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The Silo and Food Conservation

FOR the first time in the history of our country, food conservation has become such an important problem as to necessitate the active attention of the federal government, and the formulation of plans for national food control should the present emergency continue or become more aggravated. Ordinarily, in the consideration of this vital subject of food conservation, the public mind is first directed toward food materials which are factors in human consumption. In its broader aspect, however, the conservation of grain and forage crops which enter into the production of live stock and dairy products is almost, if not quite, as important in the present emergency as is the conservation of the more primary human foods.

Because of its great importance in this connection, aside from furnishing a very considerable proportion of foods directly used in the human dietary, the proper conservation of the corn crop is a matter of vital importance to the country in the present emergency. With the price of corn closely approaching the price of wheat in the grain markets of the country, this fact becomes most apparent, particularly when considered in connection with the lateness of the season and the backward condition of the corn crop, not alone in Michigan, but in many other corn producing sections of the country. For this reason every farmer in the state who grows corn—as practically every farmer in the important agricultural counties does—should very carefully consider the silo as a possible factor in the conservation of this year's exceedingly late corn crop.

Silos Needed on Most Farms.

The value of corn silage as a feed for dairy cows has been so well demonstrated and so thoroughly proven by the practical dairymen of every community of the state that the farm on which dairy products are produced in any volume which does not include a silo in its complement of buildings is rare indeed. Scientific demonstration and practical experience has also so well demonstrated the value of silage as a food for fattening animals, including both cattle and sheep, as well as for breeding animals and young stock, that silos have become common upon stock farms devoted to lines of production other than dairying. There still remain, however, a very considerable percentage of farms where sufficient live stock is maintained to make a silo a profitable investment where this equipment has not yet been provided, and it is particularly to direct the attention of this considerable class of farmers to the possibility of the silo as a factor in food conservation that this article is written.

When all grain concentrates are so exceedingly high in price as is the case at the present time, the argument will at once suggest itself to this class of farmers that it would be more profitable to harvest the corn as a

grain crop than to store it in the silo for stock feeding purposes. For the man who is engaged primarily in pork production or who might be termed a speculative feeder, buying whatever class of feeding animals may, in his judgment, promise the best chance of profit, this argument may be tenable, providing his corn crop is sufficiently far advanced to afford a reasonable degree of certainty that it will mature sound grain within the usual limitations of the growing season for this crop.

Does the Argument Apply?

Even under these circumstances it is extremely probable that the silo would still be a valuable aid in the

which purpose it will have a very much greater value when it is so conserved.

Even for the farmer who is so fortunate as to have the promise of a corn crop which will mature a good yield of sound grain this year, there is much profitable food for thought in the available experimental data relating to the conservation of the corn crop through the use of the silo as compared with utilizing it in any other manner. The first thought of the man who has not had experience in the feeding of ensilage, but contemplates the utilization of his corn crop for meat production, is that it cannot but be wasteful to put a valuable crop of

lots shock corn and mixed hay, and silage and mixed hay with an allowance of two pounds of oats per head for each lot for a period of eighty-eight days. The silage-fed steers gained a total of 3,693 pounds as compared with 3,133 pounds for the steers fed on shock corn. During this period the silage-fed lot consumed 28.8 tons of corn silage grown on 3.7 acres. In the same time the lot fed on shock corn consumed 14.6 tons of shock corn grown on 5.3 acres in the same field. It thus required forty-three per cent greater area of corn to feed this lot than was required for the silage-fed lot. While the silage-fed steers made better gains, the pork produced by the hogs following them was enough less so as to make the receipts from the two lots about even, but measured by the area of land required, it was estimated from this experiment that corn silage was fully thirty per cent ahead of shock corn from the same field in feeding value.

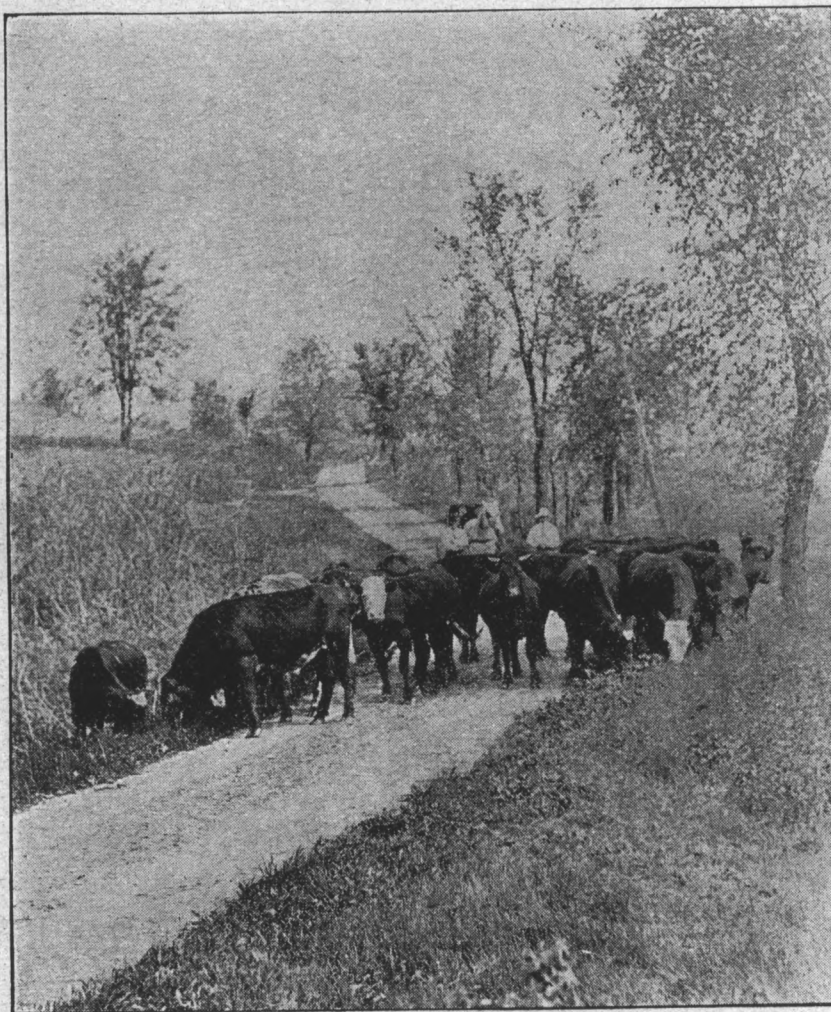
In a 130-day experiment at the Missouri station in feeding two-year-old steers on silage with clover hay, shelled corn and linseed meal, as compared with shock corn, the silage-fed steers required less concentrates for one hundred pounds of gain, made cheaper gains and sold for ten cents per hundred pounds more at the end of the trial. Including returns from pigs following the steers, a ton of dry matter in silage was estimated to have over fifty per cent higher feeding value than a ton of dry matter in shock corn in this trial.

Grain Put in the Silo Not Lost.

Some years ago the belief was quite general that it paid to remove the ears from the corn before same was cut for the silo; this theory was discredited by the Wisconsin and Vermont stations. Hill, of the Vermont station, found that one acre of green corn, including ears, reduced to silage was equal in feeding value to 1.26 acres of silage from stalks stripped of their ears and fed with the meal made by grinding the dry corn which was produced on the stalks. Almost any amount of experiment station data could be cited to show the profit in the use of silage in beef production as compared with the feeding of cattle without such succulent feed, did space permit. Without a single notable exception, the argument is on the side of the use of silage in beef production, unless some other cheap succulent feed is available.

The more limited use of silage has been found just as profitable in sheep and lamb feeding and in the maintenance of breeding ewes, while for growing animals, both cattle and sheep, it is by far the most economic roughage ration, requiring very little supplementary feed for the making of profitable gains. With this proof that it is profitable to make even a high-yielding corn crop into ensilage for

(Continued on page 74).



Ensilage is a Valuable Feed for Beef Cattle as well as for Dairy Cows.

conservation of the corn crop, but for the very large percentage of farmers who from present indications have not the assurance of maturing a good corn crop, there is no room for argument regarding the profitable conservation of this important crop through the use of the silo. Without question, every farmer who has a corn crop which will give a fair tonnage of ensilage, but which does not promise to mature a good crop of sound grain will find it profitable to build a silo for the conservation of this valuable feed in the present emergency, since every farmer should utilize his corn crop for feeding some kind of live stock, for

high-priced grain into the silo in an immature condition. Of late years a good many cattle feeders of this school have adopted the feeding of shock corn as an economic method of beef production, believing that the corn is better utilized this way than would be possible by putting a good crop of corn into the silo, ears and all.

Silage vs. Shock Corn.

Fortunately, there is experimental data upon this subject which is most enlightening. Prof. Mumford, of the Illinois Experiment Station, and formerly of Michigan, divided fifty eight-months-old beef calves into two even lots of twenty-five each, and fed these

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CURRENT COMMENT.

The Milk Producers' Problem.

In no line of agricultural production have the problems involved been so complex or difficult of solution as have those of the milk producer during the disturbed period since the outbreak of the war in Europe. Due in no small measure to the general affiliation of milk producers with the Michigan Milk Producers' Association, organized last year, and the collective bargaining for the sale of their product through this medium or its various local branches, the immediate problem in many sections was solved in a manner which under then prevailing conditions would at least cover the cost of production and under favorable conditions pay a living profit to the producers of this food necessity.

But owing to unforeseen conditions and the unprecedented advances in the price of feeding stuffs of all kinds, the prospect of a reasonable profit on the milk produced quickly vanished, and the problem of the milk producer has become more acute than ever before. As a result a great many dairymen have sacrificed their dairy herds in order to engage in the production of high-priced staple products in the present emergency, and thus secure a profit which was impossible in the production of milk.

Competent statisticians have estimated that at the present time the country is six million dairy cows short of the number required to produce all the milk needed for consumption and for the manufacture of other staple food products to insure a normal supply for all consumers. But in the face of this great shortage of dairy products, more dairy farmers are continually becoming discouraged and sacrificing their herds because the exceptional demand for meat products enables them to get out of a business in which they are continually losing money under present conditions, with a comparatively small sacrifice of invested capital.

To the economic student this condition of affairs is a deplorable one from every standpoint, and every public-spirited citizen whose attention is directed to this problem will at once

conclude that the sooner this continued sacrifice of needed dairy cattle can be stopped, the better it will be for the country at large. Even under present conditions, the supply of market milk and cream in consuming centers becomes short as soon as the season of flush production is over, and with a further depletion in the number of dairy cattle this shortage will be greatly aggravated and an adequate supply will not be available at any price.

There is obviously but one method of forestalling this undesirable condition, and that is for the milk producers, through their organization, to insist upon a price for their product which will cover the cost of production and give them a living profit under present abnormal conditions. This is a business proposition which must be met in a businesslike way. In all cases where producers are under contract for a given period, they must fulfill these contracts in good faith as the first essential of sound business policy. In cases where no contracts exist, as for instance in the districts where dairymen contribute to the condensary supply, early action should be taken for the establishment of a price which will be compensatory to the producer.

Owing to the demand for the condensed milk product for military use, the price of this product is unusually high, and the manufacturers can well afford to pay milk producers a compensatory price. It is not, however, a trait of human nature to pay more for any product than is necessary to secure it in the quantities desired. The milk producers must take the initiative in bringing about different conditions. The officers of the milk producers' association have called a meeting for the consideration of the problems involved, as announced in another column of this issue. The local organizations in the territory interested should all be strongly represented at this meeting for the careful consideration of the problems involved, and for the collective bargaining of their product at a price which will pay the cost of production plus a reasonable profit.

"Such a businesslike course is certain to bring better results for the farmers who specialize in milk production than the sale of their cows and the sacrifice of their business. This course is also the more patriotic, for the reason that the country needs the product and the dairy cows as a future asset.

What attitude the country's food administration may take with regard to this problem cannot at this time be foretold, but of all interested parties in the dairyman should least fear as to the governmental policy, since an adequate supply of dairy products is quite as essential to the future welfare of the country as is an ample supply of staple food stuffs.

The calling of a meeting of this organization for the consideration of this vital proposition of saving the dairy cows is a wise move at this time, and the local organizations of milk producers should send their best men to this meeting, to the end that the problems involved may be wisely and temperately considered, with a view to arriving at a fair solution which will be at once businesslike and patriotic from the viewpoint of the milk producers of Michigan.

The machinery created by the Federal Farm Loans, created by the federal rural credits act, so called, is now in operation to provide long time loans for the farmers of the United States. Up to July 1, 230 farm loan associations had been chartered by the Federal Farm Loan Board. Through these organizations approximately \$12,000,000 of first mortgage loans were made to the members. The average amount of the total loans made through these organizations was slightly in excess of \$50,000. The average number of farmers in each association was approximately

eighteen, making the average size of the loans thus far made about \$2,500. Most of the loans made run for thirty-six years, with provision for semi-annual payments on the amortization plan under which six per cent annual payments made by the borrower will retire both principal and interest at five per cent within the period for which the loan is made.

A supplementary report made July 18 shows a total of 432 farm loan associations chartered, and a total of loans amounting to \$20,699,337.45. As might be expected by those who are familiar with financial conditions in different sections of the country, the bulk of the loans so far made have been to farmers in the middle, western and southwestern states, with Texas and Oklahoma leading. Michigan farmers absorbed but \$200,900 of the total loans.

This is a form of credit peculiarly adapted to the development and improvement of a new agricultural section. Michigan farmers who are engaged in the development of cut-over lands of our northern counties, or those who could use additional capital to advantage in draining or improving older lands, or in stocking lands already improved would do well to carefully study this plan of financing such projects on a community scale.

STATE MILK MEETING CALLED AT M. A. C.

A delegate meeting of the patrons of the milk condenseries of Michigan is called at the Michigan Agricultural College, Tuesday, August 21, 1917, at 10:00 a. m., for the purpose of considering questions that are vital to the dairy industry of the state.

Do not lay this aside thinking that it is not important, it is important to you. The result of the labor of a certain portion of your life depends upon this very meeting. Never in the history of the condensed milk business in the United States has there been such profits made upon condensed or evaporated milk as now, and most of the condensed milk companies have tremendous contracts on hand.

The price of everything entering into the production of milk is higher than ever before, with prospects of a still farther raise in price. Reliable labor is scarce and unreasonably high. Very few cows in Michigan can be profitable in the near future on the present price basis. The investigation made by the Cleveland Chamber of Commerce in 1910 reveals the fact that milk selling by the producer at fifteen cents per gallon entailed a loss of \$30.50 per cow per year, this loss on the 75,876 cows supplying milk to Cleveland made an aggregate of \$2,100,000, that the farmers of that section paid for the privilege of selling milk.

The Wicks legislative investigation in the state of New York reveals the fact that in New York this industry cannot continue unless price conditions change very materially soon.

The splendid work done by the dairy division of our own Michigan Agricultural College goes to substantiate the evidence already given. It is conceded on all sides that the slaughter of dairy cows is proceeding at a tremendous rate. In 1900 we had eighty-nine head of cattle to every one hundred population, in 1915 we had fifty-eight head of cattle to every one hundred of our population, or a relative loss of thirty-one head in fifteen years. What does this all say? It says, that on account of the low price paid for dairy products the industry is in jeopardy. Now what is to be done, and who is to blame for this low price for this, the best food product available to the human family? The answer is, no one but the producer, if he will do concerning the sale of his product as every other business enterprise does, then his product will command a price that equals the cost of production plus a profit.

It is up to you, Mr. Milk Producer, to get a new and broader vision. It is up to you to stand by your neighbor, to stand together, to stand for a reasonable price for your product that will insure the permanence of this business. Don't let this opportunity pass by, get your local milk producers' association to send delegates to Lansing. Each local is entitled to three delegates. Spend some time now on the selling end of your business, that is where the profit is. What shall the price be in the coming months to insure the permanence of this business?

In the warring nations of Europe, excepting England, more than ninety per cent of the children born in the last two years have died for want of milk. The cry of the Belgian and the French mothers should reach the ears of the American sisters and cause them to ask, what will be the fate of American childhood in the near future if this slaughter of dairy cows continues? In the name of your own homes and your own children. In the name of the man who has the terrible responsibility of food conservation in this nation and who is pleading for the saving of the dairy cow in this United States of America. In the name of the great nation we love, I plead with you, bestir yourself now. See that you are represented in this meeting.

This office will render any possible assistance.

R. C. REED,
Field Secretary, Michigan Milk Producers' Association, Howell, Mich.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—The Russian army continues to fall back on the Galician front. The Teutonic allies are throwing heavy columns against the disorganized divisions of Kerenky's forces, compelling the latter to retreat across the boundary line to Russian soil. This advance threatens to bring Bukovina into the hands of the central powers again, and even now Czernowitz, the capital, is seriously threatened by the advancing troops. Some consolation comes from the operations of the Russian and Roumanian armies farther to the south, where consistent ground gaining has been reported from day to day. A large number of towns have been taken, and the Teutonic forces thrown back considerably.—Counter-attacks by the French against the army of the German crown prince on the western front have ended the offensive of the Germans in the Aisne region. Good gains have been made by the French all along the line between Hurtebise and La Bovelie. Several attacks by the Germans in the Verdun sector, notably between hill No. 304 and Avo-court wood, have also been repulsed. At the other end of the western front violent artillery duels make up the program and more than a week the heaviest guns have been working continuously on both sides. This shelling game has extended from the North Sea to Armentieres on the French frontier. No infantry operations are reported in connection therewith. German air-men attempted to bomb Paris late last week. They were able to reach only the suburban section, when they were driven back.

Peace talk continues. Both the Teutonic premiers have shown a disposition to consider terms. The allies in a conference held in Paris last week concluded that the objects for which the entente powers are fighting would be lost if terms were arranged with the present military agents of the central powers. In an address by Secretary of State Lansing he declared it to be his belief that the German people would not cast off the yoke of auto-cracy until the ambitions of the military rulers of Germany are destroyed forever.

Civil war seems imminent in China. The southern provinces are apparently arraying themselves against the northern provinces. Dr. Sun Yat Sen is leading the former forces and is now busy organizing the territory for military purposes.

Cable dispatches indicate famine conditions in Hungary. For instance, butter is said to be quoted at \$5 a pound, while chickens are bringing \$10 each. These reports are considered significant because Hungary has always been looked upon as the storehouse upon which the Austrian armies depended for their provisions.

Reports from England and Wales show that the acreage devoted to wheat, barley, oats and potatoes are 247,000 more than the number so used in 1916.

National.

At a mass meeting of miners in the Gogebic range district a vote was taken in favor of going on strike for higher wages. The men expect to walk out early this week. Miners in the Minnesota district are expected to walk out in sympathy with the Michigan men. There is reason to believe that the United States may assume control of the mines in view of the necessity for securing a maximum output for military purposes.

A report by the 120 state banks of deposit and discount under the supervision of the New York banking department show a gain in resources for the period from February 28 to June 20 of nearly \$36,000,000.

Nearly one hundred Michigan men have won rank as commissioned officers at Fort Sheridan, and will probably be sent to France at once.

Rosen--The Spectacular Rye

By J. W. NICOLSON
Extension Specialist, M. A. C.

OF all the valuable pedigreed grains developed by the Michigan Agricultural College, Rosen rye has been the most spectacular in its performance. Red Rock wheat and Worthy and Alexander oats, which are other pedigreed grains, have each shown outstanding superiority over other varieties in their given fields, and while in many cases they have doubled the average yield of the localities in which they have been grown they have not attained the pinnacle reached by Rosen. Rosen rye practically doubles the yield of common rye where conditions are equal.

Any farmer who grows rye, knows that, taking the average production year in and year out, fifteen bushels is about all he can expect and when he harvests twenty bushels per acre he is getting an exceptionally good crop of common rye. But any farmer who has had experience with Rosen rye will agree with me that he is getting a small yield for this variety when his crop doesn't do better than twenty bushels per acre.

There are several thousand acres of Rosen rye in the state this year and the pure variety is going to average close to thirty bushels per acre. A field each in Branch, Jackson and Ingham counties, which have come under the writer's observation, give promise of thirty-five to forty bushels per acre. And this is not at all surprising, for such yields have frequently been obtained in the last five years.

Rye has a bad reputation in some sections of the state, and many farmers declare in fact that they would not sow a kernel of it. It is not the purpose of this article, however, to convince such people that they should grow rye. But the fact remains nevertheless, that there are large areas in the state better adapted to rye than to wheat, and further, the former fits better into the rotations best adapted to some soils, such as the light sandy types. These, especially, should not be permitted to go through the winter without a crop of some kind to prevent washing and the leaching of the soluble plant foods which are lost so readily from these soils. While it is far from the desire of the writer to advocate the late sowing of rye, yet in many cases by sowing Rosen rye after corn, a crop can be kept growing on the land which will save a great waste of plant food and will incidentally give a yield that will pay for its occupation of the land and produce a good crop to seed with the following spring.

Rye Cross Fertilizes Readily.

Rosen rye was first distributed in small amounts in 1912, and without exception wherever the pure variety has been tried it has replaced all others. As with corn, rye cross-fertilizes readily. This is not generally understood and in a majority of cases where Rosen has been obtained in limited amount and sown beside common rye, the results have been bad. While there will probably be no difference in the yield the first year, the effects become plainly apparent during the year following this cross in the improperly filled heads which develop and which are so characteristic of common rye.

Consequently, of the 15,000 acres of so-called Rosen rye in the state, practically not over five per cent is really pure Rosen. This crossed Rosen will undoubtedly be much superior to common rye, but it will not compare very favorably with pure Rosen rye. This matter of crossing in grains not self-fertilized is as far reaching in its effects as cross-breeding in animals. It will generally be admitted that the milk-producing ability of Holstein cattle could not be increased by crossing

them with a typical beef breed. Similarly neither can the high-yielding ability of Rosen rye be improved or maintained by crossing with such a notoriously low producer as common rye.

Under the auspices of the Michigan Crop Improvement Association, inspection of Rosen rye is now being conducted. To pass this inspection the rye must trace to and give the field characteristics typical of this variety. Much of it is falling short of the requirements, but there will be several thousand bushels of pure inspected Rosen rye this year. It should be the duty of persons who have anything to do with these crops to see that every bushel of the pure variety is used for

seed. But even so, there will be nowhere near enough seed to sow the 325,000 acres of rye planted in Michigan last year. But with a variety available of such outstanding ability as Rosen, we should rid the state of common rye and as soon as possible replace crosses with pure strains. Michigan is now the first state in the union in rye production and if her farmers take up the growing of Rosen rye with proper care we will before long have the people of all states coming here for a supply of this seed which is so far superior to anything else available in this kind of grain.

Chief among the reasons why Rosen rye outyields all others are its greater leaf surface, its thicker, sturdier straw, and above and including all, its long, properly fertilized and evenly filled heads, seldom if ever found on common rye.

Grow Rosen rye, but for maximum yield be sure you get seed that is pure.

