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The Fight Against Oat Smut

ONE of the brightest things in the record of achievements of the county agents of Michigan is the story of the work done by the agricultural leaders in banishing oat smut from the first place as a serious cause of loss to the farmers and the making of it a disease of minor importance in its cost to the agriculture of the state. This is the story of the true war service done, not on the firing line in France, but in the first line trenches of food production. It is a story of the utilization of science—of a poison gas attack on a relentless enemy to food production and to good agriculture. It is a story of agricultural progressiveness, and the results show what can be accomplished when wide-awake farmers are led by their representatives to apply the results of experiment station work.

What I have to tell will be of interest to every reader of the Michigan Farmer. It is a thing in which he has a part. It is a thing in which he is already well versed. For years, bulletins have taught the cause of oat smut—how a fungus disease destroys a plant that should produce sound kernels. Lecturers without number have told of counts in fields which revealed a condition oft-times unsuspected by the farmers, that oat smut was prevalent in the ordinary run of oat fields in percentages such as five, ten, and even thirty and fifty per cent. The figures that these lecturers quoted were hardly believable and the farmer sagely nodded and suspected that they dealt with conditions in the other fellow's field.

Now, the United States Department of Agriculture has obtained figures as the result of a nation-wide survey which show that in no case were the figures of the prevalence of smut in oat fields exaggerated. As a result of examination of typical Michigan untreated oat fields, the average percentage of oat smut found in 1918 by a corps of government field men was 6.52 per cent.

But startling as this high percentage of loss must be, it is not a new thing nor is the story of the oat smut new. Yet the point I wish to make is that with the long years of propaganda in oat smut, the message never got across to the farmer as a general thing and seed treatment did not become universal. Treatment was spasmodic and extremely localized.

There were two reasons for this condition. In the first place, the extension work done was at long range. It didn't reach the man having trouble, but it approached year after year the same progressive farmers who read periodicals, bulletins, and who attended institutes.

The second thing was also a matter of psychology—the treatment then known was not especially convenient to apply. The treatment recommended—and it is still effective—consisted

in wetting the grain thoroughly with formaldehyde, one pint to forty gallons, and then after covering the grain for two hours, drying until fit for planting. It was a simple, cheap and fairly easy thing to do, and scientists for twenty

years thought the treatment good enough to let alone. But the fact remained that farmers in the rush of getting oats in at the busy time of year gradually formed the habit of treating once in two years, or once in a while, and the vast majority treated once and never again until an excessively smutty oat crop gave them

ed were simply to be sprinkled with a few quarts made by diluting the "patent" liquid, then the grain could be sacked and planted. The experts laughed at the farmers for paying \$2.00 a pint for half-strength formaldehyde colored blue or purple with aniline dyes, when before the war pure formaldehyde sold for twenty-five cents a pint. But the farmer knew what he was doing. He was buying the fancy preparation, not for its color or for its percentage of formaldehyde. He was buying it for its convenience. He was getting rid of the job of wetting the grain and drying it.

In a series of tests of smut cures, Dr. R. J. Haskell of Cornell University, discovered a new principle in the application of formaldehyde for grain treatments. Haskell's experiments showed that if the formaldehyde, either concentrated or diluted in one or two parts of water, was sprayed upon oats, smut was controlled without the wetting of the grain. In the old treatment, approximately one pint of formaldehyde in fifty gallons of water was put on fifty bushel of oats. In Haskell's treatments the same amount of formaldehyde—the effective agent—was put on fifty bushels and the water was left out. Haskell's concentrated method, promptly christened "The Dry Method" went the "patent" smut killer one better. It reduced the smut treatment to its simplest proportions.

The method is singularly successful. Fields treated this way have been examined and it took a trip across a ten-acre field to find a dozen smutted heads. Here is where the Michigan county agent became a factor in the proposition. Armed with the knowledge of this improved control measure and reaching the farmers of his county at close range, the campaign for the control of oat smut began in 1916, 1917 and 1918. Starting with a few of the counties in 1916, more in 1917, while in 1918 every county with a county agent made remarkable strides in removing oat smut as a menace to good farming. The county agent could meet the patent preparation with a more convenient method. He could show farmers that treatment did not mean any delay at all in planting.

The figures taken by the field agents of the Department of Agriculture in Michigan last summer show in a striking way what has been accomplished by our county men. The counties without county agents were conspicuous for their lack of treatment. The comparison with the findings in other states is also interesting. For the most part, the other states have been using the wet method and this has not seemed to appeal to farmers so generally.

But successful as this campaign has been, every county agent is planning this year a more vigorous attack. Oat smut is not a thing that can be downed for good and all. A little smut escapes treatment each year, a thresher that has handled smutty grain contaminates the seed, so that treatment has to be a regular part of oat culture. A little bit of smut one year means a great deal the next. These plant diseases have remarkable power of reproduction.

The methods the county agents have used in these campaigns are simple and business-like. Most of the county men have merely written their farmers a simple statement of the necessity of treatment and have sent the college Extension Bulletin which tells in a few words what to do. A few have conducted



A Good Seed-bed is Only One Essential of the Oat Crop.

Result of a Field Survey to Determine the Prevalence of Seed Treatment by Farmers and its Effects in Prevention of Smuts.

State.	No. of farmers interviewed.	Inspected Fields Sown to Treated Seed.				Smut found in Treated Fields.		Untreated Fields.	
		Wheat.	Oats.	Wheat.	Oats.	Wheat.	Oats.	Wheat.	Oats.
Indiana	477	159	390	57.1	39.0	3.03	0.35	6.06	5.92
Minnesota	678	688	540	16.2	18.6	0.87	1.23	3.99	3.07
New York	793	887	571	6.2	25.4	0.00	0.71	0.23	4.30
Illinois	111	54	59	0.0	18.6	...	1.21	6.65	7.38
Michigan	98	18	31	66.66	70.96	0.03	0.018	10.6	6.52

so severe a jolt that they sat down and figured out what they were losing.

In the meantime, a lot of preparations with high-sounding names as smut killers were put on the market at \$2.00 a pint, and many farmers bought these year after year. The thing that

ty-five cents a pint. But the farmer knew what he was doing. He was buying the fancy preparation, not for its color or for its percentage of formaldehyde. He was buying it for its convenience. He was getting rid of the job of wetting the grain and drying it.

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Applying Formaldehyde with a Sprayer.

(Continued on page 499).

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DETROIT, MARCH 29, 1919



CURRENT COMMENT

Cheap Food or Cheap Promises

THE cheap food howlers have succeeded in making so much noise that the agitation has apparently gotten under the skin of government officials. This is apparent from the recently published statement of Chairman Peek, of the Department of Commerce Industrial Board, in which he was reported as saying at a conference of Food Administration officials in New York that there seemed to be a general misunderstanding of Mr. Hoover's recent statement that with a free market wheat might go to \$3.50 a bushel. Mr. Peek is reported as adding that the billion dollar grain appropriation recently made by congress was for the purpose of enabling the public to get wheat products at reasonable prices as well as to make good the guaranty to producers. "With wheat prices reasonable," he adds, "reasonable prices of other products could be expected, because wheat is the barometer of the trade."

We are unable to read into the act of congress the meaning which Mr. Peek is quoted as giving it. And if the Food Administration is unable to keep the price of wheat down to the guarantee under present conditions, there is little ground for belief that the committee of another governmental department will be more successful in the projected plan of downward regulation.

But even semi-government approval of the agitation for the use of the big grain appropriation for such a purpose is to be deplored. If this principle is to be seriously considered, why stop at wheat, or even at food stuffs as a class? Why not have another appropriation to reduce the cost of other necessities, farm machinery, for instance, and clothing and shoes? Of course this would necessitate an increased tax levy, but that would be a small matter, as the tax-paying public is accustomed to it.

May the time soon come when public officials as well as cheap food agitators will see what normally sensible people ought to have seen months ago,

that in view of the world scarcity of food and the high cost of food production, there is no possibility of cheap food or low-priced farm products except through unfair market manipulation, and then only temporarily. Agitation for such unfair manipulation is not only harmful, but will defeat its purpose in the end by creating an uncertainty in the minds of food producers regarding the outcome of such methods. An increased supply of food products will result from the maintenance of compensatory prices to producers. Any attempt toward the lowering of prices by manipulation is certain to prolong the period of scarcity.

Release the Farm Boys

FARMERS who now have boys awaiting demobilization at the various cantonments throughout the country, at a time when they need their help badly on the home farm, are at a loss to understand the War Department's policy. They read about the thousands of returned soldiers who are seeking jobs in the big cities throughout the country and are told that it is the policy of the department not to demobilize the troops more rapidly than it is possible for them to secure industrial employment. But what they cannot understand is why the jobless element is not retained in the army and the farm boys released so they can go home and help put in the oats. We don't understand it either, and can offer no explanation other than the traditional red tape governing affairs of this kind.

If some hundreds of thousands of farmers whose boys are in cantonment camps impatiently awaiting release, would write the War Department for an explanation as to why they cannot be released, it might be productive of beneficial results.

Stabilized Food Prices

AS time passes, it becomes more evident that the control exercised by the government over food products did not give farmers excessive prices for their products or raise the price of foods to consumers. The benefit to both the producers and consumers was in stabilizing prices on a reasonably fair basis to both and preventing profiteering through speculation. Government regulation of the hog market ended on the last day of February. There was general expectation that prices would drop in view of a huge reported surplus of pork products. But instead of dropping, prices immediately began to rise, and instead of the standardized price of \$17.50, hogs are now bringing \$19.50 to \$19.75. With the guaranteed price still effective on wheat, prices began to rise following the removal of restrictions on certain wheat products. Early in March the Food Administration announced its purpose of releasing wheat from government stores to keep the price from going out of sight. Nevertheless, the wheat market has continued to advance until at this writing No. 2 wheat is selling on the local market at \$2.40 per bushel. Other grains have advanced in sympathy or as a result of export demand. Only beans, among available dry food products, have been neglected of recent weeks, and this market has apparently touched the bottom and begun to react.

As the weeks go by and it becomes more apparent that available stocks of foods are barely sufficient to meet the world needs, the consuming public may begin to see the light and appreciate the fact that the stabilization of food prices was in their interest rather than in the interest of producers. Stabilization of food prices at a fair point, which will pay the cost of production plus a reasonable profit, is desirable for both producer and consumer as a means of putting food distribution on a merchandizing rather than on

a speculative basis. If the cheap food howlers had had their way, pork producers would have been obliged to sell their pig crop for \$10 or \$12 per cwt. during the heavy marketing season, permitting the packers to make an enormous speculative profit on the product which the consumers would ultimately have had to pay for the privilege of securing their pork at a little lower price during a few weeks of the year.

Standardized food prices have been advantageous in giving the consumer cheaper food and the farmers a more satisfactory market than they would have otherwise had. Some feasible plan for the permanent stabilization of food markets on a fair basis which would assure the producer the cost of the product plus a reasonable profit, would benefit everyone concerned except the speculator. Consumers particularly are likely to learn this lesson before the present world shortage of food products has been overcome.

Plans for the Farm Campaign

THE season for the opening of the 1919 farm campaign has arrived. Farmers will this year be able to make their plans on a purely economic or business basis. They will not feel the patriotic spur for the increased production of food stuffs to aid in winning the war, for the war has been won and the country is busy in getting back on a peace basis. The problems growing out of the war remain to be settled, but this season's farm plans cannot await their settlement. We must mature our plans for this season without further delay, and the best way is to make them to fit into a permanent and constructive policy, rather than to suit what we may conceive to be a present emergency.

The speeding up of production to supply war needs has had the natural consequence of throwing our production out of balance. Less regard has been given to the maintenance of desirable crop rotations and less thought to the conservation of soil fertility, because of the patriotic urge for food productions. These considerations should again enter more prominently into the making of our plans for the future. For the same reason we have given less consideration to the adaptability of our soil to certain crops for which there was a special war demand than we should under more normal conditions. When average crops just barely pay out, as too often they have not paid out in the past, the poor yields are certain to lose money for the producer, hence the wisdom of sticking consistently to the lines of production which experience has shown to give the best average results in yield under our conditions.

Along with better average prices for farm products, production costs have increased to a point which leaves little enough margin of profit under the most favorable conditions as to production and marketing, and when unfavorable conditions obtain all chances for a profit are lost, hence the necessity for planning on economic production. To this end it is essential that we give careful attention to so planning the season's campaign that the demands on the available farm labor may be as evenly distributed as possible throughout the season, thus adding to the possible margin of profit on the season's operations.

Another factor in the planning of a farm campaign which should be carefully considered is the selection of some line of special production as a consistent policy. Diversified agriculture is a factor of safety which cannot be properly overlooked, but the most successful farmers have found it to their advantage to specialize along some line in which their production can be made sufficiently large to warrant the use of the best equipment for

cheap production, and the sales from which are depended upon as an important source of income. Many are the farmers who have paid off the mortgage or laid by a "nest egg" from the proceeds of some special product, of which "quantity production" was made a consistent policy.

