co. 32 do av 70 at \$5; to Eschrich 26 do av 55 at \$3.50.

Receipts, 6,902. Market steady to 5c lower than last Thursday.

Range of prices: Light to good butchers, \$6.15; pigs, \$5.25; light porkers, \$5.80; hogs, \$5.25; one-third off.

Bishop, B. & H. sold Hammond, S. & Co. 920 av 290 at \$6.25, 2,015 av 180 at \$6.20, 345 av 140 at \$3, 1,010 av 170 at \$6.15, 525 av 160 at \$6.10.

Spicer & R. sold Parker, W. & Co. 25 av 200 at \$6.25, 750 av 180 at \$6.20.

Haley & M. sold same 250 av 200 at \$6.25, 480 av 180 at \$6.20, 170 av 160 at \$6.15.

Roe Com. Co. sold Sullivan P. Co. 180 av 200 at \$6.25, 525 av 180 at \$6.20, 86 av 180 at \$6.10.

Bishop, B. & H. sold same 150 av 170 at \$6.20, 125 av 170 at \$6.15.

## Friday's Market.

November 8, 1911.

## Cattle.

Receipts this week, 1,694; last week, 1,879. Market steady at Thursday's prices. We quote: Best steers and heifers, \$5.50; steers and heifers, 1,000 to 1,200, \$4.75; do., 800 to 1,000, \$4.75; steers and heifers that are fat, 500 to 700, \$4.50; choice fat cows, \$4.45; good fat cows, \$3.50; common cows, \$2.50; canners, \$1.75; choice heavy bulls, \$4.45; fair to good hogs, \$3.50; stock bulls, \$2.50; choice feeding steers, 800 to 1,000, \$4.50; fair feeding steers, 800 to 1,000, \$3.75; choice stockers, 500 to 700, \$3.50; stock heifers, \$3.35; milkers, large, young, medium age, \$4.00; common milkers, \$2.50.

Spicer & R. sold Bresnahan, Jr., 9 stockers av 555 at \$3, 20 do av 691 at \$3.25, 10 do av 530 at \$3, 3 do av 453 at \$2.50; to Hammond, S. & Co. 1 cow weighing 730 at \$2.25, 3 do av 1,033 at \$3, 15 butchers av 515 at \$2.90, 1 bull weighing 1,150 at \$3.50, 1 do weighing 1,680 at \$4.25, 1 cow weighing 960 at \$3.25, 4 do av 947 at \$2.25, 4 do av 785 at \$2.75, 1 bull weighing 1,070 at \$3.75, 1 cow weighing 980 at \$2.25, 1 do weighing 930 at \$2.50, 3 canners av 813 at \$2.25; to Kamman B. Co. 30 butchers av 836 at \$4.40; to Sullivan P. Co. 2 canners av 865 at \$2.25; to Ratkowski 2 cows av 1,040 at \$3.40; to Watt 6 stockers av 611 at \$3.40.

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Youngs sold Mich. B. Co. 21 av 150 at \$8.

Bishop, B. & H. sold Parker, W. & Co. 28 av 150 at \$8, 6 av 125 at \$7.75, 6 av 155 at \$8, 1 weighing 110 at \$6, 1 weighing 180 at \$8.50, 3 av 150 at \$8.50, 2 av 135 at \$5, 2 av 145 at \$8.50, 3 av 150 at \$8; to Hammond, S. & Co. 1 weighing 140 at \$8.50, 1 weighing 240 at \$6, 2 av 135 at \$7, 2 av 140 at \$8, 3 av 145 at \$8, 7 av 155 at \$8.50, 11 av 147 at \$8; to Mich. B. Co. 9 av 145 at \$8.25.

Receipts, 6,977. Market 10c to 15c lower than last Thursday. Best lambs, \$5.25; fair to good lambs, \$4.50; light to common lambs, \$2.50; choice and common, \$1.25.

Spicer & R. sold Sullivan P. Co. 59 lambs av 60 at \$4, 36 do av \$2 at \$4; to Parker, W. & Co. 5 sheep av 70 at \$1.34

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Bishop, B. & H. sold Hammond, S. & Co. 920 av 290 at \$6.25, 2,015 av 180 at \$6.20, 345 av 140 at \$3, 1,010 av 170 at \$6.15, 525 av 160 at \$6.10.

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Bishop, B. & H. sold same 150 av 170 at \$6.20, 125 av 170 at \$6.15.



# Clay Robinson & Company's LIVE STOCK REPORT

## WILL HELP YOU IN YOUR BUSINESS

Mr. F. E. Ertel, Haddam, Kan., was on the market recently and purchased three cars of Feeders through us. While there he took occasion to speak of the "Live Stock Report" as follows:

"I don't know where you first got hold of my name, but the paper arrived at my house one day. I opened it and read one of the articles, a fine one too, advising the immediate purchase of Feeders. I took the hint and went and bought. Everything happened just as predicted in the 'Report.' I decided that a paper like that was just the kind for men like me, and that the firm publishing it was worthy of my patronage. I consider 'The Live Stock Report' the most valuable paper of its kind published in this country."