Bordeaux for Potatoes

By C. W. WAID
State Potato Specialist

BORDEAUX is a combination of copper sulphate (also called blue stone or blue vitriol), lime and water. It is used as a fungicide on a variety of plants in somewhat varying but definite proportions, depending upon the nature of the foliage. It is applied in the form of a spray. The film of material spread over the sprayed foliage prevents the development of such fungous diseases as late blight

water. Mix the slaked lime or one and one-half ounces of hydrated lime in one-half gallon of water. Pour the water containing lime into the water containing copper sulphate, stir thoroughly and the Bordeaux is ready to apply.

If it is desired to use a poison with the Bordeaux add one ounce of arsenate of lead paste or half an ounce of powdered arsenate of lead or one-quarter



A Field of Rosen Rye on the Farm of W. A. Blackmore, in Ingham County.

of potatoes so long as the foliage is kept covered with the fungicide.

How to Make Bordeaux.

Potato growers who make a practice of spraying with Bordeaux and who grow large areas of potatoes annually, usually arrange a set of barrels or tanks on an elevated platform so the Bordeaux can be made to best advantage and with the least possible amount of dipping of the water.

This article is prepared more especially to meet the needs of growers who are inexperienced in the making of Bordeaux and who do not have any special equipment which will aid in its preparation.

When the Bordeaux is to be used on potatoes, it may be made by mixing the materials previously mentioned in the following proportions:

For small quantities: Copper sulphate, one ounce; stone lime, one to one and a half ounces, or hydrated lime, one and one-half ounces; water, one gallon.

For larger quantities: Copper sulphate, four pounds; stone lime, four to five pounds, or hydrated lime, five pounds; water, 50 gallons.

To make a gallon of Bordeaux, dissolve one ounce of copper sulphate in one-half gallon of water. If stone lime is used, slake one to one and one-half ounces by adding a small amount of

ter to one-half ounce of Paris green.

To make a barrel (fifty gallons) of Bordeaux: Dissolve four pounds of copper sulphate in hot water. After it is dissolved pour it into the spray barrel or tank and add enough water to fill it about half full or to make twenty-five gallons.

If stone lime is used, slake four to five pounds in a large pail by adding a small amount of water at first. After it is slaked, add more water and stir to make milk of lime. When hydrated lime is used, it is best to add a small amount of water at first and stir to work it into a creamy condition, then add more water to make the milk of lime. Pour the milk of lime into a half barrel or tub which will hold about twenty-five gallons. Add more water to the lime in the pail, stir and pour off the milk of lime as before. Repeat this operation until nothing but coarse particles are left in the pail and discard them.

Add more water, if necessary, to the milk of lime in the half barrel or tub to make about twenty gallons. Dip the diluted milk of lime into the spray barrel or tank containing the diluted copper sulphate.

If a poison is to be used with the Bordeaux, add any one of the following at this time:

One pound of Paris green; three

pounds of arsenate of lead paste; one and a half pounds of arsenate of lead powder; one quart of arsenite of soda.

After the poison is put in add enough water to make fifty gallons, stir thoroughly and apply at once.

When a number of barrels of Bordeaux are needed for each application, it will facilitate the work to make a stock solution of copper sulphate. This may be done by putting as many gallons of water in a barrel as there are pounds of sulphate to be dissolved. If, for example, six barrels of Bordeaux are needed, use twenty-four gallons of water. Place twenty-four pounds of copper sulphate in a coarse sack such as a gunny sack, and suspend it so that the bottom of the sack is just under water. The sulphate will dissolve in cold water when so suspended over night.

When taking from the stock solution of sulphate to make Bordeaux, use four gallons of the solution for each fifty gallons of Bordeaux. Always stir the solution of sulphate just before removing each batch of the mixture. The stock solution of sulphate may be kept for several days providing the barrel is tightly covered.

When lump lime is used, it is well to make a stock solution by slaking a quantity in a shallow box. After it is slaked, spread it out evenly and cover with water. If enough lime is slaked for six barrels, mark the lime in the box into six equal sized squares and remove one square for each barrel of Bordeaux.

Amount of Bordeaux Needed Per Acre.

The amount of Bordeaux needed per acre varies with the size of the potato vines to be sprayed and the method of applying. Fifty gallons will cover an acre of small plants. Very large plants may need 100 gallons. Seventy-five gallons per acre on an average for each spraying will be ample. The number of sprayings will vary according to the weather. Three may be enough during a season of light rainfall but five is a common number used when conditions favor blight development.

Some things to keep in mind when making Bordeaux and applying it to potatoes.

1. That Bordeaux is a preventative and not a cure. To be effective it must, therefore, be applied before the disease gets a start.

2. That the quantity of lime should always be equal to the quantity of copper sulphate. An excess of lime will do no harm as long as it is not used in sufficient quantity to clog the nozzles.

3. Use only wooden or earthen vessels in which to handle the copper sulphate. This material corrodes tin or iron.

4. Have both the copper sulphate and the lime diluted before they are combined. If they are put together when too strong, they will not stay in suspension.

5. Strain everything which goes into the spray barrel through a copper gauze sieve with forty meshes to the inch, or two or three thicknesses of cheesecloth.

6. Do not use Bordeaux which has stood over night after being prepared. Do not use air-slaked lime when making Bordeaux.

7. Keep the foliage as completely covered as possible after the plants are five or six inches tall until frost or the maturity of the crop.

8. To be most effective Bordeaux should be applied with a pressure of 160 to 200 pounds. This should not, however, discourage growers from using any form of sprayer which may be available.

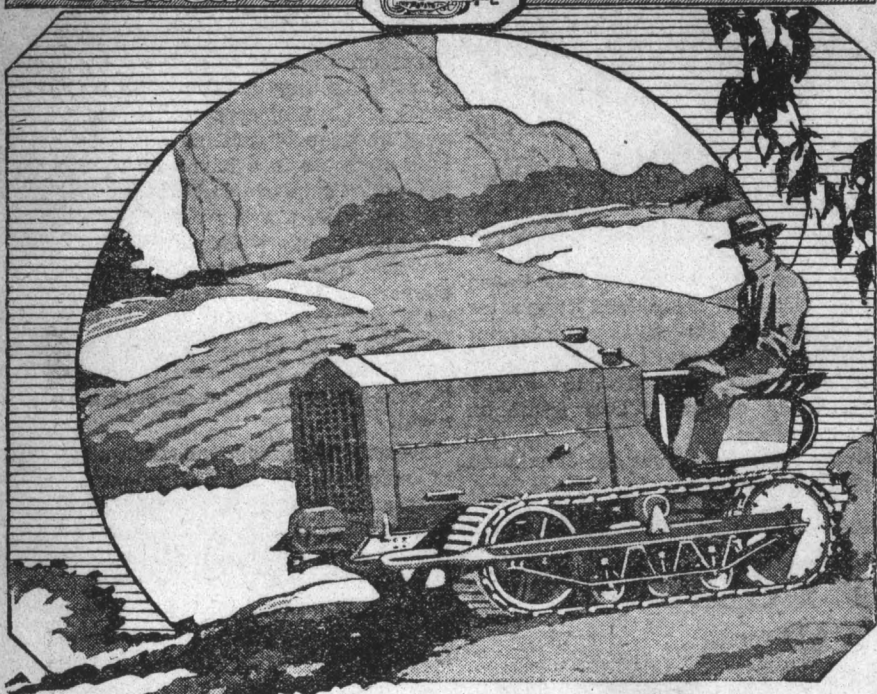
9. Remember that Bordeaux is used to prevent blight and other foliage troubles. It will not overcome the effect of poor seed, poor soil conditions nor poor cultural practices.

Cleveland Tractor

Geared to



the Ground



Motorize Your Farm

"One or more tractors on every farm will help toward intensive farming, and will help to solve the labor problem."

—J. Ogden Armour in the Saturday Evening Post.

The country demands that your farm—every farm in the land—produce a maximum yield.

This is possible, even in the face of the labor shortage that confronts you. The genius of Rollin H. White has made it so—made it practical for you to motorize your farm. For he has built the one tractor that can be operated profitably on almost every farm.

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This Company is backed by more than 500 of the best live stock farmers of the state, and we have more than \$100,000 deposited with the State Treasurer as a guarantee of the Company's responsibility. We insure all live stock—horses, cattle, sheep and hogs against death from any cause.

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Farm Notes

Subsoiling Wet Land.

We have a piece of land which is pretty wet, but cannot afford to tile it. Would you think it would do it any good to sub-soil it? Would it drain any better? It is surface-drained but has not got a very good outlet. Would like your opinion on it anyway.

St. Clair Co.

E. B.

It is very doubtful if subsoiling would accomplish any desirable results in the better drainage of this wet land. Unless the subsoiling went through the hard pan, it would not provide any outlet for the surface water. The only remedy for land of this kind is tile drainage, and if the capital can be borrowed for this purpose, it would undoubtedly prove a good investment. If the farmers in a community where this is a common condition would form an association and utilize the federal farm loan privilege for the making of this kind of improvement, it would prove an easy way to finance same, and be a very profitable investment for those who avail themselves of the opportunity.

Another possible feasible plan would be the organization of a drainage district to provide a good outlet under the provision of a new law recently enacted by the legislature.

Putting Second Crop Clover into the Silo.

I wish to know if I could put my second cutting of clover into my silo. Would it make a better grade of feed than it would to cut it for hay? If it is a good plan to put it into the silo, please give me some instructions as to how I should handle it.

Kent Co.

SUBSCRIBER.

While clover, alfalfa and other similar forage crops have been ensiled with success, there have been so many failures in the use of these crops for ensilage, that under any ordinary conditions it is better to make them into hay, unless cut at a time when they can be mixed with corn in the silo.

Seeding Alfalfa After Wheat.

I have five acres of very heavy wheat, which is lodged and in a bad condition to cut. I wish to put this ground into alfalfa this fall. I was advised to sow the alfalfa in the wheat this spring, but for reasons unnamed we did not. Can I plow this ground after wheat is removed and get the alfalfa in so as to have it get a start for fall? I will very much appreciate any advice as to the proper handling of this problem.

Lapeer Co.

READER.

While under very favorable conditions it would be possible to plow this ground and get a good stand of alfalfa started on same this year, yet it would

not be a dependable plan. Alfalfa requires a good firm seed bed with proper moisture conditions to secure a good growth of the young plants, and this would be difficult to get sufficiently early in the season to withstand unfavorable weather conditions during the winter.

It would, in the writer's opinion, be better to fall plow this land for alfalfa and seed in the early spring with a light seeding of oats or barley. If this soil needs lime, it should be applied after plowing and worked into the surface soil preferably this fall.

Orchard Grass.

What is the value of orchard grass for hay? When and how should it be sown? Also, is Speltz a good grain for horses? Does it do better on sandy soil than oats? When and how should it be sown?

Newaygo Co.

M. L.

As a hay plant, orchard grass can be better compared with timothy than with any of the other forage plants commonly grown on Michigan farms. For our climate it is not so well adapted to general use for hay purposes as is timothy. It is more pronouncedly a bunch of grass than is timothy, it matures for hay much earlier and becomes woody after full bloom much more rapidly. Another objection in comparison is the fact that the seed is much more expensive and more difficult to obtain. Its advantages in a grass mixture are early and rapid growth, the production of a greater aftermath than timothy, and its greater persistence, both in meadows and pastures.

It is adapted to the entire territory in which blue grass is a native, but attains its greatest prominence in the central and eastern group of states to the south of us where it is given preference over timothy. The seed may be sown in fall or in spring. In either event, the first year's growth rarely yields a crop of hay, but can be utilized as pasture. On this account, as well as because of the danger of winter-killing the first season, spring seeding is usually practiced.

The seed is very bulky, weighing only about fourteen pounds per bushel. From twelve to twenty pounds per acre are used where the seed is sown alone.

Speltz or Emmer.

Speltz or emmer is a fairly good grain feed for all live stock. It has not given as generally good results as oats in this state, however, and has not attained any considerable popularity as a grain crop.

Food Preparedness and the 1917 Garden

By J. A. KAISER

SO much has been said concerning the food situation and the necessity of increased production, that at first thought, it might seem that the question has been exhausted. But in this article, the writer purposes to point out some of the tangible fruits, so far as the small garden is concerned, of this food preparedness campaign. Never before in the history of this country, have so many gardens been planted. Never before in the history of this country, have so many village and city residents turned their attention to gardening, and never before has the vacant ground in towns and cities, been so nearly utilized for purposes of cultivation.

In the earlier stages of this movement to plant gardens and thereby increase production and cut down the cost of living, there were a great many skeptical persons who viewed the matter as a huge joke. These skeptics were found mainly among the farmers, although they existed also, in plenty, in the towns. Farmers doing business on an extensive scale, considered the little garden patch of the village or city dweller as insignificant and of no importance. They failed to grasp the all-important fact that these little

patches count high up in the millions, and that for the most part, they are highly productive plots. Those not well fertilized have lain dormant so long that in themselves, they contain the elements essential to high productivity.

In addition to the fact that these town gardens were small, agriculturists who were skeptical held that not half the gardens would be properly cared for, and that the fever would die out with the progress of the season and the coming of weeds and warm weather. Here, too, the skeptics were in very large measure, mistaken. In nine cases out of ten, these gardens have been cared for in number one shape.

In the writer's section, there never have been in years past, so many fine, large gardens, free from weeds, and producing excellent garden crops of all kinds. The biggest crop of early potatoes ever grown, will be harvested in the next few weeks. Many of these town dwellers will produce potatoes enough to supply the family for the entire year. Peas, too, are an unusually good crop this year. In former years, not one housewife in fifty, ever canned peas. This year, hundreds of

women are canning peas, and they expect to can beans and corn and tomatoes. Many families in the towns, will produce this year, not only all the potatoes needed for the year, but a quantity of peas, corn, beans, tomatoes, onions, squashes, and other products for winter use.

From the viewpoint of the small gardener, the season so far, has been exceptionally favorable. On account of frequent rains, ceaseless vigilance has been needed, to keep down the weeds. But as previously stated, this has been done. These owners of small gardens are just coming to their own. They are just finding out how nearly independent they may become. The movement had its origin as a war measure, but will it now teach town and city dwellers a wholesome lesson and carry the garden project through all the future? Thrift is one of the things the American people need to cultivate, in times of peace as well as in times of war. Will not one of the benefits of the world war be found in this greater economy and thrift as exhibited by the small gardener?

Out of the program of preparedness looms this fact—proved beyond contradiction, by the results. The garden project is one of the biggest factors in solving the food problem. It is impossible to conceive the full influence of this movement. When whole families by the tens of thousands, in our towns, can live largely on food produced in the back-yard garden, the products of the farmer can be moved further on, to supply the great want of the hungry millions across the sea. It is surprising to see how much can be grown and is being grown on small patches of ground. It is surprising, too, to see how zealous are the gardeners and how proud they are of their little farms. It has been said that the American farmer alone can win the war. Perhaps this is true, but the town gardener is doing in his small way, his part along this line.

An analysis of the motives which have prompted village and city residents to carry on this successful garden campaign, reveals the following facts: These gardens have been planted and cared for mainly, for three reasons. First of all, let us put the spirit of patriotism. Some people would put this factor last, but I prefer to put it first, for after all, the American people are a patriotic people. They are stepping promptly and bravely to the firing line, in all fields of endeavor.

Second in importance, comes the high cost of living. So high have prices been in recent months, that common people are willing to do anything in their power to relieve the strain. These gardeners naturally find much satisfaction in passing the grocer and market man by, and in finding the essentials of a good meal in their own gardens.

Another factor in the garden movement, is found in the potato famine of the last few months. In many towns, people have not only been compelled to pay unheard-of prices for potatoes, but at times, have been unable to procure them at any price. All sorts of motives stir men to action in times like the present. Call the potato factor a selfish motive if you please, or call it a measure of self-defense, or what you will. It is, however, a factor, as is evidenced by the hundreds of thousands of little potato patches scattered throughout our towns and cities, from one end of Michigan to the other. Individually, these little patches do not amount to much, but in the aggregate, they amount to a great deal. Their existence will, in the near future, make the potato famine and the sky-high-priced potato things of the past. The effect of the garden campaign can not be overestimated. It has increased production beyond the wildest dreams of its initial promoters. It is a big factor in the food preparedness program.

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Tractor is one of America's
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You can rest assured that a farm implement with the name **MOLINE PLOW CO.** on it will not disappoint you in field performance. The **MOLINE TWO-WHEEL UNIVERSAL TRACTOR** is no exception. It is proving itself to be the most popular and practical tractor ever put out because it fits more completely the needs of the great majority of farmers. Read below why you should choose it, whether your farm is large or small.

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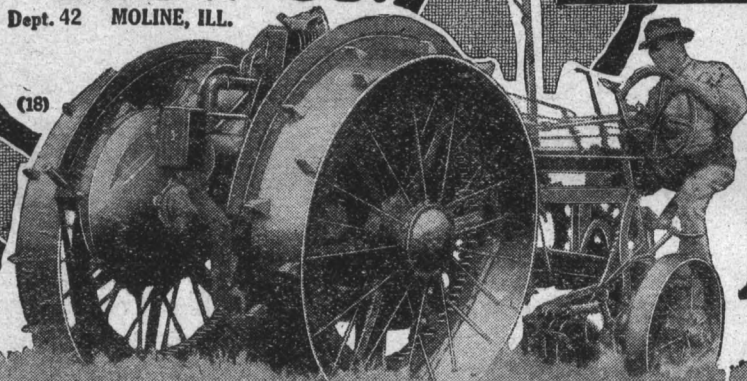
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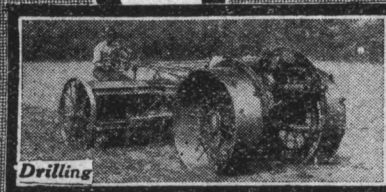
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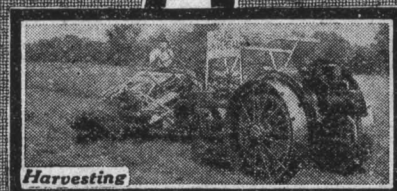
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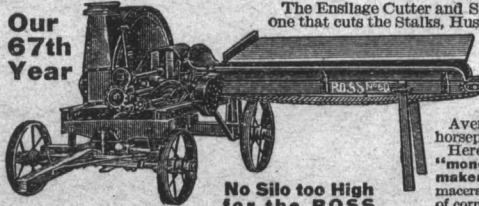


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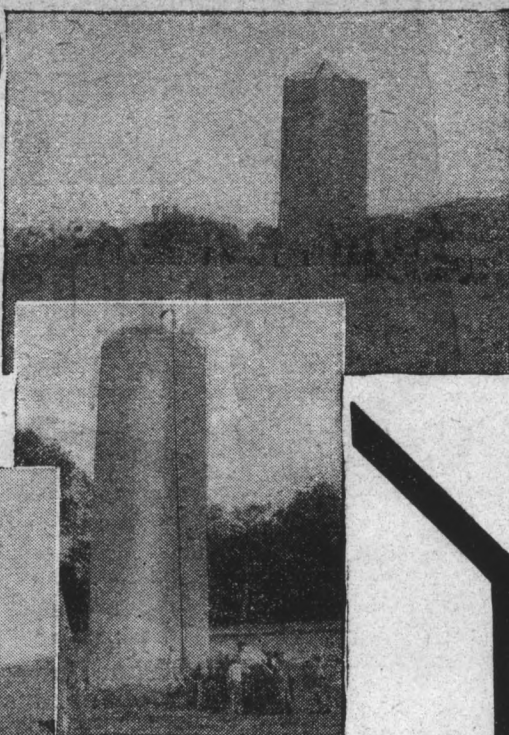
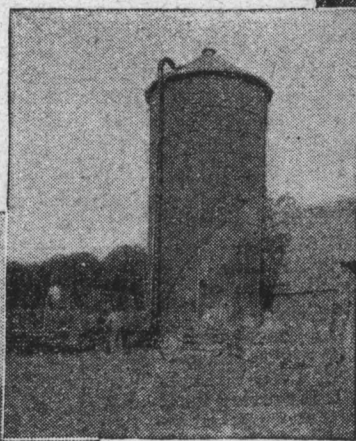
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SILO-FILLING time will soon be here. Fill your own silo just when the corn is ready to cut. Get full feeding-value from your silage and be independent of the cutter crew. If you haven't a tractor, your farm gasoline engine—3 h. p. and up—will do the work. Papec users are not worried about the labor shortage at silo-filling time.

Here's the way B. T. Cole, Stanton Station, N. J., managed last fall: "I filled my silo with a 3½ h. p. engine with corn as heavy as ever grew out of the earth and had power to spare. We weighed one load, 2340 lbs, and cut it in twelve minutes by the watch."

Frank S. Powell of Uwchland, Pa., writes: "I purchased one of your 'N'-13 Ensilage Cutters this season, and I wish to say that it is a real corn cutter. I have had a silo for the last four or five years and have always paid a steam engine and cutter for fourteen hours' work. This season, with the Papec and an 8 h. p. gas engine, I filled the same silo in 15 hours. The Papec is a wonder."



Kehrli Bros., Beaverton, Oregon, operate a 10-inch Papec. They report: "We have used other cutters and after filling three large silos with the Papec, we must say it is by far

the best machine we know of. It runs easy and is handy to get at for any change or adjustments."

Bob Phillips, Sulphur Springs, Texas, declares that his 13-inch Papec "is indeed a wonderful little machine. Have used it now two seasons and have been at no expense whatever with the exception of grinding the knives."

"I am perfectly satisfied with the machine," writes J. L. Elgin, Des Moines, Iowa, who operates a 16-inch Papec, "and I have never owned or used a piece of machinery which came so near doing what was expected of it as this cutter. I can heartily recommend the Papec to all prospective purchasers."

Fred L. Farmer, Mgr. Congdon Orchards, North Yakima, Washington, bought a 19-inch Papec cutter last August. He says: "We forced the machine to its full capacity, on our 18 x 48 silo, but experienced no difficulty in elevating. We afterward equipped the cutter with an automatic hay feeding device and have used it several days each week since. It is the most efficient machine that we know of for cutting either ensilage or alfalfa."

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50 MAIN STREET
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Requires 1-5 to 1-3 less power than any other blower cutter.

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Can't-Sag Gates Cost Less than all wood—last 5 times as long—can't sag, drag, warp or twist. Boards double bolted (not nailed) between angle steel uprights. Guaranteed 5 years. More than 500,000 in use. I furnish complete gates ready to hang or just the Gate Steels, hinges, bolts, etc. Everything but boards. Write for free catalog. A. V. Rowe, Pres. ROWE MFG. CO., 2915 Adams St., Galveston, Ill.

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Wonderful Money Saving Fence Book Over 150 Styles. 13¢ Per Rod Up. Gates-Steel Posts-Barb Wire. DIRECT FROM FACTORY-FREIGHT PAID. All heavy DOUBLE GALVANIZED WIRE. 13¢ per rod up. Get free Book and Sample to test. THE BROWN FENCE & WIRE CO., Cleveland, Ohio. Dept. 49

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Every acre of wheat land should be fertilized!