And in planning for the season's production, facilities for marketing our products should also be considered. For this reason it is advisable to standardize production of cash crops on a community basis so far as possible, and then make community plans for cooperative marketing of the product. Improved roads in many sections of the state adjacent to good markets will enable the individual farmer to market certain lines of produce to excellent advantage without community cooperation, but for the rank and file of the producers of farm products cooperative marketing offers economic advantages which should not be neglected.

News of the Week

Wednesday, March 19.

PEACE conference announces that all the main questions between the interested nations have been discussed and that in the opinion of the British delegation, the League of Nations covenant should be incorporated in the preliminary peace treaty.—Mohammedans start a revolt in Egypt which is speedily curbed by prompt action on the part of Great Britain.—Armenians living at Aleppo are reported to have been attacked by Arab troops.—Japan is suffering from epidemics of cholera and influenza.—Disorders in northern Mexico have obliged American cavalry to take extra precautions.—Traffic in western Wisconsin is at a standstill due to floods. The railway bridge across the Mississippi at Winona is carried away.

Thursday, March 20.

IT is announced that 2,100 Michigan men will return in April.—A revolt against the Bolsheviki government is reported from Petrograd.—The successful establishment of wireless telephony communication across the Atlantic is made between stations in Ireland and Nova Scotia.—To date 83,409 officers have been discharged from military service.—The Michigan legislature is undertaking to reorganize the state board of equalization.—The contention of American labor representatives at the international labor congress in Paris to the effect that each country should settle its own internal labor questions has been sustained.

Friday, March 21.

IT is announced that all the German forts within fifty miles of the Rhine river must be destroyed, according to the agreement of the allied peace representatives.—The Soviet government of Russia is ready to deposit \$200,000,000 in the banks of this country and Europe to secure supplies for reconstruction, according to late announcements.—Another revolution involving Germans, Russians and Austrians is announced in today's Berlin report.—Canada's war claim is set at \$1,500,000,000.—The New York state legislature will spend \$50,000 to investigate Bolshevism in that state.—The German national assembly adopts resolution incorporating German Austria with Germany.—A cut in the price of steel is to become effective at once.

Saturday, March 22.

THE Ukrainians capture Lemberg, Galicia, after five days fighting.—Trotzky, the Bolsheviki minister of war orders a campaign with Archangel the base of the allied forces in northern Russia, as the objective.—Colonel Haywood, of New York, criticizes the American military establishment in France by stating that American soldiers were placed in front lines before they were properly trained.—British workers agree to a four days' truce before going on a general strike pending further negotiations with the government.—Circuit Judge Hosmer, of Detroit, orders fares on the electric line between Detroit and Jackson reduced to the pre-war rate.—President Poincaré, of France, appoints Alexandre Millerand governor of Alsace-Lorraine.

Sunday, March 23.

Lithuania is recognized by Denmark.—Sweden and Switzerland as a nation.—News would indicate that the radical government of central Russia is extending its sphere of influence.—Chicago may create a city food de- (Continued on page 518).



Urges the Study of Tractors

IN a recent address before manufacturers of tractors and threshing machines, Junius F. Cook, assistant secretary of agriculture, said: "Before the war our food supply was growing less in proportion to our population. The tractor will help counteract that tendency. But before buying a tractor a farmer should make it his business to see all machines in his neighborhood. An investment amounting to from \$1,200 to \$1,500 should not be made until the article to be purchased has been studied thoroughly."

Mr. Cook believes lessons growing out of the war have done much to boost the tractor industry. He said:

"Through the war and for a period after the war the high price of food and the wish of every true American to do his utmost to win quickly have given the tractor trade a tremendous stimulus. The reconstruction period is as valuable and important to the tractor business, if not more so, than any other has been. Every nation and every people will be striving to recover with the greatest rapidity from the conditions of the war. The value to a nation of a very quick recovery after the war can be scarcely overestimated. The nations all will want labor-saving machines in proportion to their needs, to their ability to use them, and to their financial ability to buy them."

"The user is induced to purchase his tractor. Presumably he expects to make more money out of his farm work thereby. His equipment has been horses, and he may have in mind ways whereby he can make more money with a tractor than with horses. His neighbor may have a tractor which has been a success and perhaps that is the most conclusive guide to some farmers. If the neighbor's tractor is not a success, or only is a partial success, it may or may not be a true indication of whether the farmer should buy. In fact, his neighbor's experiences only is an indication and the farmer still needs education to enable him to decide for himself. If the farmer is not of the kind to look the matter over broadly and decide for himself, he still may be successful in following a successful neighbor's example."

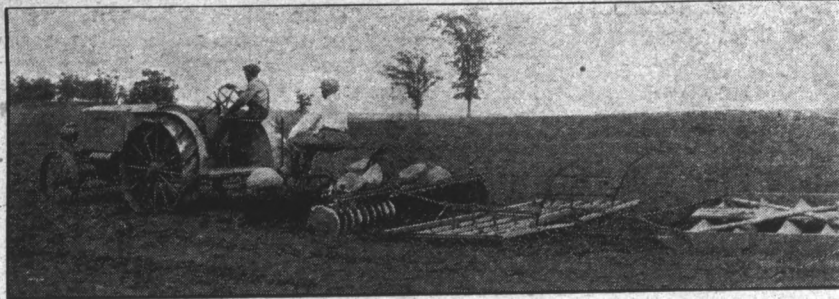
Sources of Tractor Education.

"Education in tractors can be obtained by the farmer from a great many sources, and the more he utilizes all these sources the surer he is to attain the highest success with a tractor. That also applies to the manufacturer and dealer. He can get valuable education and information from his neighbor, from the tractor schools held by the makers, from the tractor schools at the state colleges of agriculture, by attending tractor shows, studying tractor bulletins of the Department of Agriculture and attending tractor demonstrations. Tractor publications, farm papers, and trade papers also give valuable information."

"While the dealer comes in between the manufacturer and the farmer, his education should be such that he knows not only the construction of the machine, but also the principles of design. He also must know how to use it to give the best results to the user. There is no place in the industry where increased knowledge will reap a richer reward than in the position of the dealer. He has facilities given in many ways by the manufacturer to obtain a good knowledge of all the lines handled."

"The farmer should, before purchasing a tractor, make it his business to see all the machines in his neighbor-

Government Expert Advises Farmers to Study the Problem from its Different Angles Before Investing in a New Outfit



hood. He will put into the venture, at least, \$1,200 to \$1,500, and it will pay him well to spend a considerable amount in investigation before buying. Every opportunity should be taken to give the farmer as much information as possible regarding the machine he has purchased. The tractor schools of the agricultural colleges should be valuable educational forces that the farmers, as well as dealers and manufacturers, should make use of as far as possible.

Chief Causes of Trouble.

"From the answers to questionnaires sent out by the Department of Agriculture to farmers, I found from 2,179 reports the question, 'What part of your tractor gives you the most trouble?' the answers:

Magnetos	299
Spark plugs	110
Gears	108
Carburetor	104
Cylinders and pistons....	61
Bearings	80
Clutch	59
Valves and springs.....	43
Lubrication	29
Starting	28

"That information gives one a good idea of how to start examining a trac-

tor with the view of buying. It will be seen from the return one can eliminate a great many details and concentrate attention upon the above, which may be considered the main points of trouble. It seems to me if I were buying a tractor I would make it my business to study magnetos, spark plugs and carburetors enough so I would know not only the best for me to use, but know how to use them when I received my tractor. Of course the reports of these troubles were from the users, and many of them probably did not know how to use tractors to the best advantage, but after all it is a good indication as to where to look for trouble. The farmer must not run away with the idea that because he can make his Ford car do all sorts of things he can do the same with a tractor running over rough ground and pulling a load up to its full capacity all day. It will take a lot of time and patience to make the tractor man realize his best load would be two plows; that is, have a margin of one-third for satisfactory running, even if he can just struggle along with three plows."

"There have been so many requests to the Department of Agriculture from farmers for information to guide them

in buying tractors, I feel there is a real need of the department taking up that work. Any such work would aim at answering the farmers' questions about tractors as far as possible. The tractor could be tested and given a rating such that when a farmer bought a 25 horsepower machine he would know such horsepower rating was on the same basis and would give the same power as another make of machine of the same rating. If such a machine would pull two plows satisfactorily on his farm he would expect a machine having 37 or 38 horsepower to pull three plows under similar conditions. He would know what size thresher or ensilage cutter he could run with his engine. There seems to be far more need of testing and rating tractors than of motor cars or motor trucks. Such a rating would be a safeguard to the manufacturer and dealer as well as the farmer, for any dispute arising could be settled by a rather simple test.

"At this time it is easy to overestimate the influence the tractor will have upon this nation, but from my study and work in connection with it I think the possibilities are enormous. Before the war our food supply was growing less in proportion to the population. The tractor will help counteract this tendency."

Watch Your Machine.

With the great increase in the number of tractor engines being used by American farmers, and with the probability the present number will be doubled in a very short time, the necessity for keeping these machines in good order, ready to do their full work when wanted, is of increasing importance.

From the kind of service and the place where the work must be done, it is almost certain that the owners and operators must do most of it on their own farms. They cannot easily haul a broken down tractor out of a field to the local garage or handy man. Neither is it reasonable to suppose that the local man will care to go out to such jobs or keep extra mechanics for such work while plenty of work rolls to his very door under its own power, in the never ending stream of autos.

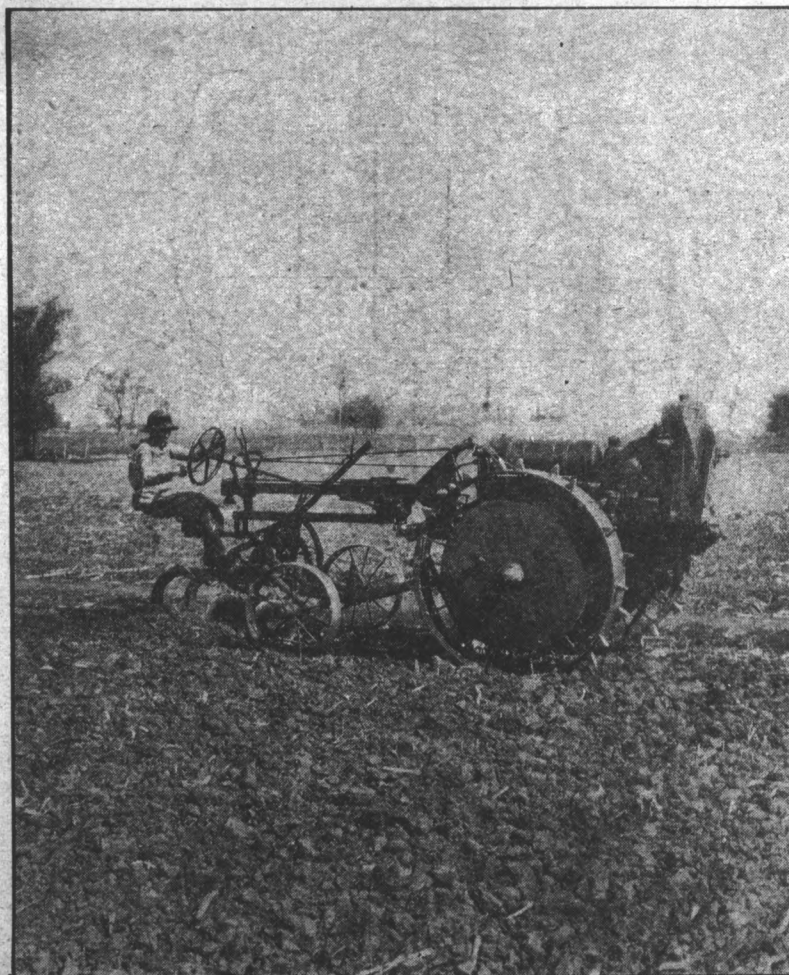
The logic of the situation demands that the owner or operator plan to take care of his own repairs.

A thorough inspection of the entire machine should be made every day. Set aside twenty minutes or more either before starting in the morning or at noon for this inspection. This time is comparable to the time a horseman should give his teams to know they are properly fed and watered, harness adjusted to prevent sores and strains.

Time spent on inspection is not lost time; but the best insurance that the engine will be sure to give uninterrupted service for hours without rest. Do not get the idea that this daily inspection is complete insurance and that nothing can possibly happen until next inspection. All the hours of running must be spent in a sort of "watchful waiting" for what the various parts of the machine are saying.

No tractor operator can claim to be efficient unless he can make all repairs on his machine. Such skill comes from hard study and clear thinking, together with practice doing the work.

A tractor is as deserving of a good house and careful repairs as the auto. On the tractor depend, in large measure, the actual production of crops.



News of the Agricultural World

THE LATEST ON THE BEAN SITUATION.

THE bean jobbers should receive full credit for their efforts to get an outlet for this year's bean crop and for all they have done in the past to place the bean industry on a substantial basis. But so far as we can see, no occasion has arisen for the growers to fall upon their knees before the buyers, as some of the latter would have us to believe. Some jobbers lay much stress upon carrying the bulk of the financial burden of this crop for thirty or sixty days. Have they forgotten that the farmer began nine or ten months ago to invest in this crop and that many of them have not, to this date, seen so much as a cent from their investment? Certainly the farmers have done their part well, and it would now appear that the proposition is squarely up to the jobbers. At least, there is no occasion for charging a producer who may be anxious for money to meet legitimate obligations, with ingratitude, as some of the jobbers have done.