Above letter speaks for itself. The "Report" is a 16-page weekly ILLUSTRATED market and general live stock paper published by us from Chicago, but covering all the leading markets. Any person who ships one or more cars of live stock per year can have the paper for merely the cost of postage, viz.: 50c per year. We do not solicit nor desire subscriptions from persons who market no live stock, as the paper costs us three times the amount charged. In other words, subscribers receive \$1.50 value for 50c. We guarantee to refund the price upon request of any subscriber who does not find the paper worth to him many times the amount paid. SEND YOUR NAME AND ADDRESS TODAY, WITH 50 CENTS, AND RECEIVE THE PAPER FOR 12 MONTHS.

Address all Subscriptions as follows: Report Dept., CLAY, ROBINSON & CO., Union Stock Yards, CHICAGO.

## CLAY, ROBINSON & CO.

Leading Live Stock Commission Salesmen  
at the Ten Principal Markets



## \$225 an Acre from Potatoes

Early potatoes are one of the best-paying crops raised in Southern Alabama, Western Florida, Tennessee and along the Gulf Coast. Good prices are always obtainable and demand for same beyond the supply. Read what a farmer at Summerdale, Ala., has to say on this crop:

"My yield of saleable potatoes this year, per acre, was 150 bushels, which sold readily at \$1.50 per bushel, this being the first crop on the land. I followed this crop with sweet potatoes and sweet corn and then planted cow peas. I raised three crops on the land in one year, all of which brought good prices."

Sweet potatoes produce big returns and are usually planted after Irish potatoes have been dug. Two to three hundred bushels an acre are produced and bring from 50 cents to \$1.75 per bushel. Let me send you our illustrated booklet and learn what can be done in a country where fertile land can be purchased cheaply and where there are 312 working days a year. Low round-trip fares 1st and 3rd Tuesdays each month.

G. A. PARK, Gen'l. Imm. and Ind'l. Agt., Louisville & Nashville R. R., Room 256 Louisville, Ky.

## Make Your Old Wagon New



Just as strong and as good as ever and more convenient. Write us and let us show you how cheaply we can fit your old running gear with our superb

## Electric Steel Wheels

which put an end to all break-downs. No shrinking or drying apart or tire setting. Makes your wagon a real handy wagon. Our 48-page book shows you why no other wagon wheels in the world equal the famous Electric Steel Wheels. Reading it will save you time, money and horse flesh. It's free. Write for it to-day to

ELECTRIC WHEEL CO., Box 35, Quincy, Ill.

## Sandow \$37<sup>50</sup> 2 1/2 H.P. Stationary Engine—Complete

Gives ample power for all farm uses. Only three moving parts—no cams, no gears, no valves—can't get out of order. Perfect governor—ideal cooling system. Uses kerosene (coal oil), gasoline, alcohol, distillate or gas. Sold on 15 days' trial. YOUR MONEY BACK IF YOU ARE NOT SATISFIED. 5-year ironclad guarantee. Sizes 2 1/2 to 20 H.P., at proportionate prices, in stock, ready to ship. Postal brings full particulars free. Write for proposition on first engine in your locality. (114) Detroit Motor Car Supply Co., Detroit, Mich.

## Johnson Seed Potato Co. Richmond, Me.

Choice Seed Potatoes of strong vitality grown on new land. Active Agents wanted. Catalogue free. Address A. C. Valentine, 109 Whittemore St., Saint John, Mich.

## We Want HAY & STRAW

We get the top price on consignments, make liberal advancements and prompt remittances. Daniel McCaffrey's Sons Co. PITTSBURG, PA. Reference Washington Trust Company, or any bank in city



"Sal-Vet is giving fine results. I lost fewer lambs by 50 per cent this year while feeding Sal-Vet than in either of the two preceding years when it was not fed."

E. J. Downing, St. Charles, Mich.  
From A. A. Wood & Sons, Saline, Mich.  
"We keep Sal-Vet accessible to our

sheep all the time and have found its use very effective in keeping out worms, and the sheep in a generally healthy condition. We have also found it an excellent conditioner and worm cleaner for horses. Our experience is that of many of the best farmers of this locality."

A. A. Wood & Sons.

"I have received great benefit from feeding Sal-Vet. One of my colts voided at least a tablespoonful of worms once or twice a day until I commenced feeding Sal-Vet. Since then I haven't seen a single worm and the colt is as thrifty and sleek as anyone could wish to see."

Scott W. Jackson, Dundee, Mich.