Do your "bit" by raising more bushels to the acre and so swell the amount that can be exported to the needy in Europe!

Use 18% Acid Phosphate For Wheat on Heavy Soils

The cost per unit is far less than in 14% or 16% acid phosphate. We have unlimited quantities for sale. We also have brands containing 1, 2, and 3 per cent Potash for fall delivery.

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See the "Buffalo Brands" agent in your community and buy the highest grade brands sold in the State.

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Wentworth Hotel, Lansing, Mich.

International Agricultural Corporation,
Cincinnati, Ohio

THE SILO AND FOOD CONSERVATION.

(Continued from first page).
feeding almost any class of live stock maintained upon the farm; when it is considered that the silo is the only means of saving the full value of an immature corn crop, and that with a minimum of waste as compared with any other method; when it is realized that the harvesting of the corn crop is simplified and almost wholly accomplished by the use of machinery, and the use of the land for a fall sown grain crop facilitated, the farmer who does not provide a silo for the conservation of his corn this year should have unusual reasons for such action.

The Final Objection is Passing.

A few years ago many farmers who were convinced of the utility of the silo hesitated about erecting one because of the difficulty in getting same filled, since the threshers were the main dependence for silo filling in most communities. These conditions have fortunately been modified in recent years. In many communities there are farm tractors available for use as stationary power in silo filling. In other sections farm owned gasoline engines of sufficient size to run a small silo filling outfit are common. In such cases the farmer can well afford to own such a silo filling outfit, either individually or jointly with some of his neighbors, so that the community is comparatively rare at the present time in which silo filling cannot be accomplished at almost any specified time, and thus the last available day of growing weather can be utilized to the benefit of the corn crop without entailing any unnecessary waste.

The size and type of silo which should be erected upon any given farm is properly a matter for individual consideration. The size of the silo should be such as to provide for the removal of one and a half to two inches of silage per day for the feeding of the stock maintained, so as to avoid any possibility of waste from spoilage. The only requirement for the successful keeping of silage is a practically airtight silo. The material of which it is constructed is more essential as effecting its permanence than its immediate serviceability. While the more permanent types of construction are increasing in popularity on farms where silos have come to be recognized as a permanent essential, so far as immediate results are concerned it is unimportant whether the material used be wood, tile, cement or steel. The essential thing as related to food conservation is the erection of a silo upon every farm where a silo is really needed from this standpoint in the present emergency, and, if this is accomplished, the farms on which a silo is not found this fall will indeed be few.

UPPER PENINSULA COUNTY AGENT DRIVE.

It is a matter of giving the weather man credit for July 16-17-18, that made it possible for the county agents, together with extension representatives from the state and federal department, to make the trip through Marquette, Iron, Dickinson, Menominee and Delta counties by auto.

The object of the trip was standardization and co-operation by acquainting the various county agents with methods of county agent work in counties other than their own.

Much attention was given to the comparison of varieties of grains, grasses and roots. In the drive 400 miles of territory were covered and twenty-seven visits made.

Following the "Drive" a two-days' conference was held at Escanaba.

Much appreciation of the trip was expressed by all who partook and it was the consensus of opinion that the trip was a success.

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WHETHER you are selling cream or making butter, if you have no separator, or are using an inferior or half-worn-out machine, you are wasting cream, time and labor every day you delay the purchase of a De Laval.

You can't afford to wait another week. It means too much loss with butter at its present high price, and the importance of saving time and labor. Let the De Laval start saving cream for you right now, and it will soon pay for itself.

See the nearest De Laval agent right away and let him show you what the De Laval will save for you. If you do not know the De Laval agent, write direct for any desired information.

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Banish the fly evil from your cattle and horse stables. Let the animals live and work in comfort. Remove their greatest summer dread. Use



SO-BOS-SO KILFLY

Spray your animals with this fly preventive twice a day during the fly season and they will not be bothered with flies. They will work and milk better because their energy will not be wasted on the pesky flies.

SO-BOS-SO KILFLY is a perfectly harmless liquid which absolutely keeps the flies away. It will not gum the hair nor harm the hide. Has been used by thousands of farmers and dairymen for 17 years.

Ask your dealer for a gallon can. Also ask for circular describing other farm uses for SO-BOS-SO KILFLY. We will send you a copy of a letter which one nationally known dairy breeder sent us.

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Dairy Cows' Summer Ration

By EARL W. GAGE

ONE of the most common mistakes in the feeding of dairy cows on the farm is that the good cows are not given a sufficient quantity of feed, above that required for their physical maintenance, to obtain the maximum quantity of milk they are capable of producing. Successful feeding of dairy cows involves the provision of an abundance of palatable, nutritious feed at a minimum cost, and feeding this in such a way as to receive the largest milk production from the feed. One successful dairy farmer defines feeding for profit as liberal feeding, or feeding to the full capacity of the cow.

From the standpoint of economical milk production, a dairy cow should not be fed more than she will consume without gaining in weight. But there are times when it is desirable to make exceptions to this. Practically all heavy milk producers lose weight in the early part of their lactation period; that is, they produce milk at the expense of their body flesh. When such cows approach the end of their milking period they normally regain the flesh they have lost, and the dairyman can well afford to liberally feed them, with the assurance that he will be repaid in the form of milk when the cows again freshen.

Pasture is the natural feed for cows, and for average conditions, with ample pasture of good grasses, or legumes in good succulent condition, good production can be secured.

Experts advise us that grain should be fed to heavy-producing cows under all pasture conditions. Variations should be made to meet different conditions and individual cows. Grain-fed cows on pasture need not contain the same percentage of protein as for winter feeding. Pasture being an approximately balanced ration, the grain ration should have about the same proportion of protein to other nutrients. The following mixtures are suggested for supplementing pasture without other roughage:

Mixture No. 1. Ground oats, 100 lbs.; wheat bran, 100 lbs.; corn meal, 50 lbs.; per cent of digestible protein, 10.3.

Mixture No. 2. Wheat bran, 100 lbs.; corn meal, 100 lbs.; cottonseed meal, 25 lbs.; per cent of digestible protein, 12.7.

Mixture No. 3. Corn-and-cob meal, 250 lbs.; cottonseed meal, 100 lbs.; per cent of digestible protein, 15.5.

Mixture No. 4. Wheat bran, 100 lbs.; gluten feed, 50 lbs.; corn meal, 50 lbs.; per cent digestible protein, 13.6.

To carry the dairy herd over a period of short pasture without falling off in milk, soiling crops are growing in favor. For this purpose, second-growth red clover, alfalfa, oats or peas are excellent. Corn is also available usually in August and September. What may be a disadvantage in the use of soiling crops is the extra labor required to cut and haul these crops from day to day, when field work is pressing hard.

The summer silo is gaining in favor in many sections. An acre of corn in the form of silage will provide succulent roughage for several cows for a season. During periods of drought, when both pastures and soiling crops fail, a silo filled with well-matured silage grown the year previous is most valuable.

In planning a summer silo, the farmer should keep in mind that its dimensions should be in relation to the number of cows fed daily. As a usual thing, under summer conditions, a cow will consume about twenty pounds of silage. Therefore, silage enough must be provided daily to prevent excessive surface fermentation. On this basis, a summer silo for twenty cows should

be eight feet in diameter; for thirty cows, ten feet; and for forty cows, twelve feet. As eight feet is about the minimum diameter of a silo for best results, a summer silo is most applicable for twenty or more cows.

DAIRY PROBLEMS.

Silo for Six Cows.

This is my first year in Michigan. I came from Illinois where I was a renter, and bought forty acres in Van Buren county. The soil is a sandy loam and fairly productive. I am milking three cows but want to milk six if I can arrange it right. Will it pay me to build a small silo, say 8x30, for six cows? I do not plan to feed ensilage to my horses, but to my cows, and a few head of young stock, also the hogs occasionally. The silo is a new thing to me and I would like some good advice.

Van Buren Co.

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Whether it would pay to build a small silo for six cows would depend to no small extent upon factors not stated in this inquiry. As a general proposition, there is no question about the profit of silage in feeding dairy cows. It is generally considered, however, by dairymen of experience, that a farmer who is in the business of selling dairy products ought to keep more than six cows. Ten cows is generally considered as about the minimum commercial dairy herd which can be profitably maintained upon a small farm, and it is the writer's opinion that it would be a far better plan to build a silo large enough to store ensilage for feeding ten cows, including sufficient capacity for summer feeding, as this will be essential if this number of cows are kept on a forty-acre farm, rather than to build a silo only eight feet in diameter, with the idea of limiting the dairy operations to six cows.

It will only cost a little more to build a silo ten or twelve feet in diameter, which will have the capacity to feed ten or a dozen cows. The successful dairyman of the present day must be a specialist, and no man should undertake to conduct a specialty in so small a unit as to not promise an adequate labor income. We would advise building a larger silo and keeping more cows, or else following some other specialty than dairying. As between a possible profit from six cows with or without a silo, however, we believe it would still pay to use the silo.

Light vs. Heavy Cream.

Which is the most profitable, to run cream about 45 per cent or about 30 per cent. Which is the most profitable market, one year with another, cream, cheese factory or condensary? Has a condensary a tendency to increase or decrease the hogs and calves on a farm?

Tuscola Co.

J. D. H.

Within the limitations of the successful mechanical working of a cream separator, there would be little difference in the profit derived from running a light or heavy cream. If the cream is sold in the open market, it will be more profitable, of course, to comply with the requirements of the market in this respect. Of course, the heavier the cream, the greater proportion of skim-milk which is left as a by-product, but this would not be a very considerable factor on the average farm. Close skimming is a factor of greater importance than the running of an extremely heavy cream.

Conditions vary so greatly from year to year that it is impossible to make a comparison that would hold good as an average. At the present time, there is a very good demand for condensed milk, and condensaries are paying a better price for milk than the present cheese market would warrant. Obviously, any method of disposing of whole milk will have a tendency to decrease the number of hogs and calves maintained upon the dairy farm.

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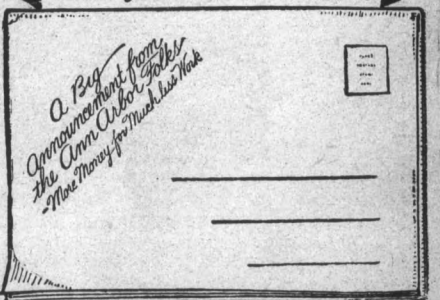
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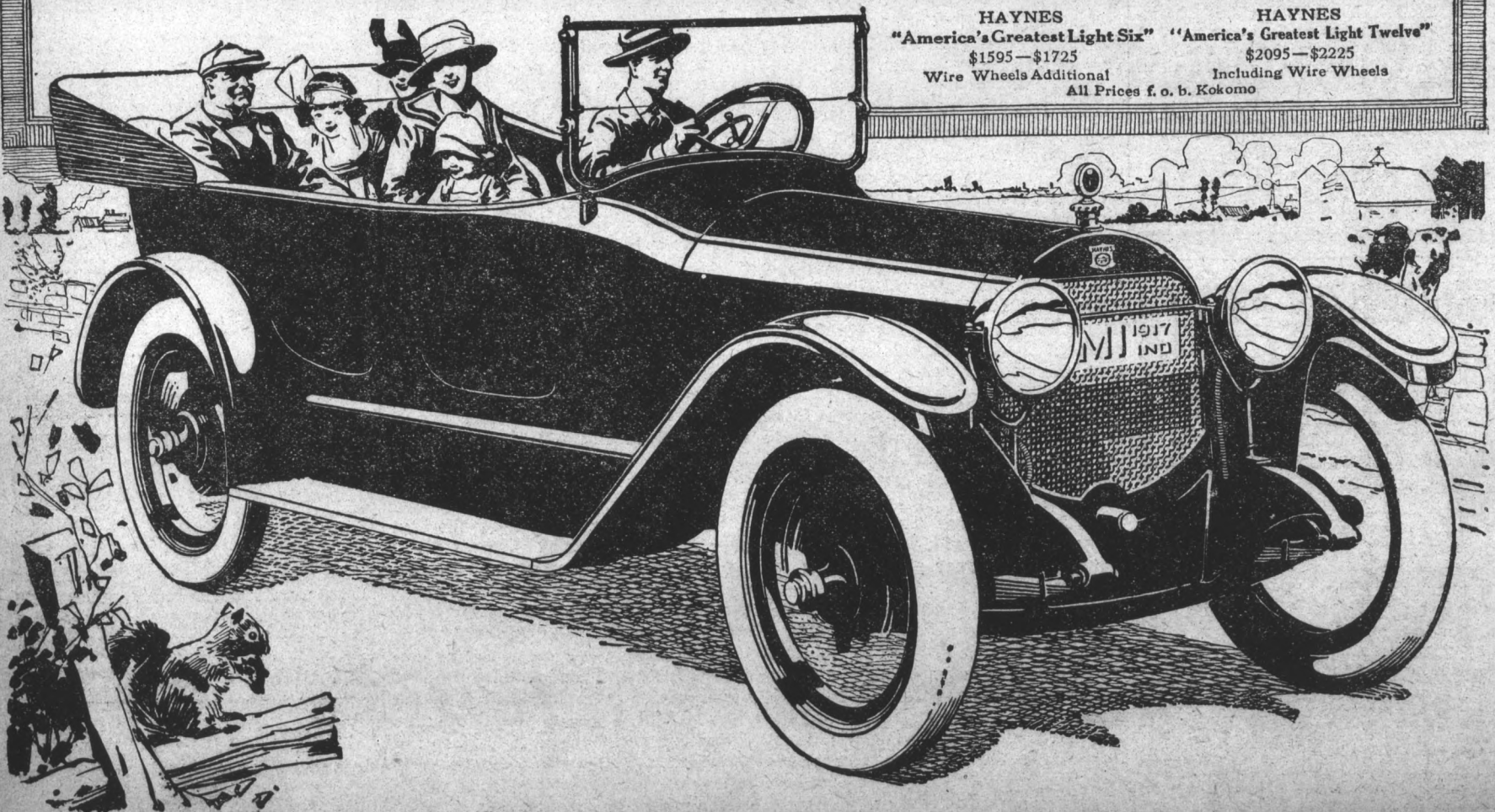
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Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

If the exigencies of war do not interfere, the third day of September will be a bright and glorious holiday and the attention of the public will be turned toward labor. It is unlikely that the day will not be celebrated, for an occasional day off benefits the worker and in the long run increases the measure of his efficiency.

The Labor Day movement in this country was started in 1882 by Mathew Maguire, secretary of the Central Labor Union, of New York City. He corresponded with various organizations in the state, and his letters were favorably received. He was made chairman of the committee to arrange a Labor Day celebration. The event, largely local in character, was a real

When Workers Celebrate

By DONALD HONORE

success; and it blazed a path for the expansion of the idea gradually throughout the nation.

Further progress was made in 1883. Letters were sent. Other cities than New York staged celebrations. Two powerful organizations, the Knights of Labor and the American Federation of Labor, gave their official endorsement. The movement gained strength in the next three years.

The legislature of the state of New York on April 27, 1887, passed an act in which the first Monday of September

was named as Labor Day. Massachusetts and others did likewise, and in 1894 Congress formally sanctioned it.

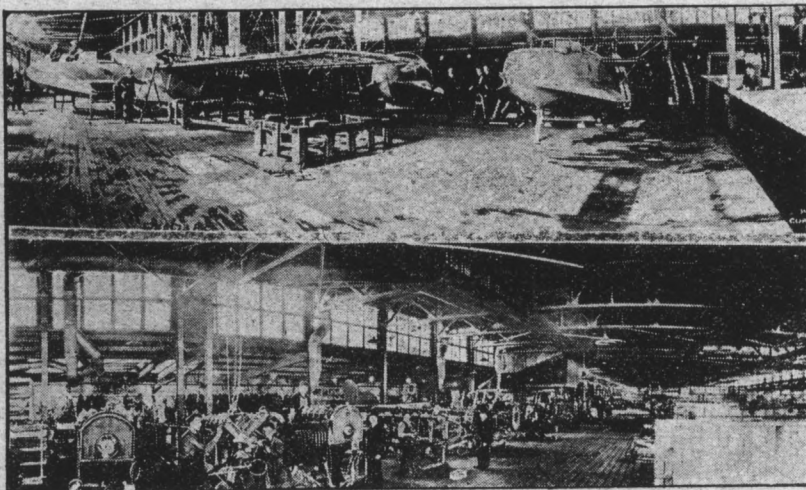
Walsh, in his book on "Popular Customs," comments on Labor Day as follows:

"In point of fact, this declaration of Congress has legal effect only within the District of Columbia and among government employees in the states. But the moral effect was to bring about a general observance of the day in nearly all the states of the Union. Up to 1894 monster parades were

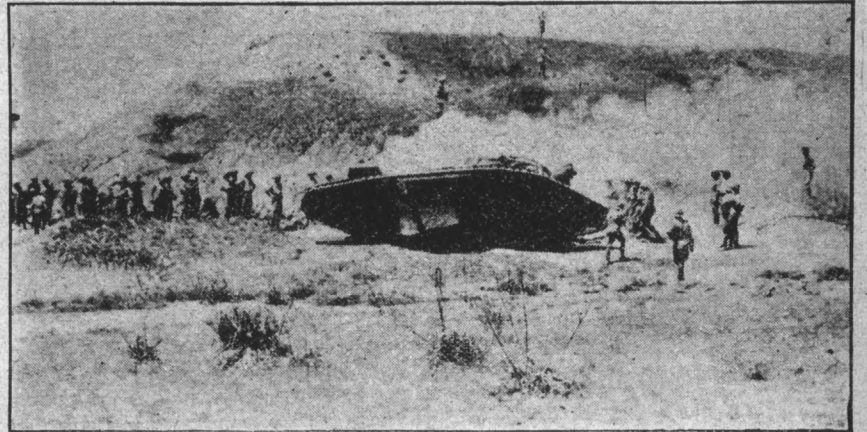
held in New York and other cities in honor of the day, but these proved so expensive that they have been abandoned almost everywhere. The festival is now marked mainly by the closing of shops and warehouses, by the cessation of mechanical labor (many labor unions impose heavy fines on members found at work this day), and by picnics, excursions, and public games, which are expected to fill the coffers of the unions rather than deplete them.

"The American socialists take no part in the celebration of the September Labor Day, choosing rather to cling to an unofficial holiday on May 1, which has been chosen by the labor men and socialists in Europe as the

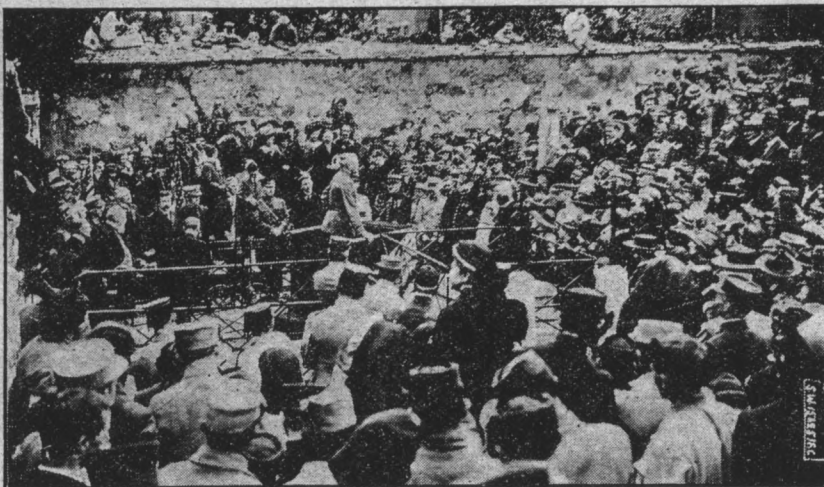
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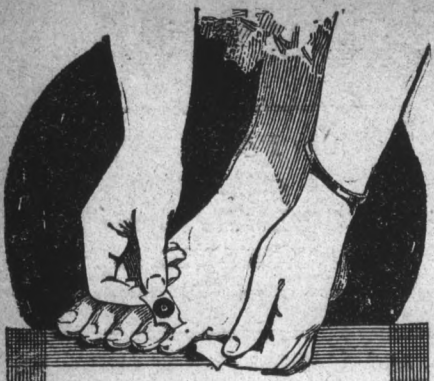


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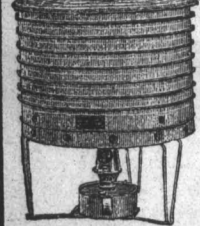
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occasion for their annual demonstrations. In New York the evening of May Day witnesses a parade through the streets and a mass meeting in Union Square of the various socialist unions. The mass meeting is addressed by prominent orators of their faith. Similar demonstrations occur in other large cities. But the rioting and bloodshed that have too often signalized the day in Europe have found no repetition in America."

Labor Day cannot be considered more than thirty-five years old. Fourth of July, Thanksgiving, Christmas, Halloween, Decoration Day and others antedate the September event. Perhaps, in a general sense, we undervalue the importance of labor and do not comprehend that nothing can be accomplished without it.

"Whatever there is of greatness in the United States," said its former president and former commander-in-chief, Ulysses S. Grant, "or indeed, in any other country, is due to labor. The laborer is the author of all greatness and wealth. Without labor there would be no government, and no leading

class, and nothing to preserve."

J. Macculloch declared it was to labor and to labor only that man owes everything of exchangeable value. He called labor the "talisman that has raised him from the condition of the savage; that has changed the desert and the forest into cultivated fields; that has covered the earth with cities, and the ocean with ships; that has given us plenty, comfort, and elegance, instead of want, misery, and barbarism."

One of the secrets of efficient labor is the adaptability of the individual to it. His heart is either in it or away from it; and our spreading system of vocational education is fitting the man to the work for which he is naturally best endowed. It is as Henry Giles has said:

"Man must work, but he may work grudgingly or he may work gratefully; he may work as a man, or he may work as a machine. There is no work so rude that he may not exalt it; no work so impassive that he may not breathe a soul into it; no work so dull that he may not enliven it."

"Contraband" RANDALL PARRISH

The New Day Begins.

I remained on deck the greater part of the night, but nothing of an alarming nature took place. The crew remained quiet, and the watch on duty obeyed orders promptly enough to give those of us aft a new feeling of confidence. When Leayord relieved Olson at midnight, the three of us discussed the situation together before the second mate went below, and decided to make no further move until the men openly declared themselves. Both officers agreed with me, that, as soon as the knowledge of McCann's arrest reached the fore-castle, there would be trouble if it was possible for Liverpool and White to get the backing of the others in revolt. But as to how serious the spirit of mutiny already was,

we had no absolute means of knowing. Leayord seemed to be a clear-headed, sensible fellow, and I agreed with his summing up of the situation.