Growers Organize.

It is possible, however, that out of the present situation there may develop some advantages. Growers' organizations are being formed in all important commercial bean growing states not heretofore organized. Already the producers in California and New York state have been called together for that purpose. If effective associations result a long step will be taken toward getting the producing end on a more substantial basis. There should be, and no doubt could be, the closest cooperation between the growers' organization in this and the other states, to the mutual advantage of all.

Crop Estimates Were Too High.

If these organizations were ready to give service they could do much to stimulate a large consumption of beans. If certain facts were impressed upon the public it would undoubtedly start a freer movement over the counter. The public should be told of the food value of this product, where it can be purchased, what it should cost per pound and how the good housewife can reduce her food bills and at the same time fully supply the proper portions of the various food elements to her family. Other advantages would follow a get-together movement.

The farmer's present problem is to dispose of the crop now in hand. To this end it will be interesting to know that the federal government has reduced the estimate of marketable beans in California to the level of last year's crop. Threshermen's returns show the Michigan crop to be 3,288,314 bushels instead of 4,887,000 as the federal reports have figured it. These alterations bring the total United States crop for 1918 down to the total for 1917. The trade has made free use of the news on importations of beans from the Orient, but importations from the east are nothing unusual. In 1917 the total importations of beans in the country amounted to nearly four million bushels.

Whether the factors mentioned above will be sufficient to overcome the apparent lack of confidence in the future of the market, we cannot say, and the grower must be his own judge. The present condition of the bean market is comparable with that for dairy products a month ago, in which the break has fully recovered. Should improvement in domestic demand, coupled with an increased outlet for foreign shipment occur in the bean deal in a similar way, a sharp reaction would be the certain result. But this may not occur. We can not tell. What we will do is to keep growers posted as to conditions.

We are glad to have accomplished a measure of benefit to our growers by our protest in thwarting the apparent intention of some jobbers to buy in the balance of the crop at less than they were worth on the domestic market. Some jobbers who marked the price down to \$5 per cwt. right after the placing of the government order raised it to \$6 after our protest, and that on a lower domestic market. Most buyers will also now take in beans, advance a fair price to the grower and hold them subject to his option for future sale.

VIRGINIA POTATO ACREAGE.

IN both the Norfolk section and over on the Eastern Shore (the counties of Accomac and Northampton) it is quite clear that the early estimates must be changed a bit. The Eastern Shore has an acreage sixty to sixty-five per cent of last year's crop and the Norfolk section has fifty per cent instead of forty to fifty per cent. At the last moment when it became apparent that the Norfolk acreage would be only about forty per cent of last year the larger growers got busy and put in each fifty to one hundred or more barrels of seed into the ground. The crop is in the ground in good shape, the weather having been more favorable for such work than in many years.

The lack of potash and a noticeable failure of fertilizer to make its usual showing on the crops, even when ap-

plied exactly as heretofore, and in the same quantities, creates uncertainty or an additional uncertainty as to yield. From twelve to fifteen barrels of potatoes from a barrel of seed was about the average out-turn last year and was far below the average of former years.

The lack of labor cuts a big figure in the situation. Government contracts have taken the farm labor. The farm day was ten hours or more in length; the government day eight hours; the farm pay \$1.50 per day, rent and fuel and garden truck included; the government pay was \$3.50 to \$4.00, or more for an eight-hour day, time and a half for overtime and double pay for Sunday or night work. In one way and another the colored labor has been completely upset—bad enough before but rendered almost useless for the farmer now.

STANDARD POTATOES.

BY adopting standard varieties of potatoes, farmers in the upper peninsula were able to add about \$360,000 to their income last year, according to the Extension Department of the Michigan Agricultural College.

"An average of eighteen cents per bushel above the general market price that was obtained for carload lots of potatoes of the Green Mountain variety," declared J. W. Weston, leader of county agricultural agents in the upper peninsula. "Figuring on a production of four million bushels of potatoes of this strain in the upper penin-

sula last season, the adoption of standard varieties, if only half these potatoes were shipped out, added \$360,000 to the income of producers."

The work of interesting farmers in improved spuds was largely carried on by county agents and field men of M. A. C., cooperating with the local agencies.

NORMAL WHEAT PRICE URGED BY CANADIAN GROWERS.

BOARD of directors of the United Grain Growers, Ltd., went on record as opposed to the fixing of an arbitrary price for the wheat crop this year and recommended legislation which would eliminate unrestricted speculation in farm products.

The board urged that the Canadian government market the 1919 wheat crop by selling the exportable surplus of wheat and flour at a fair price based on world value to the British and Allied governments. Such a price mutually agreed upon between the farmers of Canada and the Allied governments could be made a fixed price until August 31, 1920, and would govern the price of flour and wheat for domestic uses in Canada.

"This method," says the statement issued by the United Grain Growers, "would insure the consumers in the Allied countries of Europe and in Canada getting their food requirements at a fair price based on world conditions and at a minimum of added expense over the price Canadian farmers would receive for their product.

"It would also insure Canadian farmers getting the maximum price possible, based on the world conditions, for their product. It would eliminate all profiteering at the expense of the producer and consumer in the transfer of the former's food products to the latter.

"We do not believe," the statement continues, "in a fixed price, set at an artificial value, which at the expense of the consumer, would give protective profits to the producer, even though farmers in other countries may be situated temporarily more advantageously because of action taken by their governments previous to the signing of the armistice.

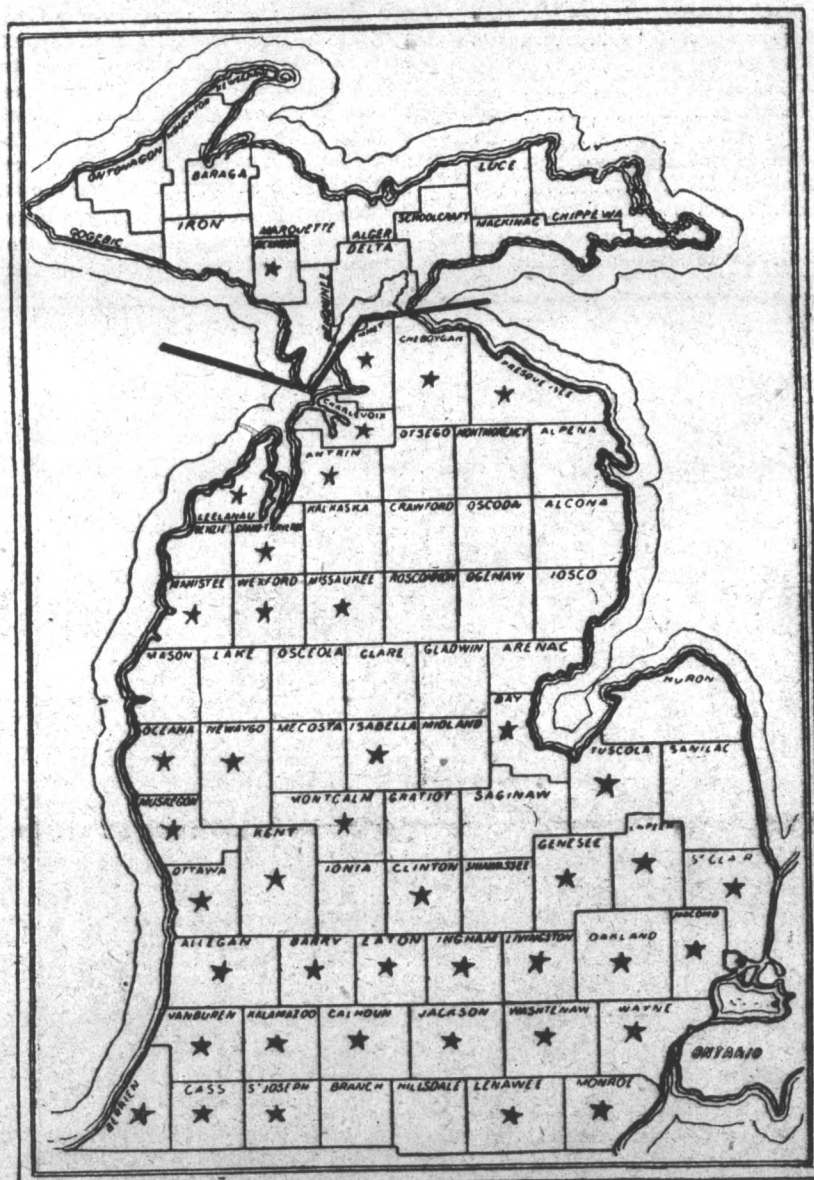
"In the event of it being impossible to sell our whole exportable surplus to the Allied governments, and in this way fixing a price, we believe immediate steps should be taken to eliminate all speculation in our food stuffs. This does not mean the elimination of future markets. We recognize that under open market conditions it is necessary for the efficient handling of our grain to have future markets in which purchasers of grain in the country can make future contracts for the present constitution of their purchases. We believe that such markets can be conducted to serve all the necessities of the grain trade, even though limited only to those who are actual owners or gatherers of the grain.

"We suggest that the Canadian government take steps to prevent the sale of grain for future delivery on the part of anyone who at the time of sale does not actually hold title to the amount of grain he sells and prevent the purchase of grain by anyone who does not have a bona fide intention of taking delivery of the actual grain."

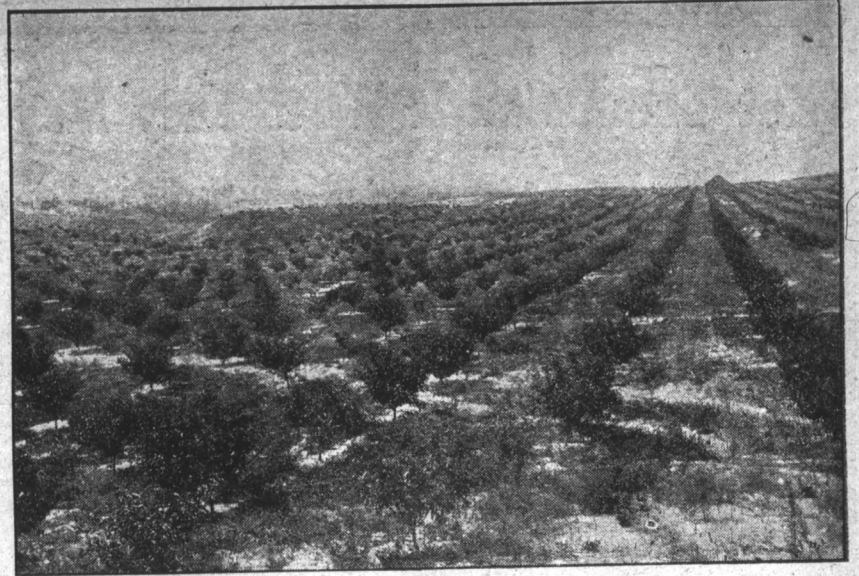
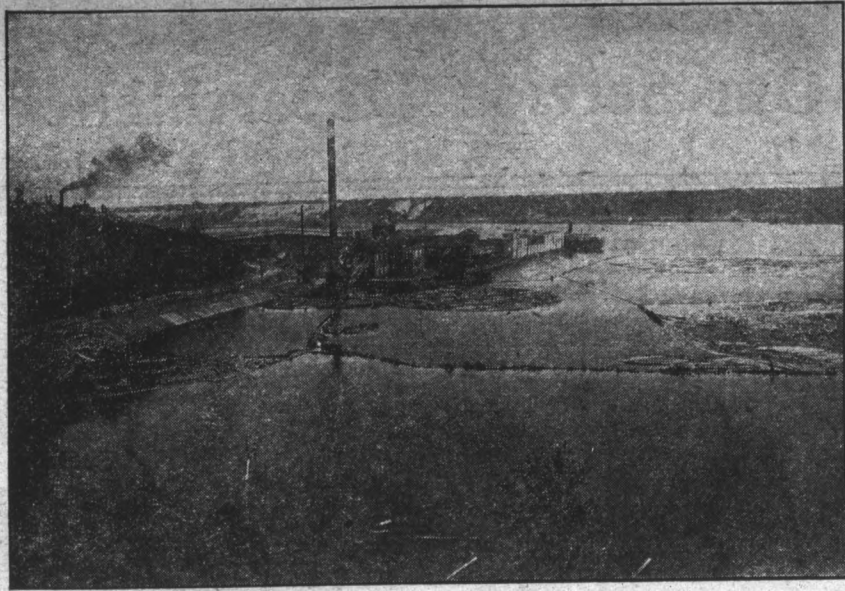
Business and charity are traveling companions at present. The food a starving man does not consume today he will not eat tomorrow or next year. The quicker we sell and ship our surplus the better for us and for those needing the food.