For 3 months I fed my unconditioned animals Sal-Vet. Every animal "rounded" into splendid shape. I hesitated to use medicated feeds, thinking good feeding and care would give best results, but Sal-Vet certainly improved my stock."

W. H. Schantz, of Michigan State Agricultural Society, Hastings, Mich.



# I'll Feed Your Stock 60 Days Before You Pay

## I'll Show You How

- To Make Them Grow Faster
- Thrive Better—Look Better
- Put on Flesh on No More Feed
- GET RID OF THE WORMS
- Save Your Stock Losses

I have done it for thousands of farmers and stockmen—I'm doing it every day—I'll do it for you. All I ask is the privilege of sending you enough Sal-Vet to last your stock 60 days.

I simply want to show you what a remarkable change Sal-Vet will work on **your** sheep, **your** hogs, **your** horses and cattle. I want to show you how it will improve their condition—make them thrive better—look better—put on more flesh on less feed and above all **get**

rid of all stomach and intestinal worms and parasites, which are the biggest drain on your stock profits. After you see the wonderful results Sal-Vet produces, you will be only too glad to pay its small cost and order more.

**Remember, I don't ask a penny of pay in advance.** I prove all my claims first—and if you are not satisfied at the end of sixty days, you are nothing out. You have nothing to risk, but everything to gain by this open, honest, liberal offer.

### What Sal-Vet Is What Sal-Vet Does

Sal-Vet is first a worm destroyer. Second, a conditioner. Sal-Vet is a medicated salt. It contains several medicinal elements which promptly kill and expel stomach and intestinal worms and parasites, and in the meantime starts and puts the stomach and digestive organs in a healthy, vigorous condition. It **sharpens** the appetite—it **tones** the blood—it puts **snap** in the eye—**life** and **vitality** into the whole system. It **aids digestion**—helps the animal to derive **more good** from its food. You will be surprised at the change it will make.

### No Drenching No Handling No Trouble They Doctor Themselves

It is easy to feed Sal-Vet—you feed it just as you do salt. Put it where all of your stock—sheep, lambs, hogs, horses and cattle, can get at it daily and they will doctor themselves. I could tell you in this advertisement **how** it will keep your sheep and lambs from dying—**how** it will prevent disease killing off your hogs—**how** it will make your horses and cattle look better, feel better, put on flesh faster—**how** it will save you money in saving feed—**how** it will make you more profit by making your stock more valuable—**BUT** you might still doubt my word. You won't doubt what your own eyes see.

That is why I want to prove all this in your own barnyard, on your own farm animals and before you pay me one cent. You cannot afford not to accept this open-handed offer.



The Great Worm Destroyer and Conditioner.

### Proof That Proves From Actual Users

Below are a few letters from prominent stockmen, who are using Sal-Vet. Their word is based on their own **actual experience**. It is **proof** that is positive, yet I do not ask you to even take their word. **I'll prove it for you.**

#### TESTIMONIAL LETTERS

From Dr. C. D. Smead, Editor Veterinary Department, Nat'l Stockman and Farmer

"I desire to say of 'Sal-Vet' that I have given it a good trial and passed some of it along to my friends. I find it fills the bill, and do not hesitate to recommend its use to all live stock owners as being a most worthy preparation. In my judgment if farmers were to depend upon it and keep it before their sheep and other stock all the time, the intestinal worm problem would be solved."

The trouble with many farmers is, they seldom follow the directions given them with preparations of this kind and, furthermore, they are unreasonable in expecting to see immediate results when they do use a salt. I am glad to make this statement for you regarding the value of 'Sal-Vet', as I believe in giving credit where credit is due."

(Signed) C. D. SMEAD, V. S.

### Send No Money — Simply Fill out and Mail the Coupon

If you could sit at my desk for just one day—open and read the letters I get, voicing the gratitude—the appreciation of hundreds of stockmen and farmers—who have taken advantage of my liberal offer to "**prove**" the merits of Sal-Vet, you would not delay a minute in sending me the coupon requesting enough Sal-Vet to feed your stock 60 days, especially when I do it **before you pay**. Now fill in the coupon—mail it at once—it's your chance to make and save a great many dollars. You pay the small freight charge when it arrives and at the end of 60 days if not satisfactory I cancel the charge for the Sal-Vet sent to you.

Sidney R. Feil, President

The S. R. FEIL COMPANY, Dept. M.F. Cleveland, Ohio

Never sold in bulk, except in Sal-Vet packages. No orders filled for less than 40 lbs.

Prices: 40 lbs., \$2.25; 100 lbs., \$5.00; 200 lbs., \$9.00; 300 lbs., \$13.00; 500 lbs., \$21.12.

Sidney R. Feil, President The S. R. Feil Company, Cleveland, Ohio

Ship me enough Sal-Vet to last my stock 60 days. I will report results in 60 days and will then pay for it. If it does what you claim, I'll pay you.

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