"It's like this, Mr. Hollis," he said soberly, "we've got to let those fellows decide first what they intend to do. There's nothing happened, so far as I can see, to cause us to kick up any particular shindy. The crew are doing their work, and the only special trouble aboard comes from whisky, and the money of that guy you've got locked up down below. I'm for holding on to him, and, when it gets daylight, makin' a search for the booze. Of course, when Liverpool and his gang find out that their precious backer is in limbo, they're naturally bound to do some kickin', but that won't be till morning, and, unless they get the whole bunch forward on their side, I reckon we can handle 'em all right. My way would be to wait, and see what turns up, sir, an' then, if them fellers really want trouble, jump in and give 'em all they want."

"Good sea philosophy, Mr. Leayord," I answered heartily. "I'll stay on deck for an hour or so yet, and then lie down. Mr. Olson, you'd better get what rest you can. Personally, I do not anticipate any demonstration forward until after I can take an observation, and the men learn where we are, and what part of the sea we are heading into. It's not likely the leaders in this row have told the others about the money, is it? They are keeping all that hid, and working the war racket."

"No doubt of it, sir. And we're surely goin' on to Hamburg?"

"That is my intention."

Olson turned away, but paused a moment at the head of the ladder. "Maybe it's not my place, sir, to speak," he ventured doubtfully. "But there's sure to be trouble when the crew finds that is the course set. They are sure stirred up over gettin' thrown into some French and English prisons. Somebody's been stuffing 'em good an' proper. I've got most of it from the men at the wheel."

"You believe they will mutiny?"

"Aye, if they have the leaders, and Liverpool and White would go a long ways for ten thousand dollars, sir."

"And you, Mr. Leayord?"

"Olson knows them better than I do, sir," the first mate answered slowly. "But I reckon sailormen are all about alike. Between the fear of bein' captured on this job, an' that money, there's liable to be quite a fire started

up there in the fo'castle. We've got our work cut out for us already if the port is Hamburg."

"Well, that's the port. You may as well understand it now, and tomorrow I'll make it equally clear to the crew. The one and only thing I want to know is, do my officers stand with me?"

In the darkness the eyes of the two sought the vague outlines of each other, but for the moment neither answered.

"Well, Mr. Leayord?"

"When I came aft, sir," he said honestly, "I expected to do my duty. I ain't changed none since."

"And you, Mr. Olson?"

"It's pretty safe to put me down against Liverpool, no matter what the row is about. I'm for Hamburg, sir, if that's where you an' the owner wants to take this hooker."

"I have never failed to win out yet, while my officers remained loyal," I said quietly, greatly heartened by the way they expressed themselves. "I am convinced that Masters is all right; so we will consider our course settled. Take your watch below, Mr. Olson; it will be all hands at daylight."

The sky cleared, although the wind remained fresh and the sea heavy enough to keep two men at the wheel. The Indian Chief made good weather of it, however, and I possessed faith in Leayord's seamanship. For an hour, perhaps, I loitered about on deck, but all remained so quiet that finally, with a word to the mate to have me called at the slightest sign of need, I went below, and turned in.

I did not remove my clothes, and the new day was barely reddening the east when I was aroused by a trampling of feet on the deck overhead. There was no call, and I was sailor enough to comprehend what was going on above—the watch was about to be changed and Leayord was using all hands in cleaning ship. The activity, the quietly spoken orders, the low chant of a song as the men toiled at a rope, were evidence that my presence was not required, and I felt it would please both officers to be left alone in charge. I opened the port and looked out at the glorious morning. It was a lonely ocean scene, yet wildly beautiful—the huge gray surges, white-capped and threatening, the red sun splitting asunder a mass of black cloud, its rays leaping from crest to crest as though they were balls of fire. Everywhere was the wild desolation of the sea, nothing on which the eye could rest except the restless waves, the constant shifting of colors. Satisfied that no other vessel was within range of vision, I lay down again.

I do not recall a pleasanter meal at sea than our breakfast that morning. All were in excellent humor, and no premonition of trouble entered our minds. The night had passed quietly, both officers reporting the crew docile and cheerful. Bascom did not appear, but Miss Carrington smilingly took her place, evidently refreshed by a night's rest. No reference was made to our peculiar situation, or to the dangerous voyage confronting us, the conversation tending toward humor, stimulated by an odd dream which the young woman related with great enjoyment. Even the two seamen forgot their embarrassment in laughter, and gave us some reminiscences of the fore-castle, quaintly entertaining. Dade and the boy Moon, hung about listening, pretending to be busy, and the bright sunshine streamed down through the opening above, flooding the dingy cabin with golden sheen. I remember how a shaft touched the girl's hair, giving it a new beauty, and how merrily her laugh rang out at an absurd tale I told.

Olson was on watch, but Masters joined us at table, and reported all well in the engine room, and together we drank a toast to a pleasant voyage, almost convinced that before us were

Preparing for Tomorrow

Many people seem able to drink coffee for a time without apparent harm, but when health disturbance, even though slight, follows coffee's use, it is wise to investigate.

Thousands of homes, where coffee was found to disagree, have changed the family table drink to

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With improved health, and it usually follows, the change made becomes a permanent one. It pays to prepare for the health of tomorrow.

"There's a Reason"

only the ordinary vicissitudes of the sea. It was not until the men left the table that I was reminded of our prisoner in the nearby stateroom. Even then I lingered a moment, interested in the girl, who seemed in no hurry to leave the cabin. She promised to sing for me that evening, and together we looked over the music in the rack, laying aside those pieces which were familiar. The table had been cleared when we finally separated.

"Mr. Bascom seldom takes any breakfast?" I said to Dade, who was polishing the stair all.

"No, sir; I have orders to take him a cup of coffee at nine o'clock."

"And how about McCann?"

"The gentleman in number six, sir? He's locked in, and I haven't the key."

"That's true; I'd forgotten. I'll look in on the man; and you get his breakfast ready to serve."

I unlocked and opened the door. McCann was seated on the edge of his bunk facing me, and, it was plainly evident at first view that he was in no pleasant humor. He had the appearance of having passed a disagreeable night, and for an instant I felt a twinge of regret because of handling the fellow so roughly.

"McCann," I said, as he failed to speak, "let's have an understanding. It is no desire of mine to hold you a prisoner here for the next month. I'll accept your pledge not to interfere with the working of this vessel."

"On what other terms?"

"That you stop holding communications with the crew, and consider yourself a passenger until the end of the voyage. Give me your word to that, and you may have the freedom of this cabin, and the after deck."

"What is the voyage?"

"To Hamburg."

He laughed, and there was an ugly sound to it.

"And do you think you will ever get there," he asked, glaring at me, but making no effort to rise. "Are you fool enough, Hollis, to imagine that the English fleet will ever permit this ship to pass through the channel? Why, your whole cargo, they tell me, is contraband."

"Who tells you?"

"Never mind who. It's the truth, isn't it?"

"Yes, you might as well know—mostly munitions of war, but contracted for months before war was declared. However, I am not fool enough to suppose we can make the channel passage. There will be risk enough at the best, but we'll try it north of the Shetlands, and through the North Sea. However, that's nothing to do with your status on board. It is nothing to you, is it, who gets the cargo, or where it is finally landed?"

"It is something to me whether I'm safe in New York, or rotting in an English, or French prison," he said sullenly. "Besides, that's not all. In the first place, I was a fool to ever accept Carrington's invitation to go on his yachting trip. I wouldn't if I hadn't supposed it to be a short cruise. I've got to get back to New York, I tell you, man. I've got a deal on there that means more than a million dollars! I can't afford to drift about out here on this rotten tramp."

"The saving of this boat and cargo means more to Bascom than your million dollar trade does to you."

"What's Bascom's affairs to me?" he sneered. "He took his chances, didn't he? You seem to think I owe the man something. I suppose he told you, or else the girl did, that I crippled him for life. Well, he deserved all he got. I pay my debts, let me tell you, and I've got some against you to be settled yet. Don't preach Philip Bascom to me. It's not for his sake you are hanging on here, and trying to get this ship to Hamburg. I'm not so blind as all that."

"What do you mean?"

"Mean! Why that is Carrington's girl, isn't it, you and I pulled out of the yacht? Lord, I knew her when the first streak of daylight came, and I saw your little game, too. There's money enough coming to her to make this a mighty profitable voyage if you can land her in your net before she gets ashore! I might have done it myself if I hadn't gone crazy in the boat. Now all the part there is left me to play is the villain."

"And you think that accounts for my taking command of this ship?"

"Of course. Everything has worked fine for you so far. Saved the girl's life; protected her in the small boat from a brute, that's me; and now, at her request, because of her desire to serve Philip Bascom, you graciously consent to guide the Indian Chief to Hamburg, and a fortune. Why, it's the greatest little story that ever was—the fair maiden, the stalwart hero, the scheming villain, the pale-faced sufferer, and over and above all, the gleaming gold—papa's gold. Bah! it makes me sick."

I did not move, or take my eyes from him, and slowly the grin on his face seemed to smooth out, as his sense of humor departed.

"Well," he snarled, "isn't that about the way of it?"

"If the picture satisfies you, Mr. McCann," I said, "you are perfectly welcome to it. Probably no other point of view is possible to your sort of mind, so any further discussion would only be a waste of time. However, you've said enough to cause me to withdraw my offer of parole. I will accept no pledge you may make."

"You intend holding me a prisoner as long as I am aboard?"

"You have left me no other choice."

He got to his feet angrily. "Well, now, see here, Hollis, I haven't any use for you, or any of your outfit! I wouldn't give you my word even if you agreed to accept it. You are going to discover before you are through with me that Fergus McCann is not quite as big a fool as you take him to be. I'll give you big odds that you never take this ship to Hamburg; I'll give you odds you never get the girl; yes, I'll make the same proposition, that you'll never hold me prisoner twenty-four hours. Are you sport enough to take me?"

I glanced back across my shoulder, only to see reflected in a mirror, Vera Carrington, standing in the half-opened door of her stateroom, as though suddenly arrested by the sound of our voices. No one else was visible in the cabin. Continued on page 81).

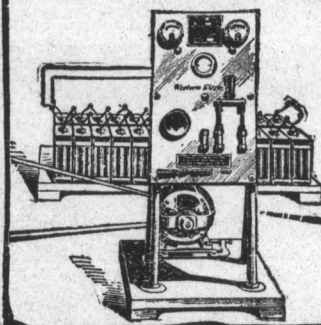
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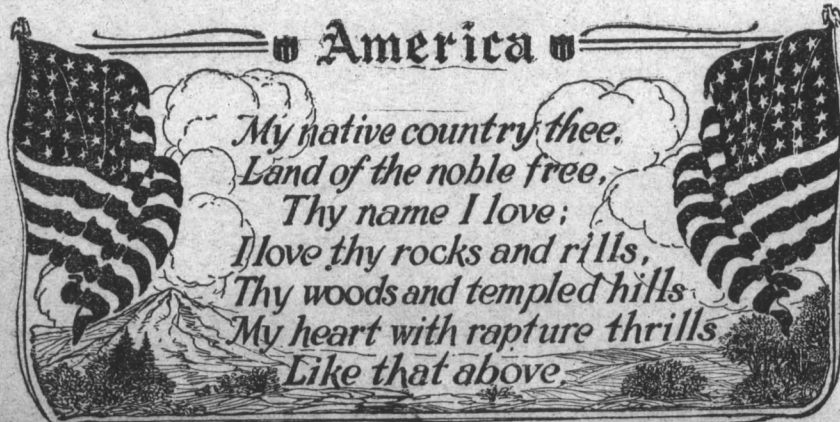
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Woman and Her Needs

At Home and Elsewhere



"The Fear of Living"

I AM not given to reading the prefaces of books. Like all women, I usually read the first page, the last chapter, and then skim through the middle. But a book which has just come into my hands has a preface so much better than the story that I am reading it two or three times.

"The Fear of Living," by Henry Bordeaux, has a startling title, but the book itself is just the common-place story of a simple French woman who devoted her life to her family. In contradistinction to her are the neighbors who shrink from the obvious duties which would disturb their peace of mind or lazy tranquillity. The book is refreshing in these days of morbid "Realism," so-called. The author's purpose in writing the story is told in his preface, parts of which follow:

"Life is, after all, such a precious thing that one must neither reject it entirely like those lazy egoists, who soften and contract it to such a degree that it loses all its value; nor partly reject it like those vigorous egoists, who claim to subordinate it to their choice.—Faith in the goodness of life, acceptance of all its burdens, confidence in the future, were formerly the code of the French family. Since Jean Jacques Rousseau, we have replaced belief in the goodness of life by faith in the innate goodness of man. It does not produce the same results.

"We must not think that, in developing in ourselves the love of life—the whole of life—we create a greater fear of death. Our life is not in proportion to its length. Very short lives often give out more perfume than long, barren existences. The important thing is not to grow old, but to fill up all one's days until the last, knowing well that the last will come and give to our lives its finished form. For the acceptance of the whole of life includes the acceptance of death. * *

"* * * just as no work of art can be produced without submission to the laws of harmony, so there is no fine life without the acceptance of an order conditioned by our dependence and our limitations. But to regulate our energy is not to diminish it. On the contrary, it is to possess and manage it as a horseman his well-trained horse. * * * energy which demands violent pleasure is the energy of the bandit. This is the case in business, in politics, in society, to some extent everywhere, with men, and even women, who in one way or another display their strength and courage. * * * they all desire to get only joys, or at least violent sensations, out of life, and aim at throwing it away afterwards like a squeezed orange. They are the mad individualists who will not observe any measure in enjoyment, and see in the world only a personal inheritance to be wasted by them.

"* * * the fear of living means precisely that—to deserve neither blame nor praise. It is the constant all-prevailing desire for peace. It is the flight from responsibilities, struggles, risks, and efforts. It is the careful avoidance of danger, fatigue, exaltation, passion, enthusiasm, sacrifice, every violent action, everything that disturbs and upsets. It is the refusal of life's claims upon our hearts, our sweat, our blood. In short, it is the

pretence of living, while limiting life, while setting bounds to our destinies. It is that passionate selfishness which would rather retrench its appetite than seek the food which it requires; the selfishness which is meanly content with a colorless, dull life, provided it is sure of meeting no shocks, no difficulties, no obstacles, like the traveler who will only journey along plains on rubber tires.

"* * * many fathers and mothers cannot consent to be separated

Eliminating Food Wastes In the Home

By ELLA E. ROCKWOOD

WE hear much about thrift these days and the impression seems to prevail that as a nation we have not heretofore given the subject the attention its importance deserves. We have been careless and wasteful, extravagant in expenditure of money and the things which money buys, puffed up with the prosperity born of many fat years and heedless of the possibility of lean ones to follow. Suddenly confronted with adverse conditions we must right about face and stop the leak as quickly as we can. All these last few months, months which have changed everything for our beloved country and brought us into the world war which we somehow hoped to escape.

All the world acknowledges, or should acknowledge, that as a class, farm women are past masters of the art of saving. They possess the ability to get the last cent of "value received" out of every dollar. They can turn and piece and make over, they toil early and late in rendering assistance to their men, and do not scorn to do labor supposedly unfitted for woman's strength when necessity presents itself, nor do they hesitate at heroic sacrifice for home and loved ones. This is all a part of womanhood, of true womanhood regardless of whether she lives north or south, east or west.

Yet a time is coming, if we are to believe the statements of those who ought to know, it is close at hand, when every resource will be taxed to the utmost to maintain the standard of living to which we have been accustomed. The food situation is a serious one, and should the present season prove similar to the last it is altogether possible that it may be worse instead of better before the 1918 harvest. Therefore it behooves us all as housewives, to go into our kitchens each day with the resolve to waste not an atom of food, and furthermore to set our minds to the problem of getting the maximum amount of nourishment for our families out of everything we prepare for the table.

Probably most of us have prided ourselves with the boast that nothing is wasted in our kitchens. We must now go further than that and see to it that nothing is cooked that is not cooked perfectly, so well that in addition to being palatable it will be both digestible and nourishing. During the past winter and spring we have learned that rice makes a good substitute for potatoes, that it can be made one of the principal dishes at dinner instead

from their children, and turn them aside from careers that are wider but more adventurous, from marriages which would take them far away but which would be morally advantageous to them; they weaken them; enervate or wear out their courage instead of arousing it, and in their sentimental selfishness impose on them a servitude which lowers their characters."

Shirkers in politics, business, society, the family are condemned by the author in his preface. In the story you have pictured the classes who fear living, and the few who love it and grasp its opportunities. DEBORAH.

of a tasty dessert, containing as it does, more than four times the food value of the popular tuber. There are other things we have learned, too, and more still to come along the line of food values. One of these is that the wheat supply of the country would be greatly increased in actual eating qualities if we would all forego the use of white bread and use whole wheat or graham instead. Our dwindling supply of this staple grain would be pieced out wonderfully if all wheat was used in this way and the white loaf made of bolted flour discarded entirely. Besides the economy of such a procedure the general health of many people would be very largely improved.

With lard at present prices our economical housewife will see to it that not a particle of fat is thrown into the garbage pail. There is no excuse for discarding any kind of fat, even that from poultry should be saved and used as shortening. The fattest old hen should be welcomed to the pot and the viscera carefully gleaned of the rich golden deposit before throwing it to the cat. Such fat is valuable for frying if not liked as seasoning in food. It is practically all oil. The inexperienced housewife will be safe in adding it to her cake frying fat if she does not know what else to do with it. A hard and fast rule should be to throw away no fat of any description. Fried out and clarified even sausage grease is robbed of any disagreeable flavor. And in view of the rising price of soap it is good economy to try one's hand at that kitchen and laundry adjunct, as we did some years ago when the "leach" was part of the regular farm-yard equipment.

I said that farmers' wives, as a class, were past masters in the art of saving. This is true, yet there are some who forget that thrift is a virtue greatly to be desired and ruthlessly throw away quantities of good food.

"The hogs will get it," or, "It will do for the dog," excuses many a glaring waste. These animals can be fed less expensive foods. Greater care that food is not spoiled by burning in the oven or while cooking on the stove, will save many a dish otherwise wasted. Sour bread is usually wasted, at least in part, and is not good food anyway.

Bread crumbs, crusts and pieces thoroughly dried and crushed can every bit be utilized in scalloped dishes, and in the various foods to be rolled in crumbs before frying. Lightly browned in the oven they make an excellent dish with cream or milk.

Slack baked pie crust, soggy and soaked, is almost sure to be wasted because nobody likes such a pie. Same about the cake which does not get "done." More care in watching the little leaks will result in a substantial saving. And we must not confound such saving with parsimony or with niggardliness. Saving is honorable and legitimate, especially so now when rich and poor alike are being urged to conserve every particle of food against a possible time of need.

The farm furnishes fruits and vegetables which this year more than ever should be saved for winter use. Vegetable canning has now become practicable in the home and all should take advantage of such knowledge to lay away a good supply as the season progresses. Sugar is high in price, but not necessary in canning.

And the food value of milk, cream, buttermilk and cottage cheese should not be overlooked. All these possess high food values. One pound of cottage cheese has as much protein as one and one-fourth pounds of beef. It is deficient in fat but this can be added by way of cream or melted butter. It is up to you, Madam Housewife, to study these questions of foods and food values that nothing gets away.

BAKE SOY BEANS.

Owing to the scarcity of navy beans soy beans are being used by thrifty cooks in many parts of the country. They contain twice as much protein as meat, but are deficient in starch. A little corn starch or flour is often added in cooking to make up for this lack.

Like navy beans, they need long, slow cooking. Soak over night and allow about two tablespoons of flour to every pint of beans. The yellow beans are better for baking. If you can allow a half cup of navy beans to every cup and a half of soy beans the flavor is improved. Cook as you would any baked beans. When white beans are used with them you do not need flour. If you have not the white beans, mix the flour with the sugar and add to your beans.

THREE KINDS OF BREAD.

The following "Economy Recipe" recently received a three dollar prize in the Milwaukee Free Press. Try it next bread-baking day.

Three kinds of bread from one cake of yeast. Soak one cake of compressed yeast in one cup of lukewarm water with two teaspoons of sugar. Let it stand until yeast rises to top. Put in breadpan one quart of lukewarm water, two tablespoons of salt, two tablespoons of lard and flour to make stiff batter, then add cup of yeast, stir well and let rise until light. Separate the mixture into three parts. To the first, white bread, add two tablespoons lard, and flour to knead as any bread and let rise again until double in bulk. To the second, brown bread, add one-half cup of molasses, a very little shortening, one-fourth cup of brown sugar, graham flour to knead, and set away to double in bulk. To third, raisin bread, add one cup of white sugar, a little shortening, a half cup of raisins and flour to knead as usual. Set away to double in bulk. Knead all down and let rise again, then bake forty-five to sixty minutes.

"CONTRABAND."

(Continued from page 79).

"Dade."

"Aye, aye, sir," his voice coming from out the forward passage.

"Bring Mr. McCann's breakfast, if it is ready."

"Yes, sir; all ready, sir."

He came forward with it on a tray, and I stepped aside to permit him to pass through the door, carefully keeping my back turned toward the motionless girl, and my eyes fastened on McCann.

"Leave the tray there on the stool, Dade—yes, that's all; you may go back to your work."

He backed out, but stood hesitating, while I closed and locked the door, dropping the key into my pocket.

"Is—is that all, sir?"

"I told you it was. When I want those dishes removed, I'll come down, and unlock the door for you. No one—not even you—are to speak with the prisoner. It will be well for you to remember that, Dade, and keep your eyes open."

"Yes, sir."

"Now go forward, about your work."

"Very well, sir."

I watched until he vanished in the passage, not altogether satisfied. The fellow had been outwardly respectful enough, but there was something indefinite about his manner which aroused my doubt. I turned, and confronted the young woman, wondering vaguely how long she had been there, and how much of our conversation she had overheard.

CHAPTER XVIII.

The Measure of Danger.

WE were alone, and as our eyes met, she advanced toward me across the deck, her hand extended.

"I was only there for a moment, Captain Hollis," she explained quietly, as though in answer to the silent inquiry of my face. "I was going on deck for a breath of air, and when I opened the door heard my own name spoken. Quite naturally I listened."

"Which you had every right to do. I endeavored to get from McCann a pledge not to interfere with the discipline of the ship, and offered him the freedom of the cabin and after deck, if he would make such a promise."

"And he refused?"

"Emphatically; he even accused me of unworthy motives—you heard that?"

She shook her head. "I hardly think so; I heard him offer odds against your ever bringing the Indian Chief into that German port, and—oh, yes, and something about your not getting the girl—what girl?"

I smiled, decidedly relieved by the lack of embarrassment in her manner.

"Have we so many of your sex on board?" I asked, "as to leave that in any doubt?"

"He—he referred to me! Why, I thought it might be something which had occurred on shore—in New York. Whatever was it he said?"

"Just a bit of ugliness that flashed out of him, Miss Vera. It is not worth repeating."

"You will not tell me, then?"