Heavy damage was caused by rains over Southern Florida. The state's winter tomato crop suffered materially.

Pioneer Counties in the Michigan Farm Bureau



Stars Show Counties that Joined the State Association of Farm Bureaus at the Initial Meeting. Has Your County Become a Unit in this Organization, the Purpose of which is to Adequately Represent Michigan Agriculture?



From Lumbering to Agriculture

By M. L. Duckles

LUMBERING has become almost extinct in northern Michigan.

Where the great pine and hardwood forests once stood farms have been laid out and the former lumberman has had to change his occupation if he has elected to remain in the region of his earlier activities. Up to the present time farming here has been of an experimental nature, no settled type having become established, unless we except fruit farming. But fruit growing is in its youth rather than middle age. Cherries and apples are the leading successes, Grand Traverse cherries in particular being recognized as among the choicest in the world.

The main reason for the success of fruit growing is the influence of the Great Lakes, with their power to regulate the extremes of temperature. Besides the Great Lakes there are numberless smaller lakes, the shores of whose shores provide ideal locations for orchards. These bodies of water are wonderfully clear and deep, comparing to advantage with the Alpine lakes. Crystal, Elk and Torch are of sufficient size to have a marked effect upon the country for several miles back.

Dividing the Grand Traverse bay lengthwise is the strip of land locally known as "the Peninsula." Not only is it most favorably placed for growing sure crops of cherries and apples, but its gravelly clay loam soil and picturesque, gently sloping hillsides, affording the necessary air drainage, could not be better for this kind of farming.

Probably no other region of the world can lay claim to so many different types of soil as northern Michigan. They range all the way from light sand to heavy muck, with the good tilable sort widely predominating, and the land is both flat and rolling, giving

a variety of choice to suit every conceivable taste.

A farmer from one of the best agricultural counties of Illinois remarked with his surprise at the readiness with which grass took hold of the newly cleared land. He found this to be true of the lighter soils as well as of the heavier types. Indeed he was struck with the fact that soil of every description was covered with some kind

of growth. Where it was not being farmed and growing domesticated crops it was over-run with grass, weeds or shrubbery. Nature, in her own way, was telling the story of its productiveness.



It is true that in spite of the natural wealth of these soils, good farmers from the heavier prairie lands of states farther south and west have frequently not succeeded well in northern Michigan. This has been chiefly on account of either not understanding the nature of the crops to be grown or the character of the seasons. There are also peculiarities of soil management which have not been carefully taken into consideration. The so-called gumbo soil would be a drawback to this region, did it exist widely, for the reason that it drains very slowly and warms up late in the spring. A lighter soil, that is, one with a good percentage of sand, can be worked readily many days ear-

lier than the famed gumbo. Furthermore, it requires much less power to work it. These are real advantages.

Ranking side by side with fruit as a successful crop, potatoes stand as a money-maker, especially on newly-cleared land. It is usually the first crop a new land farmer tries to grow, and scarcely ever fails. Fine, clean, smooth potatoes that break open white like popcorn. No wonder they are

classified as the chief article of diet in the estimation of the dwellers of this section of the country. So popular has potato growing become that it threatens the agricultural life of many a good farm.

When farming here becomes stabilized, live stock will constitute the most profitable feature of it. Agricultural permanency depends on live stock. With the advent of the silo the feed question is being solved and the corn fields are becoming larger. Ensilage corn is a certain crop. It was scarcely ten years ago when the corn belt was not drawn to extend farther north than a line across the state from Saginaw to Ludington, but yields ranging as high as eighty-five and even one hundred bushels of shelled grain to the acre are frequently reported from the counties bordering Grand Traverse Bay. Those who have met with the greatest success with this crop have

taken advantage of the ready adaptability of corn to different climatic conditions by the intelligent selection of seed from year to year. Carefully bred corn will invariably ripen before the fall frosts. The time lost in the tardy warming up of the weather in the spring is gained through the late autumns. Often it is toward the last days of October before the first killing frosts arrive.

Success with live stock depends very largely on forage. When the growing of alfalfa was introduced a few years ago, it was discovered that in order to obtain good yields with this wonderful forage crop lime had to be used on most northern Michigan soils. At first this seemed to be a serious setback to the alfalfa enthusiasts, for the cost of liming all these extensive areas seemed prohibitive. Then someone thought of the marl deposits which were known to exist, but which were always supposed to be useless. These deposits occur from a few inches to many feet in thickness throughout the old swamp tracts of the western and northern counties. There are also great beds of limestone easily accessible. The state geological department advises that there are some four hundred locations in western Michigan where suitable sources of limestone could be developed cheaply. Nature, like a wise guardian, has provided for her children's needs.

When all the agricultural resources of this once famous lumber region are fully utilized and the oncoming generation of young husbandmen are able to apply their more disciplined minds to its greater improvement there will be no better or more prosperous farms to be found anywhere. Not abuse, as in the past, but conservation must be the rule if the new industry administrators to the full enjoyment of its inheritors.



Let Them Call It What They May It's Right Name Is—Saloon

COUNTLESS ATTEMPTS have been made in this and in other states to fool the people into voting for acts and amendments that will bring back the saloon with all its attendant evils and dangers.

THE USUAL PROCEDURE is to give such legislation harmless sounding titles but, by a tricky use of words—a camouflage of language—slip a joker into the text that will give it, when enacted, the opposite power and effect to that which appears in the title.

A MORE VICIOUS use—or rather abuse—of the intentions of voters cannot be imagined—but what can you expect from a business founded as was the saloon on the weakness and cupidity of the weaker members of the race?

RIGHT NOW IN MICHIGAN a last desperate attempt is being made to do just that sort of thing.

UNDER A TITLE that sounds like one thing, an amendment that means just the opposite, is up for your decision.

IT IS CALLED the "Beer and Wine" amendment. When the "Wets" speak of it they use the term "Light wines, etc.," but as a matter of fact the word "light" does not appear in title or text—and a heavier weapon was never used by the advocates of a befuddled world!

FOR IF YOU WILL READ this latest attempt to nullify Michigan's best piece of legislation—the "Dry" act—you will find that it means just this—bringing back the Saloon in its worst form and with its most harmful accessories.

CALL IT WHAT THEY MAY—word it as they may, to conceal its true intent—this "Beer and Wine" amendment's right name is "The Saloon Amendment."

DON'T BE DECEIVED by the wheedling of those who have always advised only for their own profit—and your loss.

READ CAREFULLY; weigh every word; and make up your own mind what the saloon interests are trying to get you to do.

JUST AS AN EXAMPLE of the difference between what they say about it and what they say in it:

THEY ARE SOLICITOUS—Oh! so feelingly solicitous!—lest the poor farmer be denied the privilege of making cider from his own apples. That would be a great hardship you will agree. They weep real tears over his predicament.

VERY WELL—Read that amendment and you will find cunningly concealed in verbiage, yet clearly stated, that if that "Beer and Wine" amendment were passed the farmer could neither make nor sell cider without first taking out a license—same as a saloon or a brewery. Can you beat that for double dealing?

"OH WINES ARE HARMLESS," they say. Verily! Why, some foreign wines have almost as great an alcoholic content as the strongest whiskey—and create a worse form of intoxication.

"AND BEER," they used to tell us—"why in Germany even the children drink beer. Beer drinking is universal there."

WELL, WE HAVE SEEN what Beer will do when universally used! Was ever a people more degraded—more brutalized—more deadened to the difference between right and wrong?

MAKE THE BRAIN SODDEN—render it, by constant soaking in beer, only half active—and you have a being more akin to a brute than a man. Tractable? Yes—but never dependable.

NO—WE NO LONGER hold a beer soaked people up as examples of—anything.

THEY EVEN TRY—the Saloon propagandists—to make you think our soldier boys resent the abolition of the saloon.

WHAT AN INSULT to those brave boys and to your intelligence.

AS IF EVERY AMERICAN soldier were a toper so addicted to his booze that, like a dope fiend, he would fight if deprived of it. That's the veriest rot of course.

WHY DO THEY TRY TO HIDE the real intent of this proposed amendment under an innocent sounding title and hide its meaning again by a tricky use of words? Why?

BECAUSE THEY KNOW that the people who voted Michigan dry still want it dry. And they know too that the votes of the men will now be supported and augmented by the votes of Michigan women—and they know what that vote will say.

THEIR ONLY CHANCE to get the saloon back is to make you think they want something else. For they know you want no more of the saloon.

IT IS THEIR LAST forlorn hope—their last dying kick. The saloon is gone never to return. The longer we are without it the less we miss it—the less does anyone want it back.

THEY'D LIKE TO DRIVE a wedge in the Federal act by getting this amendment through in Michigan. That is the big significance of this attempt—that is why so much outside money is being spent in propaganda here.

THEY HAVE EVEN TRIED to make this appear a religious issue—their propaganda says some denominations are against a dry state.

IT'S NOTHING OF THE KIND—a few men of all denominations favor a Wet condition. But the vast majority of all religious denominations are for a dry state and a dry nation.

THIS ISN'T A MATTER of religion; of sect; of nationality. It is just a matter of decency and sanity and good citizenship as against rowdyism.

WATCH THIS THING—it is counterfeit. It does not mean what it says. Its title is a misnomer. Its intent is vicious. It dresses in the guise of liberty—"personal liberty"—its effect would be to enslave again.

IT IS CALLED "The Beer and Wine Amendment"—its real name is "Saloon."

DO YOU WANT the saloon back?

IF NOT—vote NO April 7th to the so-called "Beer and Wine" Amendment.

MICHIGAN ANTI-SALOON LEAGUE

Headquarters: LANSING, MICHIGAN

Our Service Department

HUSBAND NO RIGHTS IN WIFE'S PROPERTY.

Under the equal suffrage law has a man a right to take his wife's property or money and use it as if it was his own?

No; the suffrage law has nothing to do with property rights. Under the law of this state the husband has no rights in the property of his wife.

JOHN. R. ROOD.

TANNING TAME RABBIT.

Please tell me of a good recipe for tanning tame rabbit skins.

To one gallon of warm water add, slowly and carefully, one ounce of sulphuric acid, also add one pint of table salt. Put the skin in from thirty to thirty-five minutes moving it about frequently so the solution will reach all parts alike. Hang in a warm room until partially dry, then rub and stretch until dry. It is said this formula will toughen rabbit skins.

TRACTOR FOR SMALL FARM.

Do you think that a light tractor would pay on a farm of 118 acres of which ninety acres is level farming land? I also help on my aged father's farm of 110 acres.

Ninety acres of tillable land does not seem to the writer to be a large enough area of land to keep a tractor busy enough to make it a paying investment. If you can help your father out in his work you no doubt could cooperate and make it a good paying investment. If you have some belt work you hire done, then, no doubt, using a tractor with a suitable belt pulley and governor you would have sufficient work to warrant the purchase of a tractor. The tractor you have in mind has not been upon the market long enough to commend or condemn it.

G. W. McCuen.

INCOME TAX.

Can I deduct an amount for salary for myself as manager of my farm?

Yes, but you must also report, in such a case, the receipt of such a salary, and, therefore, you gain nothing by deducting it from your business income.—H. R. Green.

BORROWED MONEY NOT CAPITAL.

Will you please explain what theory the framers of the income tax law are working when they say that borrowed money is not capital?

The theory is that proprietors (stockholders) can be sold out (foreclosed) if they default on their obligations while the people who loaned them the money own the final equity. The stockholders (proprietors) have a chance to make unlimited profits. The bondholders take a risk on the value of the property on which they lend their money, but they have no chance to participate in extraordinary profits. Why should the stockholders get the benefit of the bondholders' equity as "invested capital" when the bondholders get no shares in the profits?—H. R. Green.

CONCRETE DRAIN TILE.

Please tell us something more about concrete drain tile. What is the best and cheapest way to make the individual molds? I think we might make a mold out of roofing paper. How thick should the shell of the tile be?

For pouring concrete tile, manufactured molds would undoubtedly prove the least expensive in the long run as they may be used over and over, thus

distributing the initial cost over a large amount of finished product. These molds are made of thin malleable or cast-iron, the interior core being collapsible. Galvanized sheet metal is also used.

Manufacturers of some small tile machines use roofing paper for the forms. These forms are held in place by metal bands until the tile is completed, when the bands are removed, leaving the roofing mold to hold the concrete in place and to prevent rapid drying in the first stage of curing. The shells of three, four, five and six-inch tile may be a half inch to three-quarters of an inch in thickness. Larger sizes must be proportionately thicker.

—F. W. Ives.

BALANCING A BURR STONE.

Can an old-fashioned burr-stone be rebalanced and made to grind feed.

This can be done by two different methods: (1) the stone can be placed on trunnions so it can rotate in a perpendicular plane. It is then chipped to a balance, that is, the stone when rotated will stop in any position. The other method is to pour moulten lead into a depression made on the light side of the burr and if too much lead is poured into the depression it is an easy matter to remove some of it in order to make a running balance.—G. W. McCuen.

LENIENT WITH TAXPAYERS.

THE Treasury Department will not prosecute those who file their return before May 1. Collector of Internal Revenue James J. Brade, of Detroit, has received instructions from the treasury department that no person who voluntarily files an income tax return on or before May 1 will be liable to fine and imprisonment.

Twenty-five per cent will be added to the amount of the tax due in every case, however, and each delinquent may submit an affidavit setting forth the reasons for failure to file his return on or before March 15, which affidavit will be submitted to the department, and if found to be a "reasonable cause," the commissioner will not assess the twenty-five per cent penalty. A "reasonable cause" is defined to be such a condition of fact that had the taxpayer exercised ordinary care and prudence it would have been impracticable or impossible for him to file his return in due time.

The same rule applies to corporations.

Individuals who delay making their return until after May 1 will, in addition to the twenty-five per cent additional tax, be liable to a penalty of not less than \$5.00 and corporations of \$10, in cases where it appears by affidavit that there is no wilful intent to violate the law.

Every person or corporation who paid to individuals as wages, salaries, rents or interest during the year of 1918, sums of \$1,000 or more are required to file return of information not later than May 15, and failure to do so renders them liable to the same penalty as an individual delinquent. These returns are required to be filed with the Commissioner of Internal Revenue, sorting division, Washington, D. C.

The Pennsylvania Station concluded from tests that a good active orchard draws as heavily upon the fertility of the soil as does a twenty-five-bushel crop of wheat, excepting in the demands upon the single element of phosphorus.

Helping the Other Fellow

By E. L. Vincent

A FEW years ago when in the east where I went to speak at a State Dairymen's Association, I visited the herd of a man not far from Hartford, Conn. This man had a herd of pure-bred Guernseys, bought at considerable expense. He had not had the cows very long, however, before he determined to know whether they were all sound and free from tuberculosis or not. His curiosity in that direction cost him a staggering sum of money, as well as the loss of about fifty per cent of the members of his dairy. It was a hard blow, especially as he was at that time well-nigh a pioneer in that part of the country in the Guernsey cattle business. If there is anything more calculated to give a man a big shock than another, it must be to stand still and see one after another of his choicest cows go down before the terrible scourge of tuberculosis as revealed by the tuberculin test. A weak man might well feel some degree of discouragement.

The farmer in question, however,

made of pure-bred Ayrshires. In the western part of New York state, I found a man who has set a number of younger farmers on their feet with the kind of cattle he loved so well. He had a fine strain of Ayrshires, great big cows, of a deep rich color, with large, square udders. And their records proved them as good as they looked. He was in the midst of a community of farmers where another breed of cows had for a long time had the preference on account of their heavy flow of milk; and these cows, as he told me, could be bought at a much lower figure than the Ayrshires were ordinarily sold by the men engaged in breeding that kind of stock. That made it rather slow business interesting the neighbors in the Ayrshires; but he knew the worth of his cows and he went straight ahead quietly, persistently and with full assurance that he had a superior line of stock. First he gave his own son a start on an adjoining farm. The son had been slow to break away from the more popular



When Pastures Are Green.

said: "It is all right. Now I know where I am. I will begin to build with what I have." His herd at the time I saw it, certainly was one of the most beautiful that one would care to look at, and the cows were doing fine, proving to the satisfaction of their owner that he had made no mistake in fighting tuberculosis to the limit.

After this farmer got fairly on his feet, and had some surplus calves to dispose of, he did a thing that not very many men would do, I fancy, under similar circumstances. He had some neighbors who were desirous of getting a start with Guernsey stock; and he said to them: "Come and get some of mine. You may have them for what you can get for your common stock." He might have sold those calves at a fine price, but for the sake of helping his neighbors who were not as favorably situated as he was, he made them that generous offer; and all around there now you may see cows of fine quality, grown from the calves thus obtained at low cost from this pure-bred herd. It certainly was a most philanthropic thing to do. It may be said that not all farmers could afford to do a thing like that, and it may be true in a measure. It costs to get started in such a business and there is reason in thinking that first of all we ought to get our money back and establish ourselves on a sound business basis.

And yet, there may be a chance here to prove one's unselfish disposition and to do a very good turn to one's fellow men. And the man who is actuated by such a spirit will be satisfied with a fair profit, conscious that he is in the best sense of the word, a benefactor in the world of dairy farming. Surely, this will be a reward well worth striving for.

While on another trip, through the west and middle west I stopped at a number of places where a specialty is

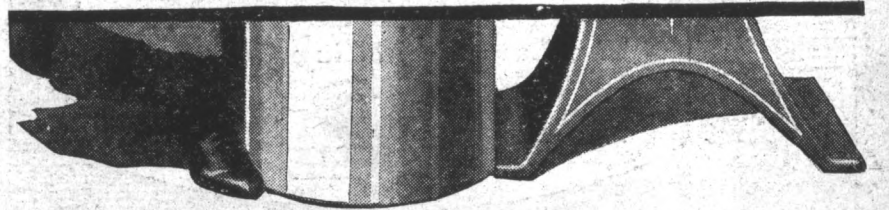
breed that his neighbors owned, but the father finally convinced him that he was making a mistake, and for the sake of proving this to him, he fairly set his boy up at his own expense in the Ayrshire business. At the time I was at that farm, the son was even more enthusiastic than was his father. He had only just come back from a big stock show in Canada, where he had sold what surplus stock he had. But he had the spirit of his father in another way, too.

"I did not get any very big prices for my cows," he told me. "I got around \$200 for some and a few a little more. But the most of them went around \$200." And he, too, was doing a good thing in aiding farmers to get a start with good stock. For pure-bred stock of the kind he had he might have placed the cows beyond the reach of the average farmer. And the heaven is working in the part of the country where these men live. Already a number of farmers who used to have the inferior stock are coming to the old man to get some of his cattle, and they do not have to go away, even if they are not able to pay big prices.

Other men I know of are exchanging their good calves with neighbors for those that are to be slaughtered for veal. That also spreads the good work and does much to improve the quality of the dairy stock of the community. It may be some of us have not thought what we can do in this way. Rather, have we not been a bit selfish about the matter? We like to make good sales, to see the money coming in, and that is all right. At the same time let us not forget as occasion offers to do our fellows a good turn by putting it in their way to own better stock than they ever have had, if we do have to make some concessions. It will all come back to us in other ways and we will be helping to make the world a bit better.



The Best Time to Buy a DE LAVAL CREAM SEPARATOR



THE best time to buy a De Laval is when you need it most. With cows freshened or freshening soon, you will have more milk to handle.

And with butter at present prices you can't afford to lose any of it.

If you are still skimming by the "gravity" method or if you are trying to get along with an inferior or "half-worn-out" separator, you certainly are losing a lot of valuable butter-fat.

So you see that the combination of larger milk supply and a high price for butter-fat can mean only one thing—you need the best separator to be had.

Right Now

The best cream separator you can get is the only machine you can afford to use these days, and creamerymen, dairy authorities and the 2,325,000 De Laval users all agree that the De Laval is the world's greatest cream saver. They know from experience that the De Laval is the most economical machine for them to use.

If you buy a De Laval you will get a machine that is tried and tested and true—a machine that will give you genuine service—and you will get the cleanest skimming, easiest turning, longest wearing cream separator that money can buy.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent; or if you don't know him, write to the nearest De Laval office as below

THE DE LAVAL SEPARATOR COMPANY
165 Broadway, New York 29 E. Madison St., Chicago

Producers Confer with Packers at Chicago

At a conference held in Chicago on March 10-11 the representatives of the Kansas Live Stock Association, Corn Belt Meat Producers' Association, Missouri Live Stock Breeders' Association, Illinois Live Stock Association, Illinois Agriculture Association and the Buyers and Sellers' Association of Texas met with the five large packers and eleven other packers. The report of its deliberations follow:

"It is the sense of those participating in the conference that it would be to the mutual benefit of the live stock industry, the packer and the consumer that steps should be taken to bring about a closer cooperation between the various interests concerned.

"Realizing that the live stock industry is on the threshold of an era of reconstruction, and with the prospect of removal of such control as has been exercised by the Food Administration during the war period, we are impressed with the importance of reaching a better understanding of the problems affecting the whole industry, and of effecting, if possible, more economic methods of production and distribution to the end that our businesses may be placed on a sounder basis and in order that the finished product be furnished the consumer at a minimum price compatible with cost of production.

"It is suggested that these ends may be obtained through the formation of a control committee composed of producers and representatives of the packing industry, the Bureau of Markets, and the National Live Stock Exchange which should meet in Chicago once a month or oftener, if necessary, for the purpose of taking such measures as may tend toward stabilization of live stock receipts at various markets and for the further purpose of studying one another's problems of adjusting grievances and of inaugurating such system as will be helpful to the producer, the packer and the consumer.

"The greatest possible publicity should be given to all of the proceedings. It is understood that if this proposal becomes effective it shall not be construed as in any way restraining the activities of the parties hereto in working for or against the passage of pending or future federal legislation for the regulation of the packing and allied industries. Its purpose is wholly understanding and fuller cooperation between all interests involved.

"It is obviously to the best interests of all concerned that receipts of live stock at all markets should be stabilized and distributed as evenly as possible, in order that a five-day market day be established for all classes of live stock, and to this end it shall be distinctly the function of the committee to make effective such measures as may be possible for the accomplishment of this object.

"It is contemplated that the producer shall obtain and furnish the committee all important information concerning the supply of meat animals in the various sections of the country, shall advise the committee regarding food conditions and the amount of live stock which shall be ready for market during the various seasons, and in other ways be a source from which valuable information, including cost of production, may be placed at the disposal of the committee.

"It is contemplated that the packers shall prepare and submit to the committee information relative to the amount of finished product on hand, the foreign and home demands for meat products, together with the cost of live animals and the expense of the slaughter, packing and distribution of the finished product. The packers shall

recommend any plans which tend to reduce their expense of operation, such as the equalization of receipts, etc.

"It is contemplated that the committee shall carefully investigate the annual earnings of the packing industry, including all their subsidiary companies; it shall be the privilege of the committee to employ a committee of public accountants of recognized standing to audit the yearly statements of the packers. Any statements or figures furnished to the committee by the packers, or by the producers, from time to time, may also be subject to verification by public accountants. Whenever duplication and unnecessary overhead expenses are disclosed it shall be the duty of the committee to recommend the elimination of same.

"It is contemplated that whenever certain methods and systems used by the producers may be shown to be wasteful or detrimental to the industry it shall be the duty of the committee to recommend the elimination of the same.

"It is contemplated that in regulating the receipts of live stock during abnormal times it will be essential that the committee shall have the support of the Railroad Administration or the Interstate Commerce Commission to the end that the regulation of transportation as recommended by this committee may control the receipts at market centers.

"We feel that the membership of this control committee should be composed of the following representatives. One from the Bureau of Markets of the United States Department of Agriculture, two from the National Live Stock Exchange, ten packers, and ten producers, representing the cattle, hog and sheep industries, with alternates—a total of twenty three. This central committee shall have authority to add one representative of the stockyards and one of the railroads if it sees fit.

"It is understood that the producers here present will take steps as soon as possible to notify all live stock producing organizations of the action here taken, and to call a general meeting of three delegates from each state, to be selected by the state associations, and three delegates at large from each of the national live stock associations and the Southern Live Stock Association, and it shall be the province of this meeting to select the ten producer representatives that are to serve on the Central Committee.

"It is contemplated that the producers will exercise the utmost care and diligence in selecting their representatives, who will be men of unquestioned standing and ability, and that the packers shall name as their representatives the principals of the institutions represented.

"It is understood that this committee when appointed, shall formulate the rules and regulations governing its operation, and that a producer shall be selected as its chairman. The headquarters of the committee we feel should be in Chicago.

"The permanent committee shall create the subcommittees at various markets and shall formulate the rules and regulations governing their operations. The purpose of these local committees in the immediate adjustment of any grievances, such as dilatory handling of the receipts, late buying, delayed weighing and the avoidance of excessive variations in the purchase price paid for the same grade of live stock on the same day.

"We suggest that the financing of this organization be divided equally between the packing industry and the live stock associations, and that the methods of raising the necessary funds be left to the Central Committee."

The Extra Can That Pays the Profit

Up to a certain point the milk produced by your cows pays only the cost of maintaining them. It is the extra milk you get that pays the profit.

In order to get this extra milk you must feed your cows the feed that keeps them in perfect condition, prolongs the lactation period and enables them to produce the maximum quantity.

Actual results have proved to thousands of Dairymen that that feed is Larro-Feed

On 200 lbs. of mixed feed, 3 cows produced an average of 18 quarts of milk per day. After changing to Larro-Feed the same cows produced an average of 34 quarts of milk per day. The same number of pounds per day of each was used. Larro-Feed keeps my cows in excellent condition.

Peter Wicks
Ironton, Ohio

Larro-Feed enables cows to produce the most milk for the longest time because it has the variety, the palatability and the digestibility which increase production and conserve health.