"Why, perhaps it may be better for me to tell, rather than leave you to imagine. It seems the fellow guessed who you were in the boat—no doubt had seen you before, and recognized your face as soon as it became daylight. Then, however, it was too late for him to disguise his real self as he had revealed it. His actions had made you despise him, and turn to me for protection. Naturally the man judges my motives from his own standpoint."

"Yes—but in this case, what do you mean?"

"Why, money is his world; he has been taught nothing else—get money, no matter how. He is aware that I

am not extremely wealthy—indeed, not wealthy at all by his standards, and that you are your father's daughter. Because I serve you, is, to his mind, proof positive of a mercenary purpose on my part—that is all."

Her eyes widened, and there was a glow of color in her cheeks.

"But—but you have done no more than any gentleman would."

"Nothing more; but perhaps he cannot understand that; besides he spoke in anger, and, really, you know his opinion is nothing which needs bother either of us. Only I am rather glad you did not hear his words."

"He—he insinuated that you sought to—to win my gratitude for some reward?"

"Yes."

"That my father would pay for your kindness to me?"

"Well, Miss Vera," I found it extremely hard to choose words, "his thoughts were more direct."

Her face brightened, a sudden gleam of humor in her eyes.

"Oh, that you wanted to marry me! Isn't it too funny! Do you really think he supposes that true?"

"I would not be at all surprised," I answered, not altogether pleased at her reception of this suspicion. "It is wholly in line with his type. To me, now, the wealth of your father would be the greatest barrier between us."

"There was a time when you never knew I had a wealthy father, or indeed any other kind."

"Was I any the less attentive then?" I retorted. "I recall almost an entire night passed on deck in the vague hope of seeing you."

She laughed, but flashed her eyes up into my face.

"Did you really? I wondered if you were there. I should have come out just to see, if poor Mr. Seeley had not locked the door. But then, that was merely curiosity."

"The mystery was attractive, I confess, but I am not at all sure there was not a growing personal interest also. You can scarcely conceive the impression you left on me in the moonlight."

"Please, no compliments. I am so accustomed to those in New York I cannot appreciate them any more. Besides, think where we are—far at sea, on a tramp steamer, laden with contraband, with a half-mutinuous crew forward, and a long voyage ahead. Have I not enough to bear without that?"

"You refuse to take me seriously?"

"I refuse to have our trip spoiled by your thinking you must say nice things to me. Please! We have been such good friends, and I must trust you utterly. You will not forget, Mr. Hollis, that I am alone here, the only woman aboard, with no protector except you."

"The situation is not quite as serious as that, Miss Vera," I interposed, assuming a sudden cheerfulness. "There are others on board to be counted on. Philip Bascom certainly, and Leayord impresses me as a real man."

"Yes, but nevertheless it is upon you that all depends," she answered swiftly. "Mr. Leayord is only a sailor, and—Philip Bascom is—is only a gentleman. It is because you are both, that I possess such faith in you."

"Faith—in me?"

"Of course. If I had not possessed such faith in your seamanship, in your manhood, I could never have consented to the continuance of this voyage. Surely you must comprehend this, Mr. Hollis. In a measure you left the decision to me—and I made the choice. Why? In the hope that we might thus avert ruin from the Bascoms. Very true, yet if you had not been on board, capable and willing to assume command, I should never have so decided. It was my knowledge of you, my faith in you, which led to this adventure."

"Your knowledge, at least, was ex-

tremely limited; but I am thankful for your faith."

"Not so limited as you may think, Captain Hollis," and a smile brightened the soberness of her face. "I have heard my father speak of you, and once I listened spellbound to a tale of your seamanship."

"Of mine—impossible."

"Far from it; this was told by the lips of one who witnessed the incident. Did you ever know a Walter Hale?"

"Hale? Certainly, he was second mate on the Mattawan."

"And you were first mate. Well, I heard him tell my father how you brought that ship under jury masts into Rangoon after the captain had been washed overboard—a thousand miles across the Indian Ocean, with a coolie crew. You were only twenty-two years old then, Mr. Hale said, but the coolest lad he ever saw on a ship's deck."

"Why," I protested, "it was Hale himself who made that job possible."

"I like to hear you say that—as if you actually meant it, too. It is my guess you both did your duty. But I was just a girl then, snuggled down in one corner of my father's library, utterly forgotten by the men as they talked. The story fascinated me; no doubt it was a commonplace enough tale of the sea, but to me it possessed all the wonder of romance. The memory was with me for years, and came up afresh whenever your name was mentioned. Why," and she laughed, a dimple showing in her cheek, as she glanced up into my face, "when you told me who you were that night on the Esmeralda, such a thrill ran through me I could scarcely speak. It is silly of me to confess this; but—but it was like meeting suddenly a character from out the pages of fiction. You—you had never seemed quite real to me before."

"Yet you told me you knew I was one of the passengers."

"Yes, Mr. Seeley gave me a list of those invited; but I had no knowledge of your appearance."

"Oh, I see; that then was the shock—it must have been a severe one."

"A subject on which I refuse to be interviewed at present," she answered brightly, swept by a new mood. "But at least, I had no reason to be deeply disappointed in your character. I can trust you, Captain Hollis, and I do; surely you can ask no more than that?"

"No; and I will remember. You were going on deck?"

"For a short time; it would seem a beautiful morning."

We emerged from the companion together, but she lingered at the rail, as I clambered up the ladder and greeted Leayord aft of the wheel. It was a broad seaview revealed on every side, nothing in sight but the crested waves sweeping to the distant horizons. The swell was heavy from the storm of the night before, but the Indian Chief met them buoyantly in spite of the heavily laden hull, shipping scarce a bucket of water over her lee rail, as her sharp bow plunged into the hollows. Except for a bank of filmy cloud off the port bow, the sky was clear, but of a misty blue which made me dubious of continued pleasant weather, although the wind had become light, with barely enough force to belly our sails, and blew steadily from the southwest. The only men I saw were on the forecastle engaged in clearing up some tackle, excepting a fellow high up in the main crosstrees, with binoculars at his eyes.

"You keep a good lookout, I see, Mr. Leayord," I said, peering up at the figure outlined against the sky. "Whose glasses?"

"Probably belonged to the first mate, sir," he answered. "I found them in my stateroom, and thought it just as well to watch for inquisitive neighbors. I hope I did right, sir?"

(Continued next week).

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Markets.

GRAINS AND SEEDS.

July 31, 1917.

Wheat.—The values have fluctuated and the market is now on practically the same basis as prevailed a week ago. Rains have occurred over the northwestern district and brought relief to the wheat in some sections where moisture has been lacking. The general outlook, however, has not materially changed, and the belief prevails that the extreme hot weather will cause an increase in the amount of unmerchantable wheat due to shrinkage. Threshing returns are fairly satisfactory in the southern part of the winter wheat belt, but the disposition of farmers to hold the grain is keeping dealers in the dark on the quantity being secured. Michigan growers are just started with their wheat harvest, which is about three weeks later than normal. One year ago No. 2 red wheat sold locally at \$1.27½ per bushel. Last week's Detroit quotations were:

	No. 2	No. 1	
	Red.	White.	Sept.
Wednesday	2.45	2.40	2.20
Thursday	2.45	2.40	2.22
Friday	2.50	2.45	2.24
Saturday	2.53	2.48	2.26
Monday	2.55	2.50	2.24
Tuesday	2.55	2.50	2.19

Chicago.—July wheat \$2.74 per bu; Sept. \$2.17.

Corn.—Additional advances were made in corn prices this past week and new high records were established. There is a great deal of speculation about the probable corn crop harvest this fall. The recent warm weather has materially aided the plant in making up for a part of the general lateness of the crop, and undoubtedly will add many million bushels of merchantable corn to the aggregate yield of the country. In a number of the northern districts, however, farmers are skeptical about the corn reaching maturity and they are beginning to think of saving it through the use of silos. A year ago No. 3 corn was quoted on the local market at 83½¢ per bushel. Last week's Detroit quotations were:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	2.27	2.28
Thursday	2.27	2.28
Friday	2.32	2.33
Saturday	2.34	2.35
Monday	2.32	2.33
Tuesday	2.33	2.34

Chicago.—Sept. corn \$1.64½; Dec. \$1.17½; May \$1.16½.

Oats.—Notwithstanding the outlook for a bumper crop of oats, the market is being sustained on a firm basis. Oats are coming in more freely than they have been, which has increased the volume of business done. The crop outlook is generally very good. A year ago the local market was paying 43¢ for standard oats. Last week's Detroit quotations were:

	Standard.	No. 3
		White.
Wednesday	87½	87
Thursday	87½	87
Friday	88	87½
Saturday	88	87½
Monday	88	87½
Tuesday	89	87½

Chicago.—July oats 85¢; Sept. 60¢; Dec. 60½¢.

Rye.—There is very little trading reported in this market, which is firm with cash No. 2 quoted by the board at \$2.10 per bushel.

Beans.—There is little inquiry for cash beans with the quotation reduced 25¢ from a week ago. Complaint is made in many sections that the new crop is not developing normally, and many farmers have fear that their late-planted fields will yield very poorly. Cash beans are quoted locally at \$8, and October at \$6.25 per bushel. At Chicago Michigan pea beans, hand-picked, are in small supply and offered at \$8.75@9 per bushel. Red kidney \$6.65@6.75.

Peas.—Market is very slow, with field peas quoted at \$3.75@4.50, sacks included, on the Chicago market.

Seeds.—Prime red clover \$11.85 per bushel; October \$12.75; alsike \$12; timothy \$3.85.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$13.20; seconds \$12.90; straight \$12.50; spring patent \$13.80; rye flour \$12.50 per bbl.

Feed.—In 100-lb. sack, jobbing lots are: Bran \$41; standard middlings \$49; fine middlings \$50; cracked corn

\$88.50; coarse corn meal \$86.50; corn and oat chop \$70 per ton.

Hay.—In carlots at Detroit: No. 1 timothy \$16.50@17; standard timothy \$15.50@16; No. 2 timothy \$14.50@15; light mixed \$15.50@16; No. 1 mixed \$14@14.50; No. 1 clover \$13@13.50.

Pittsburg.—No. 1 timothy, \$17.75 @18.25; No. 2 timothy \$15@15.50; No. 1 light mixed \$15@16; No. 1 clover mixed \$15.50@16; No. 1 clover \$15.50 @16.

Straw.—In carlots, on track Detroit, rye straw \$10.50@11; wheat and oat straw \$9.50@10.

DAIRY AND POULTRY PRODUCTS.

Butter.—Prices have remained stationary, with market firm. Fresh creamery firsts offered at 37½¢, bid at 36¢.

Eggs.—Trade was slow last week but bids of 38¢ failed to bring out any goods.

Chicago.—The market is firm with prices slightly lower than last week. Creamery extras are quoted at 38¢; extra firsts 37½¢; firsts 36½@37¢; packing stock 31@32½¢.

Eggs.—On Monday fresh firsts were offered freely at 35¢, while 33¢ was bid. Quality of receipts is poor and market is firm for the best.

Chicago.—Market is easy with the prices lower. Firsts 30¼@32¢; ordinary 26½@29¢; at mark, cases included 27@32¢.

Poultry.—Market is firmer with the best broilers at 27@28¢; Leghorns 23 @25¢; hens 15@19¢; ducks 21@22¢; spring ducks 23¢; geese 15¢; spring geese 18@20¢; turkeys 24@25¢.

Chicago.—Conditions are unsettled. Fat hens are higher and broilers are lower. Fowls sell from 15@18½¢; broilers over 1¼ lbs. 22¢; under 1¼ lbs. 20¢; ducks 14@18¢; geese 12@14¢; spring geese 16@18¢.

FRUITS AND VEGETABLES.

Fruits.—Sour cherries \$2@2.25 per 16-qt. case; raspberries, red \$5.50@6 per bu; black \$4.50@5 per bu; huckle berries \$4.25@4.75 per bushel.

Chicago.—Sour cherries \$1.40@1.90; currants \$1.25@1.75; black raspberries \$1.90@2.15; red raspberries \$1.85 @2.75 per 24-qt. case. Other fruits in 16-qt. cases.

Potatoes.—Southern offerings \$4.50 @4.75 per bbl. in store lots. At Greenville the crop is reported as doing fine but rain is needed.

WOOL.

The wool trade is just as strong as ever, with the possibility of a slight let-up in the demand, due to the elimination of much of the speculative element. Cash business between dealers and manufacturers makes up the trading activities in the large wool centers. In the fleece states prices for both fine and medium have reached a 75¢ basis compared with 65¢ a month ago and 35¢ for corresponding dates a year ago. At Boston domestic fleeces sold last week from 55@85¢ per lb.

GRAND RAPIDS.

Offerings on the city market Monday morning were largely home-grown potatoes and the price advanced from \$1.25@1.50 per bushel. Black raspberries went from \$2@2.50 and red raspberries from \$2.50@2.75 per crate. No. 2 red wheat is quoted by the mills at \$2.20. New hay is bringing \$12@14 per ton.

DETROIT EASTERN MARKET.

The lateness of crops is delaying the active season of the Detroit city markets, and the variety of products offered at present is much narrower than usual for this season. Cabbages are now selling at 45@50¢ per bushel; string beans \$1; potatoes \$1.50 per bushel; raspberries 25@30¢ per quart; currants 20¢. No eggs nor butter in sight.

LIVE STOCK MARKETS.

July 30, 1917.

Buffalo.

Receipts. Cattle 188 cars; hogs 40 d. d.; sheep 6 d. d.; calves 1150 head. There were around 188 cars of cattle here today and the run consisted mostly of medium and common grass cattle. What few heavy cattle that were here good enough to go to New York sold 10@25¢ higher, but they were a very small proportion of the run, the bulk of the stuff being plain to medium and common grades on the grass order and it is almost impossible to get bids on the common ends, as there were very few here looking for stockers and feeders and the trade was unevenly lower on all of these grades, and several loads going over unsold. Would advise being very care-

ful in buying these common grass cattle, as they are bound to sell very mean if they keep on coming as plentiful as they are now.

We had a very light run of hogs today. Chicago receipts also were light, due to labor troubles, and while expectations were for a higher market trading here was very slow and sellers were badly disappointed, owing to the fact that a few early sales were made at steady to strong prices, and then the market died, with about 20 double decks of hogs going over unsold and late trade practically dead. The bulk of the sales were around \$16.50@16.60, with a few at \$16.65. Pigs and lights \$15.25; roughs generally \$14.50; stags \$12@13. Too many hogs in sight for tomorrow and prospects are lower for the balance of the week.

With a light run of lambs today our market opened up active and prices steady with the close of last week. All sold and we look for steady prices the balance of the week, depending on receipts. We quote: Lambs \$15@15.50; yearlings \$12.50@13; cull to common \$9@12; wethers \$10@10.25; ewes \$9@9.50; bucks \$7@7.50; best calves \$15 @15.50; common and light \$8@14; heavy \$7.50@10; grassers \$6@7.50.

Chicago.

July 30, 1917.

Receipts today.. 6,000 16,000 7,000
Same day 1916.. 18,488 38,674 17,701
Last week 61,096 100,496 67,523
Same wk 1916.. 31,348 102,352 63,693

This is a Monday of unusually small live stock receipts, and fat cattle are scarce and selling 10¢ or more higher, with other kinds generally unchanged, and there were no steers offered prime enough to sell at recent top figures. Other markets received large supplies of cattle, and Kansas City got 26,000 head. Hogs of the best kind sold as high as \$16.30 early, but the general market averaged about 10¢ lower. Hogs received last week averaged 231 lbs. Nearly all the lambs received today came direct to packers, and there were not enough to make a market, prime lambs being quotable around \$15.50.

Cattle prices were wider apart than ever last week, the best selling at fresh high records, with few offered, while the trashy class of grassers glutted the market and went off as much as 50¢@1. During the preceding week \$14.05 was the new high record, but last week saw sales of prime steers weighing 1448 and 1529 lbs. at \$14.10 and \$14.15. The bulk of the steers sold at \$10.75@13.50, with the choice weighty steers taken at \$13.50 and over and a good class of steers at \$13 and upward. Medium to good steers sold at \$11 and over, and ordinary to fair steers of light weight went for \$8@10.95, with sales down to \$7 or even less for inferior little steers. Yearlings with quality to recommend them had an outlet at \$12.50 @14, with the commoner class selling down to \$9.60. Butcher stock had a slower sale than for some time past, with inferior ones selling much lower, and there was a poor showing of the better class. Cows sold at \$6.60@10.25 and heifers at \$5.85@12.25, while cutters were off to \$5.60@6.55 and canners to \$4.50@5.55. Calves were purchased at \$11@13.50 for light vealers after an early week top of \$14.25, the heavy calves selling at \$5.50 and upward. Not much activity was experienced in the stocker and feeder branch of the market, although prices were much lower, early stockers going at \$6@8.90 and feeders at \$7.75@9.25, a few selling as high as \$9.50. Texas advices were not reassuring, Kansas City reporting a glut of stock cattle from that quarter, the cattle having been forced on the market by drought. Farmers are waiting for corn crop developments and of the opinion that they will be able to buy cattle much lower later in the season. Bulls closed at \$5.50@10.

Hogs were held back last week by numerous stock feeders, because of the recent bad breaks in prices, owners being of the opinion that by marketing sparingly they would bring about some good rallies in values. This course of action worked all right, and much higher prices were scored all along the line, although it was not always possible to put the inferior kinds on a much higher level. Omaha and Sioux City reported some heavy runs, indicating that the summer run in that region is being let loose early off grass. Late in the week there was a sudden boom in hogs that landed the best at \$16@16.30 and the poorer kinds at \$14.75@15.25, pigs selling at \$11.75@14.75, with the best prices paid for pigs weighing around 135 lbs. Prime heavy hogs topped the market, with prime light shipping hogs selling a dime below them. The switchmen's strike on Saturday caused uncertainty as to the near future.

Lambs made up most of the offerings in the sheep division of the stock yards last week, including liberal supplies received by the packers from Louisville, as well as a number of train loads of Idaho range lambs offered on the open market. The Idaho lambs included a good representation of choice killers and a fair showing of excellent feeders. The week's receipts were much larger than a week earlier, and most lambs closed 35@50¢ lower than a week earlier, some culls and medium lambs being off 75¢. Sheep and yearlings showed little change. Prices closed as follows: Lambs at \$10.50@15.60; feeding lambs \$14.25@15; yearlings \$8.50@12.75; wethers at \$7.50@11; ewes \$3.50@9.25; breeding ewes \$9@15; bucks \$5.50@7.25.

Horses were marketed moderately last week and sold at generally unchanged prices, with a good demand from the United States and Great Britain for army horses, riders selling at \$150 and light gunners at \$175. Horses sold at \$60@100 for the common class and at \$185@265 for the drafters, with a fair kind of horses weighing 1350 to 1500 lbs. taken at \$160@165 for eastern shipment. Farm chunks were bought by eastern shippers at \$100@175.

LIVE STOCK NEWS.

Hogs are marketed freely pretty much all the time, or except after severe breaks in prices, following larger supplies than usual. The natural impulse is for stockmen owning hogs to market them as soon as they get moderate weight, although for many weeks there has been a gradual increase in average weights of hogs received in the Chicago stock yards. However, the average weight is running well behind most former summers, although pigs are being marketed much less freely than usual in the midsummer season. Recent receipts of hogs in Chicago have averaged in weight 232 lbs., comparing with 231 lbs. one year ago, 241 lbs. two years ago, 246 lbs. three years ago and 243 lbs. four years ago. But for the scarcity and dearthness of corn everywhere throughout the hog feeding sections of the country, hogs would come to market much better finished. As it is, there is a marked lack of good corn-fed hogs and the daily receipts are very largely made up of inferior grassy offerings. This has brought about an extremely wide spread in prices between the best barrows of heavy weight and ordinary grass-fed swine, and the latter are usually the first to go lower and the last to advance. Although large reductions in prices have taken place since the high time of the present year, hogs are still selling for higher prices than in former years. No longer than two years ago hogs were bringing an extreme range of \$6.50@7.85 per 100 lbs.

SUMMER MEETING OF MICHIGAN FRUIT GROWERS.

The mid-summer meeting of the Michigan State Horticultural Society will be held at Adrian, Wednesday and Thursday, August 8-9.

The members of the State Society will be the guests of the Lenawee County Horticultural Society at this time. The local society will use every effort to make all welcome, and as the State Society has never visited Lenawee county it will be a fine opportunity for all to become acquainted with the surroundings of Adrian.

The following program will be carried out as far as possible.

Wednesday, August 8.

10:00 A. M.—Assembling of members and friends in Circuit Court room of the court house.

10:00 to 12:00—Experience meeting while members are arriving.

12:00 to 1:30—Lunch.

1:30—Address of welcome, F. H. Ehinger, President Lenawee County Horticultural Society.

Short address by Hon. Clark Baldwin, President Chamber of Commerce of Adrian.

Informal talks by members of the State Society.

3:30—Auto ride through Adrian and suburbs.

7:00—Banquet with short toasts.

Thursday, August 9.

9:00 A. M.—Assemble at the Court House for auto trip about Lenawee county.

12:00—Lunch. Served en route. Informal talks will be held on this trip at different orchards.

Everyone will be made most welcome and all should attend this meeting if possible. It is a splendid opportunity for the busy fruit grower to have a little outing before the rush of the fruit harvest begins. Come and bring the family and friends. For further particulars address Robert A. Smythe, Secretary, Benton Harbor, Mich.

THIS IS THE FIRST EDITION.

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

DETROIT LIVE STOCK MARKET.

Thursday's Market.
July 26, 1917.

Cattle.

Receipts 2209. Good grades and cows steady; all medium cattle very dull and 5@25c lower than last week. Best heavy steers \$10@10.80; best handy weight butcher steers \$8.50@9.50; mixed steers and heifers \$8@9; handy light butchers \$7.50@8; light butchers \$6@7; best cows \$7.50@8; butcher cows \$6.50@7; common cows \$5.75@6; canners \$5@5.50; best heavy bulls \$7.50@8; bologna bulls \$6.50@7; stock bulls \$6@6.25; feeders \$8@9; stockers \$6@8; milkers and springers \$5@10.