Feed your cows Larro-Feed. If the first cost of Larro-Feed seems high, remember that Larro-Feed pays higher profits. The reason you buy feed for your cows is to get—milk profits. You can buy a cheap feed and save pennies on the first cost. You can buy Larro-Feed and make dollars on increased milk production. Larro-Feed not only pays for itself, but pays you a profit as well. Remember—Larro-Feed has been sold for seven years on a money-back-if-not-satisfied guaranty. Order a supply from your dealer today. If you do not know where he is located, write us for information.

The Larro-Milling Company

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LARROWE
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GUARANTEED
LARROWE
PRODUCTS

DETROIT
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Larro-feed

THE READY RATION FOR DAIRY COWS

WOLVERINE OATS

The Michigan Agricultural College's New Oat
Out-Yielding the Worthy—120 Bushels to 100

Plant Some This Year

There was about 320 acres planted to this new oat last year and there will be a big demand next year for good seed. Have it to sell next spring.

Inspected Seed

Our supply is small and has been inspected, true to name and absolutely the best seed of this new variety on the market.

PRICES: Carefully re-cleaned, bagged in heavy grain bags and delivered to your station, 1-2 bu. \$2.50; 1 bu. \$3.25; 2 1-2 bu. \$7.00.
In 10 bu. lots (4 bags) F. O. B. here, bags extra at 50c, \$2.00 per bushel.

Ask for Saier's Seed Catalog

It is full of information about Michigan-Grown Seeds for Michigan Growers.

HARRY E. SAIER, Seedsman
LANSING, MICHIGAN BOX 23

FEEDING HOGS? THEN HERE IS WHAT YOU WANT!

Ask your dealer for

DIAMOND HOG MEAL

Made from the nutritious hearts of corn kernels

Write to C. FRANCIS, 909 Ford Building, Detroit,
for sample, literature and particulars

When You Write to Advertisers Please Mention This Paper.



Hustle Up the Farm Loans

A Northern Michigan Farmer Explains the Red Tape Necessary in Securing Farm Loans.

By John McNamara

THE Federal Land Banks as they exist throughout the United States, are right in theory, but the system of lending money to farmers is wound up in such an abundance of red tape, that farmers of 1919 find themselves little better off than borrowing money under the old method, with a high rate of interest from seven to twelve per cent. Borrowing money from the government is a slow process, the farmer should look ahead two years before contemplating a loan from the Federal Land Banks.

Much has been written about speed in the last year. It was American speed that put over two million soldiers in France. American speed started the big drive which overthrew the dangerous war machine that threatened to annihilate civilization. The American farmer also speeded up by producing almost one billion bushels of wheat in 1918.

Our government still faces a crisis. A food shortage is still with us while our army of unemployed daily grows larger. The farmer is urged to employ extra labor, but why do the Federal Land Banks delay in producing capital? The delay is caused by passing applications for a loan through many hands before any action is taken on the part of the government. An application is scrutinized as though it were an engineer's blue print. Slight errors that any clerk of ordinary intelligence could correct are marked, and returned to the local loan association to be corrected. Getting an abstract of title right seems to be another source of delay, which causes a farmer who is waiting for his money, much annoyance. For example, the Upper Peninsula of Michigan, and Minnesota are in the same district, but the abstracts of Michigan do not require the detail attached to an abstract made in Minnesota. When an abstract from Michigan is sent to the Federal Land Bank of St. Paul, Minnesota, considerable controversy usually arises, between the abstractor and the Land Bank, as to whether necessary data is omitted or not. While technicalities and quibbling may safeguard the government's interests, the farmer is compelled to wait an indefinite time, until a final adjustment is made.

Loans are granted to farmers through local loan associations consisting of ten or more members, who must subscribe for a loan exceeding twenty thousand dollars. These associations are organized by the required number of farmers meeting together. At this meeting a president, vice-president, secretary-treasurer, a loan committee, and a board of directors are elected. Each member of the association fills out an application for a loan, not to exceed one-half the value of his land, plus one-fifth the value of his buildings. No one farmer can borrow more than \$10,000. These applications are handed to the loan committee, who after inspecting and making a report upon each farm, hand the applications to the secretary-treasurer, who in turn sends them to the federal land bank. In due time the Land Bank sends an appraiser to verify the report made by

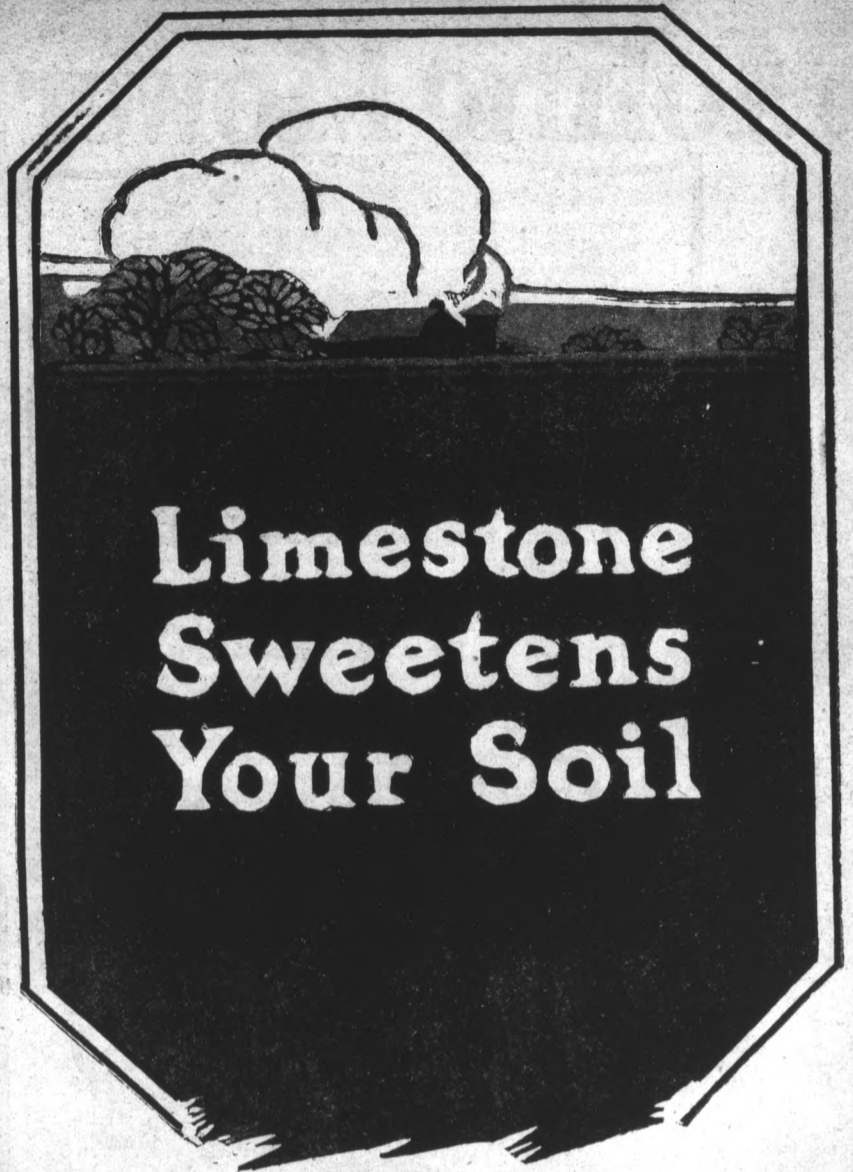
the local loan committee. If the appraiser arrives in a well established community, if he is acquainted with the farmers, and the farms are like the farms he was raised on, it is very likely that his report will be favorable. After a long time the amounts of the loans will be sent to the secretary-treasurer of that community.

In a new community where farmers are few, and far apart, where farming is still in a pioneer stage, the land banks often work to disadvantage. The Upper Peninsula of Michigan is an example. Here we see rough, rugged, rolling, stony land, and areas of swamp land, and long stretches of sand plains. We also see clay soils, and loam soils, and muck soils, all on one eighty acres. While the land does not have an even texture, nevertheless the soil is fertile. The climate, from April first until December first, is ideal for pasturing cattle and sheep. Clovers grow as weeds, and potatoes in quality and yield per acre are not excelled. This country is blessed with a limitless amount of limestone, and with its vast carpets of clover and grasses, it promises to become a foremost cattle country.

Last March sixteen farmers in the east half of Mackinaw county, Michigan, met together and formed a loan association. Loans amounting to \$28,000 were subscribed, for the applications were sent to the Federal Land Bank of St. Paul, and later the appraiser came. Unfortunately he was one of those hard-headed successful farmers, who has an economical wife, and who managed to accumulate considerable wealth. He had always farmed land of heavy clay formation, which, according to tradition, produces two tons of hay per acre, on an average of fifteen years at a stretch. He had never farmed stony land. He had never pastured cattle on a hillside. He had never planted a truck garden. He had never raised potatoes. In his estimation gravelly clay loam, silt loam, and stony sand loam were of little value from a farmer's standpoint. The appraiser was somewhat like a lumberman who looks at trees merely for the logs that they produce. A tall tree, with smooth bark, having branches high from the ground are the ones that please his eye, for he sees only the logs. The tree, however, has other values. If it stands on a high hill, overlooking a beautiful valley, an artist may consider from an esthetic standpoint, that the tree would add priceless value to his canvas. Another man may think of the tree as manufactured into rare furniture.

So also in appraising farms, one must take into consideration to what the farm would be best adapted, before a value can be placed on the land. A man who raises cattle wants a large range, good pasture, and an abundance of water. Stony, well watered land is to be preferred to the best clay land where water is hard to get. A farm must be considered from a great many angles; location, drainage, and condition of soil must be taken into account. The farmer also must be considered.

(Continued on page 514).



Neutralizes Acids and Injurious Substances

THE majority of Michigan lands, especially the older ones, need lime.

Poor drainage and a very large quantity of vegetable matter have resulted in producing acid conditions in many of our soils.

Although proper drainage may improve such soil, liming with *Solvay Pulverized Lime Stone* is most effective. Solvay Lime neutralizes acids and counteracts the bad effects of other toxic substances. Solvay limestone contains a high percentage of lime carbonates, 95% passes through a 50 mesh screen—it is furnace dried. Your needs can be supplied quickly.

THE SOLVAY PROCESS COMPANY

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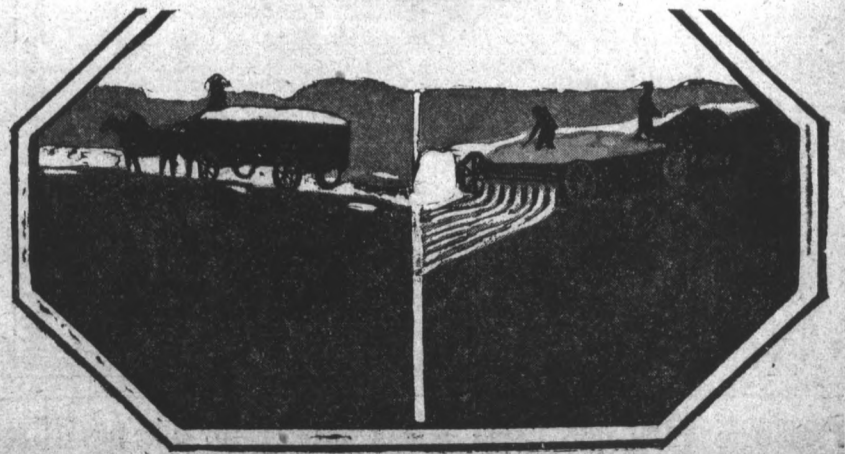
Detroit, Michigan

DON'T LOOSE YOUR WHEAT

Top dress your wheat with 75 to 100 pounds per acre of Arcadian Sulphate of Ammonia—20.75% Nitrogen. Wheat will remain a big profit paying crop. The open winter will bring the wheat plants into the growing season in a weakening condition—stimulate them with a supply of ready nitrogen.

SOLVAY

PULVERIZED
LIMESTONE



Moline Mower

"I have about two acres of soggy land. The sweet clover on this land was as high as the horses, and with the old stalks from last year still on the land. The Moline Mower is the only mower that I was able to cut this clover with, and I have tried them all. I consider the Moline Mower the best that is built. The mower is the lightest draft machine I ever hitched a team to, and certainly do recommend the Moline Mower to any one considering the purchase of a mower."—A. C. Maneman, Payette, Idaho.

This letter shows what service you can expect from a Moline Mower. The Moline gives such satisfaction wherever used and will give you better service than you ever obtained from a mower before.

It will cut any kind of grass; it is unusually light in draft, and it will give you from 25 to 40 years of satisfactory service—many Moline Mowers have been used longer than this.

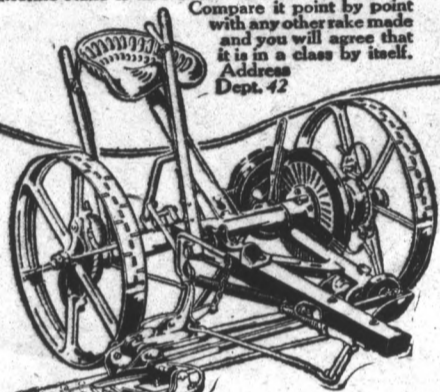
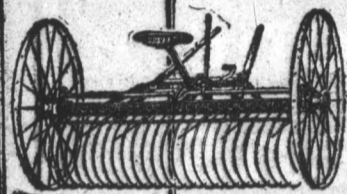
And remember, the Moline Mower is not a new mower, but has been in use in all parts of the world for the last 60 years.

Space does not permit us to tell you all about the good points of the Moline Mower. Send for Folder R. F. 22, which

we will gladly send you, and you will readily see why the Moline Mower gives such splendid satisfaction, year after year, cutting all kinds of grass.

The Moline Rake is also described in folder R. F. 22.

Compare it point by point with any other rake made and you will agree that it is in a class by itself. Address Dept. 42



- The Moline Line of Implements**
- Plows (steel and chilled)
 - Harrow
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 - Cultivators
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 - Line Sowers
 - Mowers
 - Hay Rakes
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 - Automobiles

MOLINE PLOW CO. MOLINE, ILL.

No Table Drink Has Ever Taken The Place Of The Original POSTUM CEREAL

Boil just like coffee—15 minutes after boiling begins. Its delicious flavor, rich seal brown color and fine aroma make it such a satisfying cup that Postum is the ideal drink with meals for both children and grown people.

Used in place of coffee it provides a real health drink. Contains no drugs, no caffeine as does coffee; doesn't make you nervous, sleepless or fretful.

"There's a Reason"

At Grocers—two sizes 15c & 25c.



Price Fixing by Farm Bureau

Shall the Federated Farm Bureaus be Called Upon to Fix Prices on Farm Products?

Governors and mayors returned to their homes after the three-day conference at Washington, called by direction of President Wilson to discuss labor and business conditions. Before adjournment the conference went on record as favoring the carrying out by the railroads of a program of improvements not only as an aid to transportation but also to alleviate unemployment, the reduction of freight rates on building materials and the settlement of government contracts and the lifting of all restrictions on business and industry at an early date.

The conference also condemned radical doctrines, sanctioned government approval of price schedules, but opposed fixing of costs, and recommended continuation by the government of assistance by public utilities.

The above item under a Washington date line is of significance as pointing the way to service for the National Farm Bureau Organization. Business men and public officials who do not want the United States to enter the field of costs of production but to approve or modify price schedules. The logic is that each organization of industry is the best judge of its own products. For example: The National Farm Bureau should, through its live stock commission, supply the United States with the schedule of prices for pork. The same officials who have heretofore done this work would not initiate the cost schedule but approve or adjudicate. This is really very consistent with agricultural autonomy in taking its place along with other industries and upon the same plane. It is not subverting supply and demand, but as producers interpreting supply in the terms of other industries. This same procedure ought to be enacted with the forthcoming wool crop. The Michigan Farm Bureau ought to appoint a wool committee and let this committee have public hearings in several places in Michigan and advise with and by the United States officials in a national hearing and establish grades and prices subject to changes from time to time. Agriculture sometimes complains of not having certain things done for it. When other industries want something done they have an organization and express themselves in terms of price. All market reforms run up against the question of price sooner or later and agriculture must have their minds meet at the price mark. Much of cooperation becomes ineffective just at this critical point. I am tempted to paraphrase a scriptural quotation into the saying: "What does it profit a man to cooperate and then sell at the cost, or less than the cost, of production?" Agriculture can well say to Secretary Houston, perhaps your ignoring production costs as worked out by Mr. Spillman is for the best. The National Farm Bureau will employ the Spillmans, Warrens and Pearsons and the function of price-making will be the initiative of agriculture. On our price schedules the government will act and we will be advised but not ignored. It was to avert the present scandal of the government fixing the price of beans that the Michigan bean growers asked for the government. However, the deaf ear of the administration was turned to thus request after the growers had been appealed to to grow food crops and a price made to dealers without reference to the price paid by them to growers. The National Farm Bureau could adjust areas of crop planting to decrease the acreage of a crop until a

surplus could be absorbed and other more essential crops grown.

The present world situation is that all other organizations of industry recognize that they must pay living wages and make adequate provision for profit to repair depreciation and maintain their scale of living. All this compels a calculation culminating in the money value of their product. It is for agriculture to function in a similar manner. The industrial nation cannot long exist when one-half the producers fix prices based on cost plus a fair profit, and the other half pay those prices yet have no reciprocal expression as to the prices they shall receive for what they deliver.

STATE GRADING LAW.

GRADING and inspection of fruits, potatoes and other farm products will be compulsory in Idaho this season, according to the provisions of a law enacted by the legislature now in session, when shipped to points outside of the state. Rules and regulations for grading have not been announced, but according to Miles Cannon, State Director of the Farm Markets Department, the inspection, grades, rules and regulations will be in accordance with rules of grading throughout the United States. The bill providing for grading and inspection reads as follows:

"Sale of Graded and Ungraded Products.—Whenever any standard for the grade or other classification of any farm product becomes effective under this article, no person thereof shall pack for sale, offer to sell or sell within this state any such farm product to which such standard is applicable unless it conforms to the standard, subject to such reasonable variations therefrom as may be allowed in the rules and regulations made under this article; Provided, that any farm product may be packed for sale, offered for sale or sold without conformity to the standard or grade or other classification applicable thereto when such product will be consumed or used for manufacturing purposes wholly within this state, if it is not specifically described as state graded or packed under state standard, in accordance with regulations as the director may prescribe."

A State Department of Agriculture has been created by the present legislature effective March 31 and the new law will be enforced by that body. The Department of Agriculture will succeed to the work formerly done by the State Horticultural Board, Live Stock and Sanitary Board, State Fair Board, Farm Markets Department etc., the idea being to place all agricultural work within the state under one department.

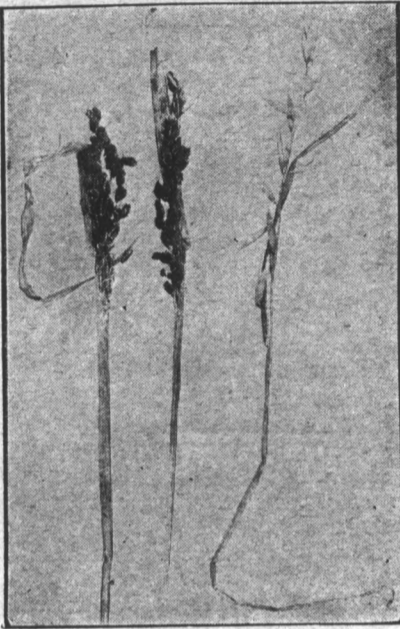
British military men do not love the Huns and when they say the Germans are starving and threaten to revolt if food is not sent to the German women and children their testimony is not likely to be exaggerated. Let us do the right thing for ourselves and for the people abroad. They may be partly or wholly responsible for their predicament, but that does not relieve us of our duty to humanity.

Western apple shippers are taking advantage of the high prices apples are bringing in the eastern markets to decrease the acreage of a crop until a clean up all their second-class stock.

Please Mention this Paper When Writing to Our Advertisers

THE FIGHT AGAINST OAT SMUT.

(Continued from first page).
ed school campaigns and this has reached a good many farmers. But the sum total of the work has been to give the farmer at the right time the needed reminder that oats have to be treated each year. They have called his attention to the new dry method which came as a war measure to conserve time and labor. There was nothing spectacular about this campaign, except the results. When a certain county agent went before his supervisors and could show that eighty-five per cent of the oat fields in the county had been treated for smut as a result



Oat Plants Affected by Smut.

of his leadership, making a net saving of \$50,000 that year for the county, the supervisors saw the point and immediately raised this county agent's salary \$200. If a county agent did no more than lead the oat smut campaign, he would be a valuable man to have around.

There must be no let-up in this fight against this parasite. Oat smut is wasting, unnecessary disease. To prevent its doing a dollar's worth of damage, all that is necessary for the farmer to do is to buy a pint of formaldehyde at a cost of about fifty cents, a pint or quart atomizer, or hand-sprayer at a cost of about seventy-five cents, and then to spray the oats as they are shoveled over, using the chemical at the rate of one pint to fifty bushels of grain. If ten bushels are to be treated, then use one-fifth of a pint of formaldehyde. The formaldehyde, if fresh and full of strength, can be diluted with one or two parts of water.

The grain after being sprayed should be heaped up and covered for four hours—no longer. Then spread thinly to air. Planting should take place at once. It is unsafe to treat and then let the grain stand around for two days or a week. Treat no more at one time than you can conveniently plant. It is evident that this is a very simple procedure.

Oats and barley are very hardy and reports of formaldehyde injury are extremely rare. Wheat is sensitive to formaldehyde and easily injured if directions are not followed. A farmer gets careless in handling oats and then treats wheat in the same fashion. The result is injury. The writer believes that safety lies in following directions closely.

The state of Michigan has reason to be proud of the war work done in connection with oat smut. But the affair is not settled. We may vanquish a visible enemy and make him give up his implements of destruction. For these hidden, microscopic foes there is no peace-table conference. It will take years to stamp out the guerilla warfare. The only league we need to stand for is a league of farmers determining to protect an important field crop.

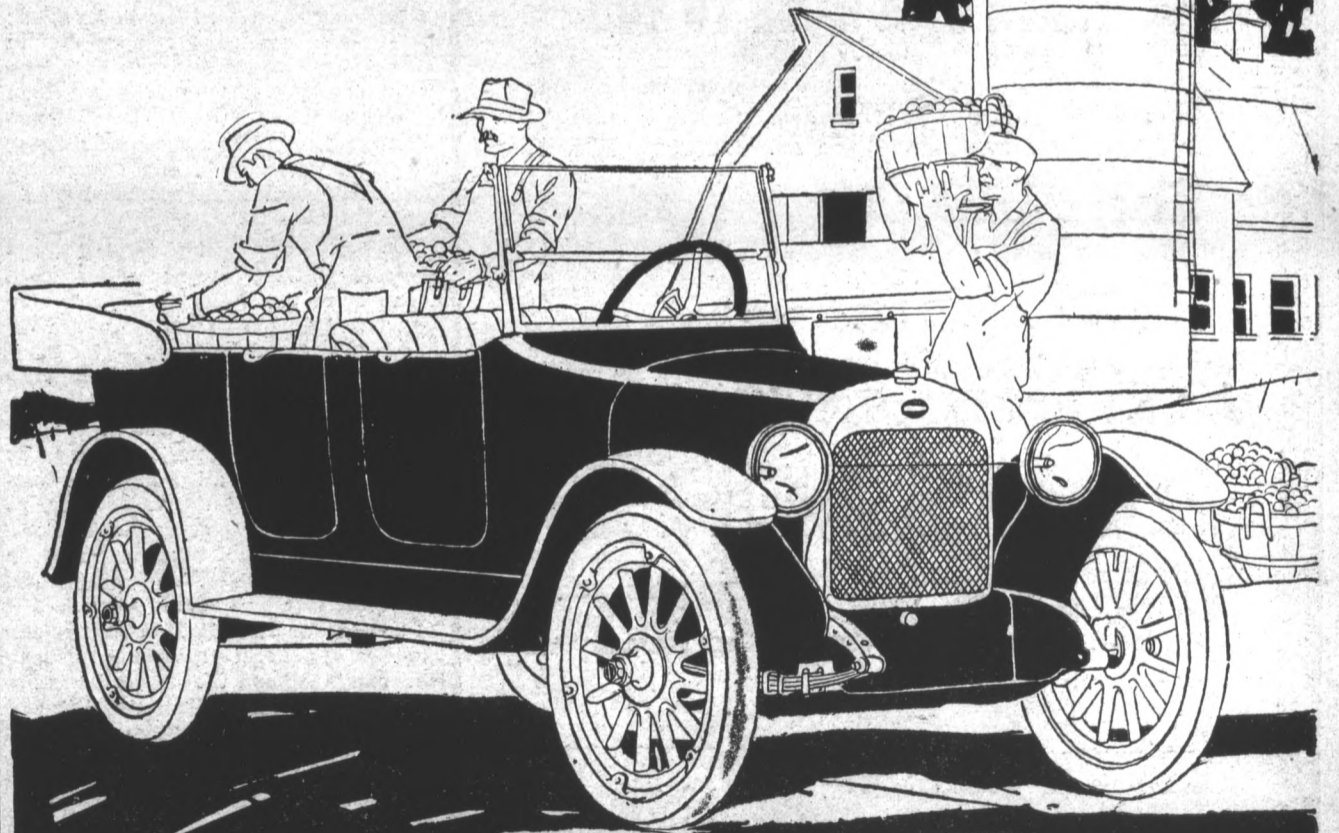
Ingham Co. G. H. COONS.

ALL the comfort, all the endurance, all the ability that has given the Oakland Sensible Six its present popularity, have been contrived in a standard chassis which, with the body above it, weighs only 2,130 pounds. Naturally the 44-horsepower overhead-valve engine with which this chassis is equipped thus gives the Oakland car an activity and an economy which heavier cars cannot rival. The remarkable value in the Oakland Sensible Six is the result of concentrating upon this standard chassis the entire resources of one of the world's largest producers of automobiles. Thereby the Oakland owner is assured a measure of automobile worth in return for his investment not to be approximated in any other way.