Bishop, B. & H. sold Mich. B. Co. 6 cows av 866 at \$5.50, 3 do av 1053 at \$7.50, 16 butchers av 970 at \$8, 20 steers av 1081 at \$9, 6 do av 1175 at \$10.50, 3 do av 1023 at \$10.50, 7 do av 836 at \$9; to Bresnahan 27 butchers av 663 at \$6, 1 cow wgh 800 at \$5.50, 2 do av 1025 at \$7.75, 2 do av 1000 at \$6.75, 2 stockers av 565 at \$5.50, 1 bull wgh 1030 at \$7.25, 8 cows av 760 at \$5.75, 5 do av 934 at \$7, 4 do av 870 at \$5.50; to Golden 2 butchers av 800 at \$6.50; to Parker, W. & Co. 9 steers av 950 at \$9, 18 do av 782 at \$7.25, 16 do av 777 at \$7.50, 8 do av 1012 at \$9, 20 cows av 695 at \$6.50; to Thompson 1 bull wgh 1380 at \$7.50, 2 do av 1360 at \$7.50; to Bresnahan 10 cows av 788 at \$6, 2 do av 1210 at \$7.50, 5 do av 980 at \$5.75; to Sullivan P. Co. 6 do av 985 at \$7.50, 2 steers av 875 at \$8; to Parker, W. & Co. 13 butchers av 782 at \$7.50; to Sullivan P. Co. 2 steers av 890 at \$7.25, 2 bulls av 1175 at \$7.75; to Schwab 4 stockers av 560 at \$7; to Hammond, S. & Co. 1 bull wgh 1300 at \$7.50, 21 steers av 914 at \$8.50, 5 do av 718 at \$6.50; to Parker, W. & Co. 20 do av 1210 at \$10.25; to Mich. B. Co. 20 do av 970 at \$8.75, 7 do av 817 at \$6.85.

Erwin, S. & J. sold Sullivan P. Co. 15 cows av 1073 at \$7.50, 2 do av 1155 at \$7.75, 5 do av 1142 at \$7.60, 4 do av 1000 at \$7.25, 2 do av 950 at \$6.75, 1 do wgh 900 at \$5, 5 heifers av 690 at \$7, 8 cows av 975 at \$7.35; to Thompson 13 steers av 984 at \$9, 2 do av 990 at \$9.50, 2 do av 890 at \$9, 4 do av 787 at \$8.50; to Hoffend 5 heifers av 660 at \$6.60; to Sullivan P. Co. 8 cows av 1055 at \$7.60, 1 do wgh 1000 at \$6, 4 do av 962 at \$7.25, 30 steers av 980 at \$8.85; to Bray 3 butchers av 860 at \$6, 3 stockers av 683 at \$5.50, 3 do av 666 at \$5.50, 2 cows av 865 at \$5.50; to Mason B. Co. 1 steer wgh 950 at \$9.75; to Applebaum 11 butchers av 798 at \$6.80; to Hammond, S. & Co. 1 bull wgh 1220 at \$7.70, 3 do av 1157 at \$7.40; to Thompson 3 heifers av 883 at \$7.50; to Shiparo 7 steers av 930 at \$8.25; to Bray 9 cows av 811 at \$6, 2 do av 1140 at \$6.50, 4 do av 762 at \$5.50; to Nagle P. Co. 1 steer wgh 1000 at \$9.65.

Veal Calves.

Receipts 628. Market 50@75c lower than last week. Best \$14; common and heavy \$7@10; trade on common grades demoralized.

Erwin, S. & J. sold Hammond, S. & Co. 8 av 165 at \$13.50, 11 av 170 at \$14.50; to Rattkowsky 7 av 180 at \$13.50; to Sullivan P. Co. 21 av 170 at \$14.50.

McMullen, K. & J. sold Hammond, S. & Co. 9 av 160 at \$14, 4 av 190 at \$9, 12 av 175 at \$13.25.

Sandel, S., B. & G. sold Shiparo 5 av 125 at \$10, 7 av 145 at \$14.50; to Sullivan P. Co. 9 av 165 at \$14.

Sheep and Lambs.

Receipts 581. Market 50c lower than on Tuesday or last week. Best lambs \$14.50; fair lambs \$13@14; light to common lambs \$10@12; fair to good sheep \$8@8.25; culls and common \$4@6.

Bishop, B. & H. sold Thompson 31 lambs av 72 at \$15.25, 14 do av 68 at \$15.25; to Mich. B. Co. 4 do av 95 at \$15.25, 7 do av 85 at \$15.25, 12 do av 85 at \$15.25, 7 sheep av 120 at \$8; to Sullivan P. Co. 24 lambs av 75 at \$14, 11 do av 60 at \$14, 16 do av 75 at \$14.50.

Erwin, S. & J. sold Thompson 6 lambs av 75 at \$15.

Sandel, S., B. & G. sold Parker, W. & Co. 72 lambs av 85 at \$14.75, 21 do av 90 at \$14.50, 16 do av 70 at \$13; to Sullivan P. Co. 15 do av 78 at \$15.25, 16 do av 70 at \$12; to Thompson 4 do av 60 at \$12, 28 do av 75 at \$14.75, 9 sheep av 140 at \$7.50.

Hogs.

Receipts 1016. Market steady at Tuesday's prices, 50@75c higher than last week. Pigs \$14@14.75; mixed \$15@15.75.

Report on the Condition of Important Michigan Crops.

Over 400 special correspondents covering the agricultural communities of both peninsulas have reported on the condition of fifteen important crops as they appeared on July 24. These reports have been averaged and tabulated according to counties in the following table. A careful study of the figures will give the reader a comprehensive idea of the crop prospects for Michigan so far as condition is concerned. The increase in the acreage of some of these crops, however, will augment the gross yield, even though the condition may not be up to the normal.

County.	Wheat	Corn	Oats	Rye	Barley	Beans	Buckwheat	Potatoes	Sugar Beets	Hay	Pasture	Apples	Peaches	Pears	Plums
Alcona	60	28	83	83	..	15	20	97	40	106	102	5	..	20	20
Allegan	87	68	97	82	100	84	98	97	..	85	99	60	79	80	83
Alpena	80	60	95	88	100	105	88	100	60	102	122	35	40	40	50
Antrim	82	60	94	91	..	77	32	95	..	99	98	25	25	68	60
Arenac	80	62	105	98	100	68	93	83	95	103	100	..	..	..	..
Baraga	95	85	105	85	90	..	..	130	..	110	110	..	..	..	..
Barry	80	105	100	100	..	..	..	..	..	110	100	..	..	..	..
Bay	76	40	125	89	102	58	74	76	70	95	91	47	55	78	80
Benzie	125	80	80	125	..	80	100	100	..	120	100	5	..	..	5
Berrien	85	82	97	97	..	84	95	99	..	77	97	55	29	46	38
Branch	89	65	100	100	106	68	90	107	..	68	94	60	..	75	..
Calhoun	82	77	95	100	97	92	99	109	..	92	95	52	20	65	65
Cass	83	71	106	90	..	93	91	101	..	85	94	45	40	44	46
Charlevoix	92	57	91	92	105	75	91	94	..	104	97	38	..	75	35
Cheboygan	99	75	99	101	98	96	101	104	94	95	103	45	..	..	65
Chippewa	83	..	85	..	71	..	..	90	..	77	98	100	..	..	..
Clare	91	77	98	102	102	92	95	102	90	100	107	57	..	77	77
Clinton	63	78	92	80	98	84	85	98	98	87	102	45	..	..	..
Crawford	40	60	60	90	..	90	100	100	..	80	100	25	..	..	..
Dickinson	100	50	50	..	..	..	..	100	..	100	105	50	..	..	..
Eaton	68	69	94	58	93	68	92	96	75	84	107	47	..	50	50
Emmet	80	59	96	95	98	96	100	102	..	108	100	31	..	75	70
Genesee	91	53	94	93	91	54	90	100	85	95	104	..	..	..	..
Gladwin	100	44	107	103	87	73	54	104	88	96	108	24	..	30	63
Gogebic	100	75	101	95	100	90	..	100	..	96	105	70	..	..	95
Grand Traverse	83	53	98	95	..	83	100	107	..	102	103	38	..	75	80
Gratiot	80	54	103	90	100	48	88	105	95	89	98	48	50	62	78
Hillsdale	71	71	95	84	89	70	87	99	..	88	96	63	..	33	78
Houghton	100	90	100	100	95	100	100	110	..	90	95	100	..	..	105
Huron	72	56	94	84	95	52	91	78	85	92	102	60	75	68	70
Ingham	50	60	90	60	100	40	90	100	100	85	90	50	..	75	100
Ionia	78	75	100	100	100	80	100	100	100	105	100	55	..	100	..
Iosco	77	42	98	60	85	57	83	55	50	92	87	12	..	75	63
Iron	75	90	95	90	75	100	..	95	..	90	100	75	..	..	..
Isabella	70	68	100	89	102	65	100	94	61	90	100	48	..	50	15
Jackson	81	71	96	95	78	74	95	98	80	74	89	54	80	69	64
Kalamazoo	80	75	96	99	97	86	87	105	..	78	88	80	50	50	102
Kalkaska	83	61	83	102	90	83	98	94	..	98	86	25	28	75	60
Kent	86	58	95	93	95	96	87	105	..	98	97	69	18	94	89
Lake	88	66	104	100	95	92	100	104	75	95	113	51	45	57	60
Lapeer	91	65	111	99	106	60	81	90	83	91	98	26	30	62	65
Leelanau	91	66	94	95	..	81	78	100	..	100	93	33	13	35	35
Lenawee	83	85	110	95	109	100	100	100	100	99	110	63	..	..	..
Livingston	85	67	100	100	96	82	97	111	90	81	99	77	50	80	98
Luce	95	90	95	100	100	100	..	95	..	90	100	100	..	95	100
Mackinac	105	95	105	100	100	101	100	105	100	95	95	90	..	..	100
Macomb	85	48	102	99	93	80	85	88	100	100	100	80	72	85	77
Manistee	90	80	80	75	..	80	90	80	..	110	100	50	40	50	..
Marquette	93	100	95	100	86	..	85	104	..	90	99	79	..	..	100
Mason	85	71	96	97	100	88	100	105	..	93	102	53	20	76	50
Mecosta	95	50	90	120	..	100	95	85	..	90	100	80	..	..	..
Menominee	120	85	110	100	110	120	100	160	140	100	110	25	..	..	125
Midland	83	63	107	100	100	73	80	113	90	85	95	28	..	50	50
Missaukee	87	57	100	98	100	81	89	97	..	96	110	34	..	..	..
Monroe	101	74	98	93	80	80	88	98	43	89	111	51	55	82	50
Montcalm	70	65	103	83	100	80	..	80	..	73	94	40	..	..	75
Montmorency	90	65	95	100	100	95	100	100	..	110	110	85	..	80	90
Muskegon	95	77	88	95	..	100	99	94	..	95	97	52	50	75	75
Newaygo	76	53	98	92	98	79	92	100	100	92	100	50	24	59	47
Oakland	89	64	103	102	104	80	..	96	..	96	99	43	25	68	55
Oceana	91	69	90	85	..	91	95	102	..	84	102	48	34	50	69
Ogemaw	88	60	104	101	100	74	86	101	80	109	106	43	53	48	60
Ontonagon	75	..	75	..	..	80	..	100	..	75	95	50	..	..	100
Osceola	87	62	99	91	77	65	71	89	..	94	100	46	..	52	36
Oscoda	97	67	100	108	..	95	75	100	..	103	105	25	..	75	75
Otsego	100	50	100	100	..	100	90	100	..	100	100	..	..	..	..
Ottawa	85	65	92	94	79	78	75	96	77	96	89	41	31	67	55
Presque Isle	86	57	106	106	99	70	100	99	..	100	117	38	..	40	84
Roscommon	75	70	93	85	85	80	95	100	..	112	100	55	..	80	80
St. Clair	91	43	98	95	100	57	68	65	43	100	100	42	5	43	35
St. Joseph	86	80	102	97	95	92	85	100	..	83	91	65	29	60	88
Sanilac	86	63	103	94	100	42	80	74	58	100	93	23	23	64	73
Saginaw	86	38	98	94	99	43	25	75	78	76	88	31	25	23	30
Schoolcraft	90	25	90	90	95	..	80	90	..	60	100	80	..	..	80
Shiawassee	70	65	100	93	98	64	100	101	79	94	98	65	..	75	75
Tuscola	77	52	96	86	88	56	71	85	75	89	95	21	22	52	55
Van Buren	79	74	99	95	..	88	93	93	..	90	90	43	40	65	30
Washtenaw	84	88	103	97	103	88	102	104	95	99	100	55	35	60	59
Wexford	75	53	99	94	..	84	100	107	..	84	98	50	30	30	57

88 Bu. Oats Per Acre

Mr. A. Taylor writes: "I had 315 acres in oats that averaged 88 bushels an acre, 30 acres in wheat that averaged 50 bushels an acre, 20 acres in barley that averaged 50 bushels an acre." This is only one of thousands of good reports from Western Canada. Yet nowhere can you buy good farm land at such low cost as along the Canadian Northern Ry.

BEST FARM LANDS at \$15 to \$20 per acre

Here you can buy specially selected, centrally located lands close to the railway, that will produce crops that can only be equaled on farms costing \$150 to \$200 the acre in a more densely settled community. This includes the best grainland, land also adapted to dairy and mixed farming. Here the man with limited cash can become the owner of one of these fertile farms through the liberal installment payment plan.

Low Fares Low round-trip home-seekers' fares to Western Canada are in effect every Tuesday, to November 27th inclusive.

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If you have not the capital to buy land you can still get one of the recently surveyed 160 acre fertile Homesteads along the Canadian Northern Railway, the newest transcontinental railroad, "The Road to Opportunity."

Free Book Be sure to write today for a free copy of the "Home-Seekers' and Settlers' Guide," full of complete and authentic information. A fortune is waiting for you.



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NORTHERN RY.**

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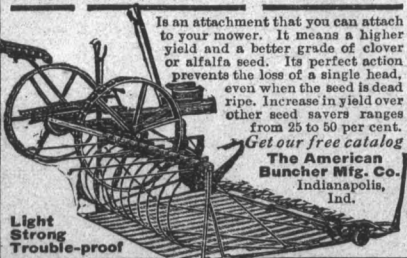
This powerful disinfectant destroys grain smuts, rust and fungus growth. It prevents flax wilt, also scab and black-leg diseases of potatoes. It rids stables and chicken houses of disease germs and flies. Formaldehyde is surely a great boon to the farmer. Our Formaldehyde at your dealer, 35 cents in pint bottles will treat 40 bushels of seed. Big illustrated Hand Book sent on request—free.

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in one day's operation

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Mention The Michigan Farmer When Writing Advertisers

Marketing Quality Grapes

By R. G. KIRBY

THE neatly packed basket of grapes still showing the bloom in a few miles of the local market is an attractive and appetizing delicacy. Grapes fresh from the vineyard are appreciated in every market center but unfortunately most cities and small towns depend upon grapes shipped in from distant growing centers and frequently the fruit is not in the best of condition when sold to the ultimate consumer. Many baskets of grapes raised in Michigan have to endure too much transportation before they are used. The basket may travel from the fruit belt of Michigan to Chicago and then back to a small town less than fifty miles from where it was produced. Then it stands in the grocery store for one or two days and finally arrives in the home of a city buyer who likes grapes. He opens the basket and finds that the fruit has lost its bloom and freshness. The bottom of the basket has become sticky and mushy and after eating a few of the grapes the remainder linger on the sideboard until they have dropped from their stems and are ready for the refuse can. The buyer loses his appetite for grapes of that kind and the grape producer loses a regular customer.

Where All Are Satisfied.

Let us suppose that the grapes were produced on a farm within a few miles of market. The grower depends upon customers in the nearby city and local dealers to handle his crop. What is the result? The fruit arrives on the market in excellent condition if a fair amount of care has been used in growing, picking and packing and the baskets of grapes are attractive. The consumer buys a basket and carries them home. The entire family scramble for the luscious bunches and desire more. The grocery order for the next day includes one or more baskets of fresh grapes and the consumer and the producer are benefited by the transaction. In some sections there is a fine opportunity for farmers to make money supplying local markets with quality grapes if they have the inclination and the time for such work. While many fine grapes are shipped from distant markets to towns in sections where grapes are not produced it is certainly true that the grape business has been injured by poor quality fruit and many more grapes would be consumed if they could be produced within a few miles of the local market which handles them.

Attractive Packages.

Grapes are usually marketed in what is called the Climax basket and they come in sizes which hold three, five, eight or ten pounds of fruit. Some growers add to the attractiveness of their package by adopting a brand name which is placed on every basket of fruit. A colored sticker showing a picture of grapes along with the brand name and the address of the farm will draw trade for that particular kind of grapes if the quality is first-class clear to the bottom of the basket. The old-fashioned tendency on some farms to place the little bunches in the bottom and the perfect bunches on top has never made any friends for the grape business. The buyer who found poor grapes on top and fine fresh specimens in the bottom of the basket might come back for more because the taste of the last bunch would stimulate his appetite for more. The buyer who started out on a fine bunch and finished the basket with a handful of sticky mush is apt to be prejudiced against grapes. It is "repeat orders" that count in every business. The grape market, even for fruit of quality, has always been severely injured by the amount of poor grapes in competition and this is very unfair to the grower who attempts to sell first-class fruit. However, in the future the grower of good grapes is very apt to receive better prices than in the past and the grower who can place fine grapes on his local market under a brand name should be able to make the vineyard a profitable section of the farm.

Good Culture.

Growing grapes on a commercial scale should not be attempted unless there is time to do it right. A certain amount of pruning, cultivation and spraying are necessary. The art of spraying grapes thoroughly requires some study and practice and first-class fruit cannot be placed on the market without a thorough knowledge of the insects and fungous diseases which attack the grape. Much valuable information can be obtained along this line in the bulletins furnished by the state experiment stations and the department of agriculture.

Storing Surplus Potatoes

THE primary purposes of storage are to protect the tubers from extremes of heat and cold and from light. Account must be taken of conditions of humidity and ventilation and of the size of the storage pile.

The temperature should be the highest at which potatoes can be maintained firm and ungerminated, and which will at the same time hold fungous diseases in check. Experiments of the Department of Agriculture with artificially refrigerated storage indicate that thirty-six degrees F. is sufficiently low for all practical purposes and that in the earlier portion of the storage season a temperature of forty degrees F. is just as satisfactory as a lower one except where powdery dry rot infection occurs.

All natural light should be excluded from potato storage houses because when the tubers are exposed to even modified light, they are soon injured for food purposes. A practical rule in regard to humidity is to maintain sufficient moisture in the air to prevent the wilting of the tubers and at the same time to keep the humidity content low enough to prevent the deposit of moisture on the surface of the tubers.

If potatoes are piled in too large

any other type of storage space. In this section these dugouts ought to be fitted with water-tight roofs. Special care should be taken to provide good drainage if the soil is not naturally situated to prevent water settling in the dugout. As a rule, the excavation for the cheaper structures of the dugout pit or cellar type when erected on level or nearly level land, does not exceed three feet. The soil removed from such an excavation, particularly if the dugout is of any considerable size, is ample for banking the side and end walls for the roof. The cost of construction may be greatly modified, according to the character of the location.

In the cheaper dugouts, where the soil is of such a nature as to remain intact it is allowed to form the side and end walls, the roof being supported on plates resting on the soil and held together by boards or joists. This form of construction involves a deeper excavation and a constant element of risk from a cave-in. In the more expensive and substantial structures the side and end walls are built of concrete.

Insulated Frame Structures.

Insulated frame potato storage houses are not used very extensively. As a rule they are better adapted to southern than to northern climatic conditions. The construction feature of such houses is the thorough insulation of their walls, ceiling, doors and windows. This type of storage house is not to be recommended for northern locations, nor is it advocated for the south except where poor drainage conditions will not permit the use of the dugout or cellar style of house. It is not recommended, because it can not be so economically constructed, nor does it furnish as good a type of storage as the properly ventilated cellar storage house.

The Aroostook Type of Storage House.

The Aroostook type of storage house with concrete or masonry basement walls and wooden superstructure, seems to be distinctively a product of Maine, and so far as has been observed is not found to any extent outside of the state. It is an expensively constructed house and is almost always located on a side hill or knoll in order that advantage may be taken of a ground-level entrance. That such houses have proved satisfactory to the potato grower in Maine is evident from the fact that practically no other style of potato storage house is in use in that state.

The Artificially Refrigerated Storage House.

The artificially refrigerated potato storage house is as yet hardly in existence. The present use of this type of storage house is confined practically to the holding of northern-grown seed potatoes in cold storage for second-crop planting in the south. A recently published farmers' bulletin of the U. S. Department of Agriculture gives added details on these different methods of storing this important crop.

HOLDINGS OF CREAMERY BUTTER.

Reports from 266 cold storages show that their rooms contain 65,874,378 pounds of creamery butter, while on July 1, 312 storages reported 48,498,442 pounds. The 207 storages that reported holdings on July 15 of this year and last show a present stock of 61,273,734 pounds as compared with 78,707,845 pounds last year, a decrease of 17,434,111 pounds, or 22.2 per cent. The reports show that since July 1, the holdings increased 35.9 per cent, while our last report showed that during June, the June 1 holdings increased 426.7 per cent. Last year the increase from July 1 to July 15 was 46.4 per cent and in June the increase was 675.2 per cent. A summary of this report was released by wire on July 20.

Warranted to Give Satisfaction.

**Gombault's
Caustic Balsam****Has Imitators But No Competitors.**

A Safe, Speedy and Positive Cure for
Curb, Splint, Sweeney, Capped Hock,
Strained Tendons, Founder, Wind
Puffs, and all lameness from Spavin,
Ringbone and other bony tumors.
Cures all skin diseases or Parasites,
Thrush, Diphtheria. Removes all
Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism,
Sprains, Sore Throat, etc., it is invaluable.
Every bottle of Caustic Balsam sold is
Warranted to give satisfaction. Price \$1.50
per bottle. Sold by druggists, or sent by ex-
press, charges paid, with full directions for
its use. Send for descriptive circulars,
testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

**New Insurance Law Protects
the Responsible Man in a
Mutual Company**

The last legislature codified the insurance laws of the state, and it provides that it shall be lawful for a mutual insurance company to provide in its articles of association and by-laws to make assessments upon the policies issued pro rata for the payment of losses and expenses and that said assessment shall be a lien upon the property insured to the amount of the assessments and costs and interest thereon.

The above law is a protection to the man who has property and is responsible, for the reason that every man who belongs to a mutual company can be compelled to pay his part of the assessment. If a man is honest and fair, he would be willing to do this.

Many of the large mutual companies have had such provisions in their policy. The company which has no such provision should make such a provision in its by-laws so as to guard the man with property against the slackers and those who are unwilling to do their part.

**SPLIT HICKORY
AFTER HARVEST****Special
Prices!**

If you need a buggy or harness this fall or next spring, I'll save you \$20 to \$40 if you buy NOW. You won't have another chance to buy as low as my "After Harvest Prices" which I am quoting for a limited time. Write today for

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and see for yourself the money you can save. Look over the 150 nifty styles, SPLIT HICKORY Buggies are famous the world over. Sold on 30 Days FREE Road Test—2 Year Guarantee. Don't miss this opportunity to get a genuine Split Hickory at a big saving. Write for catalog and price list now.

H. C. PHELPS, Pres.
The Ohio Carriage
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A REAL POTATO DIGGER

Not a mere Plow with a rake attachment, but a low priced, scientific implement. Cleans the trash from the dirt and the dirt from the potatoes as well as machines that cost five times as much. Steel beam with high arch to prevent clogging. Polished high carbon steel shovel. Adjustable wheels regulate depth and "pitch" exactly. Will not bruise potatoes. Don't buy a Drill, Cultivator, Harrow, Lime Spreader, Potato Digger, or any other piece of Farm Machinery before writing for our special catalog. State what machine you want and give your dealer's name.

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Dromgold
Company
York, Pa.
1514 6th Ave.



Please Mention The Michigan Farmer When
Writing to Advertisers

Grange.

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

NEWAYGO POMONA MEETING.

Newaygo Pomona Grange met with Lincoln Grange, June 21, for a one-day session in Aetna Grove, and a picnic dinner.

Hon. Wayne Rice was to have given an address, but telephoned that he would not be present, so the patrons themselves occupied the time. What helpful suggestions that I gained at the farmers' institute, or week of school last winter, can I put into practice? P. M. Miller opened this question and told of the many things the week of school did for him.

One farmer asked if the bulletins sent out by the government and agricultural colleges were not as valuable as the schools, and the general answer was "no," the farmers would not read them. There was more incentive, and better inspiration where men get together and exchange ideas. Are we showing proper spirit to the farm bureau, was another question brought up. The general opinion was that we did not, and that it was our fault if we did not take advantage of the things offered by the bureau.

Will it be just to the grower and consumer for the government to regulate the price of farm products, without eliminating the speculator? This question was taken up by Homer Handy and nearly everyone had something to say. Some said you could not eliminate the speculator, as he was a necessity. Many others contended that it would not be right for the government to regulate the price of farm products.—Mary Robertson.

DEDICATE A RURAL HOME.

For the second time the ceremony of dedication of the rural home of one of its members was performed by Ann Arbor Grange at its last regular meeting. Patrons who have not read or seen this ceremony carried out can have little idea of its extreme beauty and simplicity. Among all the rare portions of Grange ritual, it holds no mean place. Its ideas are so plainly worded and so fittingly picture the ideal farm home in its best estate, that it makes a profound impression upon all who hear it. The sentiments, the songs, the emblems—all are of the commonest and dearest to the home-loving heart. The family whose home is dedicated, the officers of the local Grange, the members and their little children, even to the infant in arms—all these are assigned a place and part in this dignified and heart-searching service. I cannot too strongly urge subordinate Granges everywhere to use this somewhat recent contribution to our Grange symbolism and helpful services.

In the instance referred to above, the home of Mr. and Mrs. E. E. Calkins, on Packard Road, was dedicated under the name of "Longacres," by Ann Arbor Grange, with Master Oscar McDougall in charge.—Jennie Buell.

COMING EVENTS.

Lapeer County Pomona Grange Rally and Picnic will be held at Cedar Park Lake, Wednesday, August 8. John C. Ketcham, Master of Michigan State Grange, will be special speaker for the occasion. Everybody invited to attend.

Pomona Grange of Mecosta county will hold their annual picnic in Biehler's Grove, a half mile west of Stanwood, Thursday, August 16. John C. Ketcham, Master of the Michigan State Grange, will deliver the address. A fine program of local talent is being prepared, as well as sports, races and other contests for all. Forget the busy cares of farm life and bring your basket of good things and get a few of the "germs" of good fellowship and social Grange spirit that will fill that beautiful little grove on August 16.

West Michigan Grange Rally, under the auspices of Kent County Pomona Grange, will be held Wednesday, August 22, at the Brewer Farm, at Plainfield.

Farmers' Clubs**CENTRAL MICHIGAN CLUB
RALLY.**

Central Michigan Farmers' Clubs will hold their second rally at the M. A. C., Wednesday, August 15, 1917. Everybody should plan to be there. Further particulars in the next issue.

W. L. CHENEY, President,
Mason, Mich.

MOTHERS PINK TEA.

There were just eighteen charming girls in our community, daughters of the members of our Farmers' Club. They had organized themselves into a sort of culture club of their own, which we mothers knew little about, until we received the following invitations, which we made a point to accept. The invitations were written on pink tinted cards as follows:

"You are invited to be present at a 'Pink Tea,' in honor of the mothers of our club members, from three to six o'clock, July 2, 1917. Parlors of village church."

The ladies were received by the president of the club, and the first hour was spent in an informal visit, which resulted in heart to heart talks of the problems of modern farm life. One mother said that her daughter's taste in reading had been much improved by the exchange of good books among the club members. Another said, "Mae's music had seemed a waste of time and money, until she began to play at the Farmers' Clubs, since that she seemed to realize the pleasure she might give by the patient cultivation of her musical talent. And one mother spoke of the helpful interest her twin daughters were taking in cooking the daily meals.

Promptly at four o'clock eighteen lovely maidens dressed in white, with pink caps on their heads, escorted their guests to the dining-room. The table was a vision in pink and white. Pink carnations and bleeding hearts formed the centerpiece. Place cards bearing hand-painted rosebuds, the work of one of the girls, and favors of little baskets made from pink Bristol board, and filled with candy, graced each place. The bill of fare, which follows, was cooked by the girls themselves, and daintily served:

Tomato Bisque Wafers
White Bread Butter
Strawberries and Cream
Pink and White Cake Ice Cream

At the conclusion of the meal the president said, "If our mothers will now go with us into the adjoining room, we shall be pleased to display our talents in other ways."

A delightful miscellaneous program followed. Care had been taken that each daughter should take a part previously unheard by her own mother. Violin and piano selections were practiced when mother was absent. One very diffident girl, who always failed if standing before an audience, recited a humorous poem in a delightful manner, seated in a big arm chair. The program was concluded with a familiar song, sung by the mingled voices of mothers and daughters. Yes, and the writer, who is pleased to tell the true story of the Mothers' Pink Tea, that other daughters may go and do likewise.—Mrs. Elmer Lewis.

CLUB PICNICS.

On July 4 the Salem Farmers' Club held its annual picnic at the pleasant home of Mr. and Mrs. Dewey Farley, and a fine pot-luck dinner was served to 125 friends and members of the Club on the lawn. A tent was erected and ice cream was served during the afternoon to all who wished it. At 2:30 the vice-president, Mr. Johnson, called the meeting to order and the program was opened by singing America. A recitation was then given by Reva Dean, after which Mr. Charles Ross gave a very fine paper on "The Position of the United States in 1917." Mr. Ross thought it a very difficult subject to handle at the present time as it was hard to know our exact position. We then listened to a recitation by Miss Dorothy Bailey and a piece of instrumental music by Velma Nelson. Mr. Daniel Smith next favored us with one of his ever pleasing recitations, and the program was concluded by music by Velma Nelson. The Club hopes to hold many more such pleasant and helpful days.—Mrs. I. R. Johnson, Sec.

**Largest Mutual
Automobile Insurance Company In
the World**

About 27,000 policies issued and \$70,000.00 in cash in the bank. The company has selected responsible and careful automobile owners in the small cities and country districts of Michigan. The policy is carefully drawn, and has been approved by the Attorney General's Department and the Insurance Commissioner.

With fire, theft and liability hazard increasing, no automobile owner should go without insurance. Join the large Mutual, which has stood the test of three seasons. Join the company that can stand the shock of serious losses.

Cost only \$1.00 for policy and 25c per horsepower.

Citizens' Mutual Automobile Insurance Company,
Howell, Mich.

**Worms Should
Worry**

But they need never worry you if you feed Dr. Lape's Medicated Stock Salt. It tones the system, aids digestion, and makes more pounds of flesh on the same feed. Get it at your dealers, or sent on receipt of price 25 lb. pail \$1.50, 50 lb. pail \$2.50, 100 lb. sack \$4.00.

USE:—Dr. Lape's poultry tonic. Prevents disease, keeps hens healthy, and healthy hens lay.

USE:—Dr. Lape's Lice Killer. It kills 'em.

USE:—Dr. Lape's Fly & Insect Destroyer, you'll get more milk.

USE:—Dr. Lape's Nervine Healing Powder for sore necks or shoulders, or any raw sore on man or beast, it will heal.

USE:—Dr. Lape's Smutene, guaranteed to prevent smut and it will.

USE:—your head. USE:—our preparations, we will USE you right.

Dr. Lape Veterinary Co. Inc.
Adrian, Mich.

CORN HARVESTER Self Gathering for cutting Corn, Cane and Kaffir Corn. Cuts and throws in piles on harvester. Man and horse cuts and shocks equal to a Corn Binder. Sold in every state. Price only \$22 with fodder binder. The only self gathering corn harvester on the market, that is giving universal satisfaction.—Dexter L. Woodward, Sandy Creek N.Y. writes: "3 years ago I purchased your Corn Harvester. Would not take 4 times the price of the machine if I could not get another one." Clarence F. Huggins, Spearmore, Okla. "Works 5 times better than I expected. Saved \$40 in labor this fall." Roy Apple, Farmersville, Ohio: "I have used a corn shucker, corn binder and 2 rowed machines, but your machine beats them all and takes less time of any machine I have ever used." John F. Haag, Mayfield, Oklahoma. "Your harvester gave good satisfaction while using filling our Silo." K. F. Ruegnitz, Otis, Colo. "Just received a letter from my father saying he received the corn binder and he is cutting corn and cane now. Says it works fine and that I can sell lots of them next year." Write for free catalog showing picture of harvester at work and testimonials. **PROCESS MFG. CO., Salina, Kansas**

For a quick sale I will sell my 16 horse Huber engine with tank and belt; Huber Beamer nearly new and Case separator with wind stacker self-feeder all for \$550. Adam Cook, R. 2, West Branch, Michigan.

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to represent a reliable concern canvassing among farmers in your own neighborhood or elsewhere. No experience necessary. Liberal pay and supplies furnished free to right parties. Reference required. Address,

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Detroit, Michigan

POULTRY.

Yearling Hens For Breeders

S. C. White, Buff and Black Leghorns at \$1.00 each. SUNNYBROOK FARM, Hillsdale, Mich.

JOHN'S big beautiful hen-hatched Barred Rocks, good layers. Breeding pens (5 birds) \$10 to \$20. Eggs \$2.50; 100, \$7.00. Photo, John Northon, Clare, Mich.

Barred Rocks: EGGS FROM STRAIN with records to 297 eggs a year, \$2 per 15. Delivered by parcel post, prepaid. Circular free. Fred Astling, Constantine, Mich.

Barred Rock Hens Great Layers first class breeders 10 for \$25.00. W. C. COFFMAN, R. 3 Benton Harbor, Mich.



Ferris White Leghorns

A real heavy laying strain, trapped 17 years, records from 200 to 264 eggs. Get our special summer prices on yearling hens, breeding males, eggs for hatching, 8-week-old pullets and day old chicks. We ship C. O. D. and guarantee results. Catalog gives prices; describes stock; tells all about our farm and methods; results you can get by breeding this strain. Send for your copy now—it is free. GEORGE B. FERRIS 984 Union, Grand Rapids, Mich.

LOOK 5000 PULLETS

March, April, May hatched, at right prices S. C. White Leghorns only from trapped stock. Write for prices and free catalogue. Stamps appreciated. NABOB POULTRY CO., Gambier, Ohio.

Fowlers Buff Rocks. Eggs one half price for bal. of season. \$7.50 for 15; \$1.50 for 30; \$2.00 for 50; \$3.50 for 100. R. B. FOWLER, Hartford, Mich.

Buff Leghorns. August sale 25 hens one dollar each. 16 two dollar hens and cock bird for \$20.00. Dr. William A. Smith, Petersburg, Mich.

Pine Crest S. C. White Orpingtons, special sale cocks and hens, also young cockerels. MRS. WILLIS HOUGH, PINE CREST FARM, Royal Oak, Mich.

HOMESTEAD FARMS

Intends to be a real service to our farmers. Gradually it is making itself a service to farmers of Bloomingdale vicinity. The call for chicks went way beyond what we found we could take care of, for next year we are making greater preparations. We can now supply a limited number of yearling hens, one and two year old Cocks and Cockerels; no more Pullets. We invite correspondence about any breed and will advise according to inquiry. Pure breed practical stock; nearly all breeds. We are developing a high class market with consumers who want strictly fresh eggs—a matter of value to Michigan Farmers in connection with their poultry breeding. HOMESTEAD FARMS, Bloomingdale, Mich.

RHODE ISLAND REDS and PLYMOUTH ROCKS Males 5 to 12 lbs. according to age \$2 to \$5; P. R. hens weight 5 to 10 lbs. eggs 15 for \$1.00; 100, \$5; 120, \$6.00. Mammoth Bronze Tom Turkeys, 8 to 28 lbs. according to age \$6 to \$25, 10 eggs \$3. A. E. Cramton, Vassar, Mich.

R. C. Br. Leghorn c'krls. \$1.00 each from Kelp and Gale strains. Eggs \$4.00 per 100. MRS. CLAUDIA BETTS, Hillsdale, Michigan

R. and S. C. Reds. Good breeding hens at \$1.50 each for short time. Also Belgian Hares. O. E. Hawley, Ludington, Mich.

R. I. Red Summer Sale. Rose Comb cocks and hens. R. Single comb hens and pullets. All at bargain prices. Cockerels after September 15th. INTERLAKES FARM, Box 89, Lawrence, Mich.

Silver Spangled Hamburg Eggs setting \$1.50 Balance season, young Belgian Hares pedigreed \$6.00 pair. Pedigreed Persian Kittens great hunters \$10 each. Send stamp. Riverview Farm, Vassar, Mich.

S. C. White Leghorns Yearling hens for sale. Thoroughbred stock, bred for vigor and egg production. \$1.00 each. References. Write Krentel Bros., Box 624, East Lansing, Mich.

S. C. W. Leghorns at a sacrifice, buy them now. Two-year-old hens \$1 each; Roosters \$1 and \$1.25. HILL-CREST POULTRY FARM, Ypsilanti, Mich.

SILVER, Golden and White Wyandottes. Eggs from some grand matings. \$1.50 per 15, \$2.50 per 30, large vigorous birds. C. W. Browning, R. 2 Portland, Mich.

S. C. W. Leghorns. April Hatched. Standard Bred each. White Line Poultry Farm, Hillsdale, Mich.

Thousands of Chicks for Aug. Delivery.

My Young Strain S. C. W. Leghorn Chicks now \$8.00 per 100. Order direct. Satisfaction guaranteed. W. Van Appleton, R. 7, Holland, Mich.

WHITE Wyandottes. A. 1 layers. Eggs for hatching, \$1.25, \$3 for 15, \$7 for 100. Special matings \$5 for 15. DAVID RAY, 709 Norris St., Ypsilanti, Michigan.

BREEDERS' DIRECTORY.

Change of Copy or Cancellations must reach us Ten Days before date of publication.

We Offer a Few Special Bargains In S. C. White Leghorn cockerels, Ram-bouillet rams, Hampshire pigs (either sex) and Holstein bulls. A good chance for a small investment to reap the benefit of a large expenditure of capital and years of expert breeding. Flanders Farm, Orchard Lake, Mich.

CATTLE.

Aberdeen-Angus

Herd established in 1900. Trojan-Ericas and Black birds only. Bulls in service; Black Brandon 208932. Enos of Woodcote 191382. Also breeders of Percheron and Saddle Horses. WOODCOTE STOCK FARM, Ionia, Mich.

CHOICE Angus Bulls for sale. Have several well bred, excellent type Angus Bulls at reasonable prices. M. L. Smith, Glenwood Farm, Addison, Mich.

Registered Guernseys

Stock always for sale. May Rose Strain—Herd Tuberculin tested annually. Never had a reactor—no abortion. J. M. WILLIAMS, North Adams, Mich.

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

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

GUERNSEYS Bull calves for sale, from A. B. dams and cows on test. GEO. N. CRAWFORD, Holton, Mich.

Registered Guernsey Bulls. Service age, and Bull Calves. May Rose and Gov. Chene breeding. Avondale Stock Farm, Wayne, Mich.

Registered Holsteins. Very fine young bull five months of age A. R. O. breeding. Satisfaction guaranteed. W. B. Jones & J. F. Lutz, Cohoctah, Mich.

FOR SALE Seven reg. Guernsey heifers and one reg. Guernsey bull, no kin. All nicely marked and fine specimens of the breed. G. F. COLE, Bancroft, Mich.

Guernsey Bull "Count of Hilltop Registry No. 39442 will sell at farmers price as I am discontinuing Dairying. Apply Joseph Harris, Otter Lake, Mich.

Bigelow's Holstein Farms, BREEDSVILLE, MICH.

Have Some Fine Registered Stock For Sale

REG. HOLSTEINS: Herd headed by Albina Bonte Butter Boy No. 93124. Dam's record at 6 yrs. butter 28.58 lbs. milk 619.4. Yearly record at 2 1/2 yrs. butter 802 lbs. milk 18622 lbs. W. B. READER, Howell, Mich.

OAK LEAF FARM

Herd Sire Ypsilanti Sir Pietertie De Kol

Service bulls all sold. Buy a calf and raise it. Fine individuals 4 and 5 months old. E. H. Gearhart & Son, Marcellus, Mich., R. No. 4.

Buy Your Bulls From Parham's Pedigree Stock Farm Choice Registered Holstein calves from A. R. O. cows. RAY B. PARHAM, Bronson, Michigan.



Purebred Registered HOLSTEIN CATTLE

The most profitable dual purpose cattle are Holsteins, as impartial investigations conducted by experiment stations of Michigan, Iowa and Nebraska have conclusively shown. The Holsteins showed a greater gain per steer at a less cost per pound of either roughage or grain than any of the other breeds. Holstein calves are big, strong, and grow quickly, and Holstein beef is as fine in texture and taste as that of any cattle. Purebred Holsteins have firmly established themselves as the world's best dual purpose breed. There's big money in the big "Black and White" Holsteins.

Send for **FREE Illustrated Descriptive Booklets** The Holstein-Friesian Association of America. F. L. Houghton, Sec'y., Box 164, Brattleboro, Vt.

CLUNY STOCK FARM

100 REGISTERED HOLSTEINS 100

For Sale:—17 mos. old bull whose 7 nearest dams average 560.1 lb. milk and 25.679 lb. butter in 7 days. Sire is by the son of a 32.9 lb. cow and from a 31 lb. 4 yr. old cow. Dam is a 22.5 lb. Jr. 3 yr. old daughter of a 26.5 lb. Jr. 4 yr. old cow, whose dam is a 27 lb. cow.

Ready for immediate heavy service. Priced to sell immediately. Send for pedigree and price. R. BRUCE McPHERSON, Howell, Mich.

WINNWOOD HERD

REGISTERED HOLSTEINS

Holton, Mich.

Reference: Old State Bank, Fremont, Mich.

Flint Maplecrest Boy sire in service

His sire is Maplecrest Korndyke Hengerveld, his 3 nearest dams each over 30 lbs. of butter in 7 days. His dam and grand dam both made over 120 lbs. of butter in 1 year. It is the yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vasser Bell, 30.57 lbs. of butter in 7 days and 120 lbs. in 30 days. Her butter fat test is 5.27. This looks about right to the man who goes to the creamery. We have Bull Calves from 2 weeks to 8 months old for sale at dairy farmers' prices all out of A. R. O. Heifers. Write & tell us the kind of a bull you want. John H. Winn, (Inc.), Holton, Mich.

842 Lbs. BUTTER

Is the average of the semi-official records of our herd bull's dam (at 2 yrs.), his grand-dam (at 3 yrs.) and his great grand-dam. Three choice young bulls from A. R. O. dams. Herd tuberculin tested annually. Holsteins of course. Peaceland Stock Farm, Three Rivers, Mich. Chas. Peters, Herdsman, C. L. Brody, Owner, Port Huron, Mich.

FOR SALE Three Registered Holstein male calves ranging from four weeks to six months. All from A. R. O. stock. All fine individuals. Prices right. For particulars inquire of J. W. McFadden, West Salem Stock Farm, Salem, Mich.

PURE bred Holstein Bull born July 15, 1917, not eligible to record, 15-16 white, a good one. \$35.00 crated & delivered anywhere in state. Newton Barnhart, St. Johns, Mich.

Holsteins vs. Berkshires

The greatest of Live Stock Combinations.

The Holstein furnishes you the largest production of milk, which separated gives you great hog feed—Skim Milk.

The Berkshire will make wonderful growth on skim milk, nature's food. It balances any food you raise on your farm. Other conditions equal the man with skim milk always excels in hog raising.

The Holstein and the Berkshire is each more profitable to you by reason of the other. We have the best to offer you in each breed. A young bull out of a tested dam and a trio of spring pigs for your breeding pen would prove the best of investment, providing you feed and care for them as you should. Correspondence solicited. All stock guaranteed as represented.

SWIGARTDALE FARM

PETERSBURG, MICH.

I Always Have Holsteins To Sell

If wanting Registered cattle write me your wants before placing your order elsewhere.

L. E. CONNELL, Fayette, Ohio

Need Reg. Holsteins??

You can't find better bred bulls than we are offering, ready for service. You don't need cash. We trust you. Get our description booklet. LONG BEACH FARMS, Augusta, (Kalamazoo Co.), Michigan

For Sale A Yearling Heifer, pure bred Holstein Sire, Olantha Johanna Cream-elle Lad, Dam, Elizabeth Segis Lyons. If you want something good, write, Geo. D. Clarke, Vassar, Mich.

Butter Fat Counts

Holstein Bull Calves from a 30 lb. 6.53% Sire. Dam are grand daughters of the King of the Pontiacs. Their dams grand daughters of Sadie Vale Concordia the first 30 lb. cow. Edwin B. Lewis, Marshall, Mich.

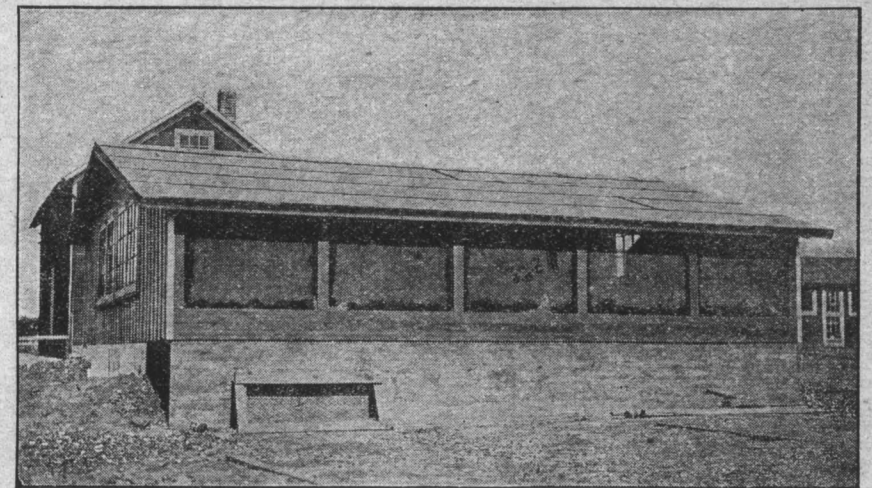
Practical Farm Poultry House

At the Michigan Agricultural College a practical farm poultry house has been constructed by Professor Burgess which will meet the requirements for a flock of one hundred hens. The house is attractive in appearance and the estimated cost is about \$100. As the photograph shows, it is a house of the open-front type and large windows in the ends are intended to furnish the sunlight which otherwise would not enter because of some lack of height in front. The house is three feet six inches high in front and four feet six inches in the rear. With the ordinary shed roof type of house an abundance of sunlight can be obtained from the front but in this Burgess house it is quite necessary to place plenty of windows in both the east and west sides.

The front of the house is covered with wire cloth to stop the force of the wind and keep sparrows from en-

where the winter is very severe it would possibly be practical to use curtains on a house of this type during the coldest weather. A thermometer hung in the house, and also one outside will furnish the poultryman with valued information in the management of his house. If curtains are necessary on the open-front house they can be made at a small expense by using burlap or canvas on light frames. The open-front house is a winner but some poultrymen have reason to believe that there are times in the winter when it is impossible to keep an open-front house warm enough for the comfort of the fowls. In that case the house must be equipped with curtains to regulate the temperature as much as possible.

A house of the Burgess type painted to correspond with the other farm buildings will be an attractive addition to any farmer's property. In building



Good Type of Open-front House for 100 Chickens.

tering. This long "wire window" is two feet four inches in height and extends the length of the house. The outside dimensions of the house are twenty by twenty, which gives a floor space of four hundred square feet.

The roof is covered with prepared roofing and the sides are protected in the same manner. The lath which hold the paper to the sides may be painted to contrast with the color of the building paper, and this gives the house an attractive appearance. The floor is of concrete placed on six inches of cinders, which are tamped and leveled.

Interior Arrangement.

The interior of the house is arranged slightly different from the usual custom. The roosts are placed above a pit made by laying up boards so that a box is formed to collect the droppings. This is substituted for the dropping boards commonly used in many farm poultry houses. The only objection the writer can find with this plan is the fact that it takes away some of the floor space which can be used for the birds. A tight dropping board still gives the birds the use of the floor space beneath the board, which can always be bedded with plenty of clean litter.

In this house the trap nests are arranged over the roosts and accurate records have been kept of the birds laying there. In general vigor the hens seemed to be in first class condition and undoubtedly a house of this type could be used to great advantage by many farmers desiring to keep at least one hundred hens.

The open-front type of house is generally considered very satisfactory by practical poultrymen. The birds are in less danger of acquiring colds and roup than when they are confined in damp and ill-ventilated houses. Hens need plenty of fresh air at all seasons of the year and an open-front house with windows in the two sides is easily ventilated even on the warmest days of summer.

On exposed sites or in sections Washtenaw Co. R. CRANE.

FOWLS A DISTINCT BREED.

I noticed recently a discussion of breeds of poultry without tails, and I want to say there is a breed with no tail, and very distinct in every meaning of the word. They are called Rumpless Rocks, or Bobs. The mark of distinction being the lack of tail feathers, they are easy to pick out from among the other Rocks. They can also be easily distinguished after being dressed for the market for they are minus the tail portion, the end of the backbone or rump being round in effect.

Another characteristic which distinguishes this breed is the egg, which is round, although for size it is equal to others in this respect.

Aside from these characteristics in which they differ from the ordinary Barred Rocks, they are like them in size, color, and other characteristics.

This breed won favor on our farm, which made them a distinguished breed, because visitors, although not interested in poultry, would notice this tailless fowl with feathers on the rump curving gracefully and overlapping in uniform ranges of external covering or plumage, and become interested in this apparent freak of nature. In that way they would become interested in our entire flock of poultry. The advertising value of our Bobs was therefore of some value.

Veterinary.

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

Rheumatism.—We have taken the Michigan Farmer for a great many years and think it one of the best farm and all around papers published in the country. I would like to have you tell me what to do for two Jersey cows that appear to be stiff and rheumatic for the past five or six weeks. They show similar symptoms to a horse that is foundered. F. W. P., Harbor Beach, Mich.—Give each of your cows a teaspoonful of powdered nitrate of potash at a dose in feed or drinking water twice a day. You had better examine their fore feet as they may perhaps be sore and require attention.

Cow Gives Blood.—I have a heifer that came fresh July 3, milked her Wednesday noon, she gave clear blood from all four teats, but is some better now; however, her milk is yet a pink color. F. R., Burt, Mich.—Doubtless your heifer injured her udder, or else the whole bag became congested, resulting in slight hemorrhages, and all that is required to correct this ailment is careful milking, plenty of bedding and a limited food supply for a few days. Give her a teaspoonful of powdered nitrate of potash twice a day for a few days.

Foot Soreness.—I have a horse that is foot sore, especially in his fore feet. I first noticed this soreness commencing to come on him when he was three years old and he is now five. Have had him shod with bar shoes which seemed to give him slight relief. S. C. M., Wayne Co.—Stand your horse in wet clay two hours daily, one hour in the morning and another hour or two in the evening. Giving or applying drugs has little or no effect on these cases of chronic foot soreness. Shoeing with a wide-webbed strong shoe that has considerable rolling motion will afford some relief.

Wind Puff.—Have a horse with wind puff on hock joint which is not causing soreness or lameness. What treatment do you recommend? J. W., Fowler, Mich.—Leave him alone, as a bunch of this kind cannot be reduced; furthermore, applying irritating liniment or blisters might perhaps make him worse.

Sitfast.—I have a horse that has a bunch on lower part of shoulder about the size of a small bowl, which interferes with his action. The muscles of shoulder are shrinking and I would like to know what can be done for him. I forgot to say that our local Vet. is treating the case. J. S. P., Attica, Mich.—Your Vet. should remove bunch or else split it open and remove wall of abscess, either with the knife or by packing it with gauze saturated in rectified oil of turpentine. A stimulating liniment should be applied to wasting muscles; however, as soon as the lameness leaves, the shoulder muscles will gradually grow. This is a case which requires treatment by a competent Vet.

Licking Disease.—My young cattle, as well as the milch cows, seem to have the habit of chewing on bits of wood and inclined to lick fences and bones. At present they get only the grass of the pasture, but are well supplied with salt. B. K., Zeeland, Mich.—Usually this ailment occurs in certain localities or on certain premises, but is most commonly seen among cattle which are kept stabled continuously and is most likely to appear during the winter months. With your cattle all that will be necessary is to furnish them with some grain twice a day, or you may mix equal parts of cooking soda, ginger, gentian and powdered charcoal and give them each two tablespoonfuls at a dose in ground feed twice a day.

Indigestion.—I have a cow six years old, that was fresh in November, 1916; will freshen again in November, 1917. She has always been a very good cow, gave a good flow of milk with a good test. Is not giving more than a gallon per day now. She is running on good pasture of wild hay and clover. Has been getting a little grain but not enough to make her produce much milk. After urinating she is inclined to strain as if suffering some pain. A. A. M., LaGrange, Ind.—Give her two tablespoonfuls of bicarbonate soda at a dose in feed or drinking water two or three times a day. If it is possible you had better change her feed.

Sores on Teats.—Several of my cows are troubled with sore teats and I would like to know what to apply. A. K. B., Hillman, Mich.—Apply equal parts glycerine and compound tincture of benzoin to sores twice a day.

Jerseys and Duroc Jerseys

The most important thing in buying a Jersey bull is to get one backed up by generations of high producers.

Brookwater offers to sell a few choice bull calves of this kind.

H. W. MUMFORD,
OWNER

BROOKWATER FARM

O. F. FOSTER,
MANAGER

Ann Arbor, Mich., R. 7.

High Grade Holstein Heifers

Fresh or soon to freshen. Also grade Holstein Bull Prices reasonable. THE JENNINGS FARMS, V.M. SHOESMITH, General Manager, Bailey, Mich.

Registered Holstein Friesian Heifers. 3 to 6 mos. old. Some from 30 lb. sires. Priced to sell. Fred J. Lange, Sebawaing, Mich.

3 Holstein Heifers 30.21 lbs. sire. Their dam's dam A. R. O. sister to dam of 35 lb. cow. bred to 4 brothers to 35 lb. 4 yr. old. Terms if wanted. M. L. McLAULIN, Redford, Michigan.

Registered Cows, heifers and heifer calves, breeding and good individuals. B. B. Reavey, Akron, Mich.

On Our Easy Payment Plan we will ship you any registered Holstein Bull calf in our stables. Prices from \$30 up. Ypsilanti Farms, Ypsilanti, Michigan.

RINKLAND HERD BULL CALVES from A. R. O. prices. JOHN A. RINKE, Warren, Mich.

For Sale 2 Reg. Holstein cows 7 years old due to freshen Sept. 7 and 8. Well marked, price right. J. C. L. HULETT & SON, Okemos, Mich.

HEREFORDS

Sires in service, Governor by Prince Donald Militant Farmer by Farmer (Imp), Bonnie Brae Jr. by Bonnie Brae 24th. Inspection invited. ALLEN BROS., PAW PAW, MICH.

The All-Around Jersey

is the farmer's cow. She's his friend and pride—the beautiful, gentle, ever-paying milk machine that lifts the mortgage, builds up the fertility of the farm, and puts the whole business on a sound, paying, permanent basis. She adapts herself to all climates and all feeds and does not need fancy care. She matures early and lives long. And she's so sleek, clean cut and handsome, as to be the family pet and pride. She produces well and sells well. Learn about her in our fine, free book, "About Jersey Cattle." Write for it now.

THE AMERICAN JERSEY CATTLE CLUB
346 West 23d St., N.Y. City

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

Jersey Bulls for sale, ready for service. Out of good producing dams. Prices right. R. B. FOWLER, Hartford, Mich.

Hillside Farm Jerseys. For sale ten months old bull backed on both sides by R. of M. dams with high official records. C. & O. DEAKE, Ypsilanti, Michigan

Maple Hill Farm Registered Jersey Cattle Stock under 2 1/2 years all sold. J. R. Worthington, R. No. 7, Lansing, Michigan

The Wildwood Farm

Breeder of Line bred Majesty strain of Jersey Cattle. Herd on R. of M. test. Tuberculin tested. Bull calves for sale. Type & Production is our motto. Alvin Balden, Capac, Mich.

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

Maple Lane R. of M. Jersey herd offers for sale tuberculin tested cows, bulls, bull calves and heifer calves, carrying the best R. of M. blood of the breed. IRVIN FOX, Allegan, Mich.

S. T. Clair County Jersey Cattle Club. We have for sale 5 Bulls old enough for service and Bull calves, from best strains of Jersey Cattle. Majesty's, Noble of Oaklands, Combination's Premier, etc. Write for pedigrees, prices and particulars. Fred A. Brennan, Sec., Capac, Mich.

Notten Farm Jerseys also a few Duroc Jersey pigs for sale. NOTTEN FARM, Grass Lake, Mich.

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

FOR Sale—Reg. Short Horn Bulls by Maxwellton Monarch 2nd, a son of Ayndale, from 1 to 3 mos. old. John Schmidt, Reed City, R. No. 5, Michigan.

Francisco Farm Shorthorns Big Type Poland Chinas "They're rugged—They pay the rent." Nothing for sale at present. P. P. POPE, R. R. 3, Mt. Pleasant, Mich.

Bidwell Shorthorns

"For Beef and Milk" This heifer at 6 months has bone, size and quality—our own breeding. The blood of Scotch bulls, Imp. Shenstone Albino and Imp. Villager Registered stock always for sale.

BIDWELL STOCK FARM,
Box B, Tecumseh, Michigan.

Shorthorns For Sale Young bulls ready for service, also cows and heifers. W. B. McQuillan, Howell, Michigan.

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

Richland Shorthorns Largest and best herd in the state. Tuberculin Tested by the state. IMP. Lord one of the Sires in service. Entire Herd of Reg. Angus cattle, including the show cattle for sale at a bargain. Mostly Ericas and Blackbirds. Herd at Prescott, Mich. Office Tawas City, Mich. C. H. PRESBOOT & SONS.

For Sale Shorthorns Bulls 3 mo. to 2 years old from good milking cows. R. R. Clyde Station, H. J. DeGarmo, R. 6, Milford, Mich.

SHORTHORNS Maple Ridge Herd, Established 1867. No stock for sale. J. E. Tanswell, Mason, Michigan.

Shorthorns for sale, 5 bulls Scotch top 10 to 14 mos. 3 roan, 1 white, 1 red, price \$150. to \$250. 1 son of Maxwellton Sultan, 19 mos. \$350. C. Carlson, Leroy, Mich.

Shorthorn Cattle a few young bulls for sale. W. J. Lestler, Belding, Mich.

MAPLE Grove Shorthorns & Oxford Down Sheep. Reg. roan & red bulls by King George, a Son of Roan Sultan, from 2 to 13 mos. David Murphy & Son, Cass City, Mich.

I Have a light roan, registered, shorthorn bull ready for service, also younger ones for sale. JAMES NEAD, Sunfield, Mich.

Cattle For Sale 2 Loads feeders and two loads yearling steers. Also 2 can show you any number 1, 2 and 3 years old from 600 to 1200 lbs. Isaac Shanstun, Fairfield, Iowa, R-8.

Cloverly Stock Ranch Angus! Bulls, Cows and Heifers for sale. GEO. HATHAWAY & SON, Ovid, Michigan

FOR SALE Sixty head of cattle yearlings and two year olds. Can sell and allow pasture till Sept. 30 Oct. or 1. 1 1/2 miles from Chase, 4 1/2 miles from Reed City. HERBERT LUSBY, Reed City, Mich.

HOGS.

Durocs and Victorias Heavy bone, lengthy Spring Boars and Gilts from prize winners sired by one of the best Sons of the Great Defender & other noted strains. M. T. STORY, Lowell, Mich.

Berkshires, Boars, serviceable age, best blood lines. Registered. ELMHURST STOCK FARM, Almont, Mich.

Berkshires Bred gilts and sows for fall farrowing. Also Spring pigs, either sex. A few boars serviceable age, reg. Chase Stock Farm, R. 1, Maclette, Mich.

Berkshire Pigs going fast \$15.00 & \$20.00 each three months old. Registered and transferred, richly bred. Riverview Farm, Vassar, Mich.

Duroc Jerseys bred gilts for sale priced to sell. Hastings, Mich.

Duroc Spring Boars sired by Orion Cherry American Col. One 2 year old sow by Cherry King's Rival due to farrow Nov. 1st, farrowed 15 pigs last May raising 12. NEWTON BARNHART, St. Johns, Mich.

Duroc-Jerseys One Yearling Cherry King Boar, Gilts bred for fall farrow. J. H. DANGEART, East Lansing, Mich.

Duroc Sows and gilts bred to Eureka Cherry King and Crimson Critic son of Critic Model 1916 champion Iowa Fair. W. C. Taylor, Milan, Mich.

Duroc Jerseys. Fall Boars & Gilts all sold. I have some extra good heavy boned spring pigs for sale pairs not akin. F. J. DRODT, R. 1, Monroe, Michigan.

Dobson's Durocs; Pigs at weaning time; breeding. Collie Pups, Orlo L. Dobson, Quincy, Mich.

DUROCS a few choice spring boars. Write for description & price. E. D. HEYDENBERK, Wayland, Mich.

Reg. Duroc Spring Boars and Oxford Ram Lambs ready to ship. Exp. Paid. Pine Stock. J. R. HICKS, St. Johns, Mich.

Durocs, Good Spring pigs by Defender's E. E. Calkins. R. D. 6, Ann Arbor, Michigan.

Raise Chester Whites
Like This
the original big producers

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

Big Type O. I. C'S, & Chester Whites Special prices on all boar pigs for the next 30 days. Will sell sows only when bought in pairs. These pigs are sired by our three Champion boars that have not an equal in the country. School master King of the breed Crandell's wonder & Callaway. Ed both champions. All stock shipped on approval, satisfaction guaranteed. Get our catalogue. Harry T. Crandell & Son, Cass City, Mich.

O. I. C. & Chester White Swine Strictly Big Type, with quality. One yearling sow & two gilts bred for Sept. farrow. Guaranteed safe with pig. I have the finest lot of early Spring pigs I ever raised, can furnish a few in pairs not akin. Address, NEWMAN'S STOCK FARM, Mariette, Mich. R. 1.

Chesters Bred Gilts all sold. Special prices on Bull. F. W. ALEXANDER, Vassar, Mich.

O. I. C. An extra fine lot of last spring good, growthy stock. Farm 1/2 mile west of depot. Otto B. Schulze, Nashville, Mich.

CHOICE SPRING PIGS Ready to ship. The big smooth, growthy type, sired by noted boars. Registered and shipped C. O. D. J. CARL JEWETT, Mason, Mich.

O. I. C. Boars and Gilts all sold. I am booking orders for March and April pigs either sex, single, or in pairs not akin. A. J. BARKER, Belmont, Mich. R. R.

O. I. C. Thorough bred O. I. C. Swine all sold out except fall pigs. O. D. Somerville, Grass Lake, Mich. R. D. 4.

O. I. C'S. All sold. Booking orders for the best of our winter and spring pigs. C. J. THOMPSON, Rockford, Michigan

O. I. C'S. Spring pigs and Reg. Holstein heifers from 5 to 15 months old. CLOVER LEAF STOCK FARM, R. 1, Monroe, Mich.

P. C. SWINE Big boned Apr. boars. Sows bred for fall farrow. Satisfaction guaranteed. R. W. Mills, Saline, Mich.

O. I. C. 'S. Gilts bred for Aug. and Sept. farrow. Also a few choice spring farrowed boar pigs. Geo. P. Andrews, Danville, Mich.

O. I. C'S. A few choice boar pigs ready to ship. Want one? Act quick, they won't last long at this price. Stock recorded free. Elmer E. Smith, Redford, Mich.

BIG TYPE POLAND CHINAS

Boar Pigs from the CHAMPION and GRAND OF AM-PION and our other GREAT HERD BOARS and big STRETCHY SOWS of very best breeding and individuality. HILLCREST FARM, F. B. Lay, Mgr. Kalamazoo, Mich.

"War is —" So is starvation, every one should do their bit. You can raise more pork on less feed if you breed Butler's big type Poland Chinas. Sows bred for fall farrow. Boars ready for service. J. C. BUTLER, Portland, Michigan, Bell Phone

Large Type P. C. Fall pigs and bred gilts all sold. Nothing for sale at present. W. E. LIVINGSTON, Farma, Mich.

Big Type Poland Chinas: April and May pigs, healthy and growthy. Prices right. L. W. BARNES & SON, Byron, Mich.

LARGE Strain P. C. everything sold except 1 husky yearling boar that is long, tall & deep, 1 extra choice fall boar. H. O. SWARTZ, Schoolcraft, Mich.

LARGE type P. C. Some very choice summer gilts bred to farrow in August. Will sell 1 of my yearling herd boars. W. J. Hagelshaw, Augusta, Mich.

Large Stiled Poland China, fall and spring pigs, at farmers prices. B. P. Rock eggs \$1.50 per 15. Robert Neve, Pierson, Mich.

POLAND Chinas bred gilts all sold, still have some choice fall pigs of large and medium type, at farmers prices. P. D. LONG, R. 8, Grand Rapids, Mich.

Big Type Poland Chinas Sept. farrow, either sex, sired by Jumbo Wood, 800 lb. hog. A. A. WOOD & SON, Saline, Michigan

Big Type Poland China boar now ready to ship, buy now and get choice. G. W. HOLTON, KALAMAZOO, MICHIGAN.

Hampshire Swine. Nothing for sale but fall boars and gilts. Write for prices. FLOYD MYERS, R. No. 9, Decatur, Ind.

Hampshire Weanling Pigs from good breeding. Priced for quick sale. A. E. BACON & SON, Sheridan, Mich.

FOR SALE YORKSHIRE BOAR PIGS Waterman & Waterman, Packard Road, Ann Arbor, Mich.

SHEEP

The JOINT SHEEP SALE Will Sell at

Public Auction at the State Fair Grounds, Columbus, Ohio

AUGUST 7 and 8 1917

200 Hampshire ewes 200 Hampshire rams
100 Shropshire ewes 100 Shropshire rams
100 Lincoln ewes 50 Lincoln rams
100 Rambouillet ewes 50 Rambouillet rams
30 Cotswold ewes 30 Cotswold rams
250 Oxford yearling ewes 200 choice grade ewes

These sheep are consigned from the celebrated flocks of Walnut Hall Farms, Dr. S. F. Snow, H. W. McLaughlin, Telfer Bros., W. J. Cherry, Harley R. Emmons, A. J. Knollin, Zelma Green, Lincoln Bros., Peter McIntyre, R. S. Robson, Dods & Dods, W. W. Casler and others. This will be a long-fide sale to the highest bidder, the opportunity of the year to buy good sheep. Send bids or write for particulars to Joint Sheep Sale, 39 Woodland Ave., Detroit, Mich.

Shropshire Ewes Mostly yearlings with lambs by side, extra good ones, come at once if you want them.

Kope Kon Farm, Kinderhook, Mich.

Shropshires Big, early, reg. ram lambs, for coming fall trade, sired by imp. Nook ram. Milo M. Gibson, R. 5, Lapeer, Mich.

OXFORD DOWN SHEEP We have a few rams for sale. M. F. Ganssley, Lennon, Mich.

HORSES

OVERSTOCKED 20 head horses and colts for sale including 1 team chestnut mares 3300, 1 team grays 3300, 1 black mare 1850 and colt. Ten head colts one to three years, from these large mares. Albert B. Holmes, Ypsilanti, Michigan.

For Sale Reg. Black Percheron Stallion Colt Weighing 1600 pounds at 21 mos. old Sired by a Stallion Weighing 2100 pounds well bred and priced to sell. M. A. Bray Est., Okemos (Ingham Co.) Mich.

SHETLAND PONIES 200 head to select from. Special prices on colts for August and September. Write Dept. E. The SHADYSIDE Farms, North Benton, Ohio.

REGISTERED PERCHERON Mares and Stallions priced to sell. Inspection invited. L. C. HUNT, EATON RAPIDS, MICH.

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

For Sale or exchange for other stock three Percheron Stallions and one Spanish Jack. E. J. Aldrich, R. 1, Tekonsha, Mich., Bell Phone



Rest Up For Tomorrow

When all nature is blooming and the whole countryside is smiling under blue skies, forget dull care and the heavy work of the year for an hour or two. Get out your car—take friend wife and the family for a spin over the countryside. The exhilaration of an hour's run at sundown—or in the cool of the evening is the most restful thing in the world. Try it and see what a difference it makes in helping you “do your bit” for the nation's welfare tomorrow.

And, of course, to enjoy the ride thoroughly you will naturally equip your car with tires that are as resilient as cushions, saving you from bumps and jolts; that are as tough and road-resisting as science and skill can make them; that are economical and safe, giving more mileage at lower final cost and having high anti-skid efficiency.

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