The Oakland Sensible Six Touring Car is especially roomy, having a full 106 inches of body room upon its 112-inch wheelbase. Oakland owners report returns of from 18 to 25 miles per gallon of gasoline, and from 8,000 to 12,000 miles on tires.

OAKLAND MOTOR CAR COMPANY
Pontiac, Michigan

Touring Car, \$1075; Roadster, \$1075. Sedan, \$1650; Coupé, \$1650
F. O. B. Pontiac, Mich. Additional for wire wheel equipment, \$75.00



OAKLAND
SENSIBLE SIX

ATWATER KENT

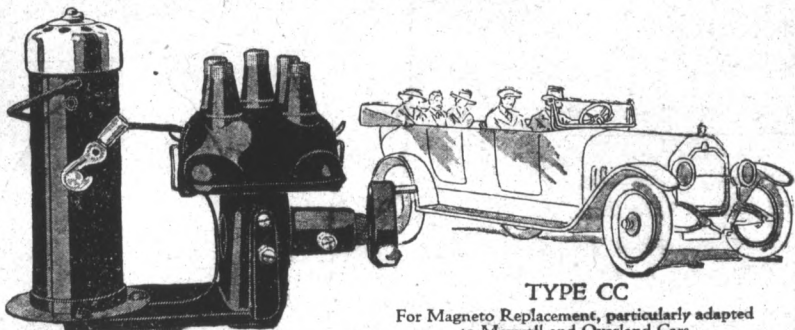
SCIENTIFIC IGNITION

The Atwater Kent spark is just as big, hot and powerful at cranking as at maximum speed. Motor power is greater, starting is easier, gear shifting and motor stalling are reduced, and improved combustion saves gas.

Condenser mounted directly on contact maker instead of on coil. Less wiring. Condenser is oil and moisture proof. The condenser is the governor of the ignition system.



Replace your magneto with Atwater Kent Ignition—easily installed at moderate cost. There is a type system for every car made—electrically equipped or not. Forty manufacturers of passenger cars, motors, trucks and tractors are using Atwater Kent Scientific Ignition as standard equipment. Send for literature.



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For Magneto Replacement, particularly adapted to Maxwell and Overland Cars

Please Name Make and Model of Car or Tractor When Requesting Literature.

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See your dealer or write to 4927 Stenton Avenue



Department Wakes Up

COST of production studies are of value to the individual farmer, and at the same time are helpful in ascertaining the economic status of farming as an industry, says the report of the committee appointed by Secretary of Agriculture to consider a plan of organization for the office of farm management and outline the field of operation and especially methods of procedure in making cost of production studies. The primary purpose of cost of production studies are:

1. To record the details of the farm business for reference.
2. To give an insight into the elements and interrelations of the different farm activities.
3. To furnish information that may enable the farmer to reduce costs or otherwise increase profits.
4. To make possible a comparison of the profitableness of the different enterprises and combinations of enterprises.

From the standpoint of the public, cost of production studies provide the facts which give a basis for intelligent judgment upon the probable effects of any given legislation or other public activity upon the farmer as a producer and as a citizen. Cost of production studies are therefore, one of the means of providing the basic facts needed by legislators and price commissions in comparing the profits of competing lines of production and estimating necessary price.

The committee recognizes three ways of obtaining cost data—cost accounting, the survey method and the questionnaire sent by mail. The accounting method is based on complete records of all farm work and business transactions. Arrangements are made with farmers to keep detailed records of all operations and transactions in connection with the farm business. The work is supervised by personal visits to the farm. It is desirable, the committee says, that cost accounts be kept to obtain basic data, and cumulative results of such work become increasingly valuable.

By the survey method trained investigators obtain the necessary data, some from the farmer's books, some from the books of persons to whom the farmer sells and from whom he buys, some from his bin, silo and building capacities and some from estimates made by the farmer. One of the advantages of this system is that records are obtained from all classes of farms after the close of the farm year, so that when desired areas more representative of normal conditions may be chosen. The committee points out, however, that by the survey method it is sometimes difficult to determine the amount of general expense and miscellaneous labor and the proper basis for apportioning such items to different enterprises, and that unless the investigator is thoroughly experienced in the subject he is studying some items of importance are likely to be omitted.

The questionnaire sent by mail can be used to advantage in securing supplementary data from large numbers of farmers, but, in the opinion of the committee, it should cover only a limited number of cost items, and the questions should be direct and clear.

The specific items to be considered in cost of production studies, the report continues, will always depend upon the enterprise under consideration. When the survey method is used, it is essential that the list be complete enough so that no item will be omitted

either by the farmer or the investigator. When the accounting method is used a classification is needed that is broad enough to include all charges, but the cost items will be developed in the working out of the records and will vary with the enterprise.

FRUIT GROWERS DISCUSS MARKETING.

A WELL attended meeting of delegates from fruit growers and allied associations of the southwestern part of the state was held at Hartford, March 11. Representatives were there from Lawton, Paw Paw, Lawrence, Coloma, Fennville, Saugatuck, South Haven, Bangor, Hartford, Millburg, Benton Center, Riverside, St. Joseph, Bridgman and Benton Harbor.

The meeting was called in the interests of a general central office or selling agency for all of Michigan Fruit Products. For the past season five or six of the South Western Michigan Fruit Exchanges tried selling through a central office which was stationed at Benton Harbor. Mr. Tennant, of the Bureau of Markets, who was chairman of the meeting, asked for a report from every association who had used the selling agency in regard to the satisfaction that the service had given. The majority of the exchanges who used such service reported favorable results and considering that it was the first year of such service. Some of the delegates thought service was all that could be expected and the minority that the service was not entirely satisfactory and could point out quite a number of defects, etc.,

Mr. Tennant presented a very able argument in regard to federating all the tree fruits under one class with a salesman and the grapes under another, consolidating them all in a central office, thereby reducing the overhead and giving weaker associations the benefit of first-class sales service. The discussion was general and an informal vote was taken without pledging any association as to whether they would be in favor of such a central office. Ninety per cent of the delegates said that, provided a first-class salesman could be secured they thought their association would accept such service. The grape associations as a general thing, have contracts that will prevent them from immediate acceptance. All the representatives present agreed that their association would undoubtedly support a central organization for buying supplies, protecting their interests as regarding grading, legislation, traffic matters, etc. Also thought it would be perfectly feasible and agreeable to have a central office where all different salesmen could work together. This does not mean any price agreements but just reducing the overhead.

Mr. Dorr Buell, president of the Potato Growers' Selling Association, was present and spoke in a very encouraging manner regarding the success that they had had where the selling was done from a central office.

On motion, the chair appointed Messrs. George, Friday, Nicol, Pugsley, Crane and Culp as a committee to canvass the situation and see what salesmen they could engage to handle the selling of the tree fruits from a central office. Same committee meets in Benton Harbor, Monday, March 17, and reports to the general meeting at Hartford Tuesday, March 25.—J. N.

THE WORTH OF A NAME TO YOU

Every one realizes how valuable certain names become to their owners; how years of association with quality, reliability and fair dealing have made their good-will worth millions of dollars.

Such names, however, are **EQUALLY** valuable to the **PUBLIC** for goods thus identified may be bought with the confidence that a reputation so valuable, once gained, **MUST** be maintained.

When you put your time, your money and your labor into making a crop, why not protect them by insisting on

ROYSTER'S FERTILIZER



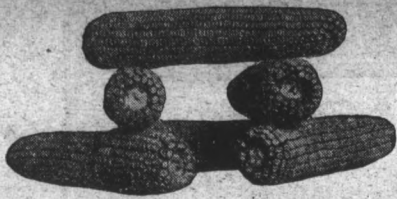
ORDER EARLY AND AVOID DISAPPOINTMENT

F. S. ROYSTER GUANO COMPANY
TOLEDO, OHIO

A Grand Stock of all kinds of fruit trees berry plants, grapes, shrubs vines, roses, the choicest varieties. Also seed corn and garden seeds. Prices right. Catalog free.
ERNST NURSERIES, Box 2, Eaton, Ohio.

Seed Corn for sale. Mich. Yellow Dent; this corn been grow on my farm for the last 25 years and will mature at \$1.00 a bu. including bags and also Plymouth Rock eggs at \$1.00 per setting of 15.
JOHN LOHMAN, R-3, Hamilton, Mich.

Mention The Michigan Farmer When Writing Advertisers



Co-op Threshing

ONE of the innovations resulting from the more general use of the tractor is the small thresher. Types of this new power farming thresher are being put on the market, and from the interest farmers are taking in these new machines there is sure to be a big demand for them in the near future.

Any discussion of the small thresher as compared with the large commercial threshers, is a one-sided argument, without a dissenting voice even from the manufacturers of the bigger machines. All realize the coming of the cooperative threshing plan.

Some of the advantages of the smaller thresher were outlined by an authority on farm questions.

"The smaller thresher, used cooperatively by a small community of diversified farmers, has been and will be an unquestioned success. By such a plan grain may be threshed earlier, avoiding the risk of damage from rain and wind while in the shock. The cost of handling may be reduced, also by threshing early enough to obviate stacking. Michigan is an especially adaptable place for the small thresher, as here the acreage of grain is not large enough to demand the use of a large thresher.

"Very few unfavorable conditions from the time the grain is cut until threshed can easily reduce the quality from five to ten cents a bushel, beside putting it in a condition where it can not be threshed clean. Therefore, as a matter of insurance, the cooperative threshing plan is a paying investment, aside from the possibility of the small thresher paying for itself in three or four years at the maximum.

The farmers in several districts have demonstrated the value of the small thresher. By cooperating they saved themselves the usual threshing labor troubles; their wives were spared the strenuous work of cooking for and housing threshers, and everyone saved several hundred per cent on their threshing bill. For instance, it cost one of the men \$28 for the same work that cost \$75 the year before.

"The necessity of early threshing is vital this year, as the government guaranteed price will be taken off October 30, under the present tentative legislation."

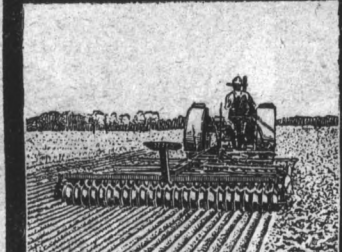
SOY BEAN SEED AND VARIETIES.

AS the supply of the 1918 crop of soy beans for seed is reported less than the 1917 crop, it is advisable at this time to look forward to supplies of seed of desirable varieties and prices. It is not likely that the prices will be much lower than at the present time. Undoubtedly much of the 1917 crop of seed will be sold this season. It is well for the buyer, as well as the grower who has his own supply of seed to make germination tests. Soy bean seed loses its viability quite readily, and unless the seed is of the 1918 crop or has been properly cured and stored tests should be made to learn if the seed is of high germination.

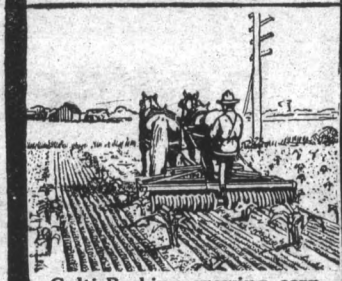
The variety to be grown is of prime importance, and the grower should select one suited to his locality. The late varieties for forage or seed are best suited to southern conditions, although the Virginia and Haberlandt, both medium late varieties, have given most excellent results under southern conditions for seed, forage, and pasture. The best late varieties are the Biloxi, Mammoth Yellow, and Tokio.



Preparing seed bed with Cultivator-Packer. Note how lumps are crushed and air spaces firmed out.



Saving moisture in dry weather by using disc and Cultivator-Packer to form mulch soon after plowing.



Cultivator-Packing growing corn. Quick Detachable Wheels removed for straddling rows.



The Busiest Implement on the Farm

The farmer who uses the Cultivator-Packer in the right way will keep it busy more days of the year than any other tool on the farm.

From the early spring when it prevents winter killing in the wheat field and meadow, till the last day of fall seeding, there is work where the Cultivator-Packer will repay many fold the time spent in using it.

To begin with it starts the seed bed right by crushing all clods, firmed out harmful air spaces and mulching the surface. Following the drill or planter it presses soil about the seed, causing quick, even germination and preventing crusts. When plants are small it stirs the soil, pressing it about the roots, destroying any clods or crusts and keeping the field in good growing condition. It keeps moisture in the soil against dry weather by packing the soil underneath and at the same time stirring and mulching the surface.

On every crop the farmer raises the Cultivator-Packer is being successfully used.—Wheat, corn, oats, alfalfa, cotton, rice, sugar cane, sugar beets, flax, potatoes, etc.

Dr. Tait Butler, editor of THE PROGRESSIVE FARMER, says: "Next to the plow and section harrow the Cultivator-Packer would take third place among the necessary implements on the farm."

Look up the Cultivator-Packer now at the nearest John Deere dealer. Ask him for the 56-page illustrated book "Soil Sense" and read what farm authorities everywhere say about this remarkable tool.

The Dunham Co., BERE A, OHIO (Suburb of Cleveland)



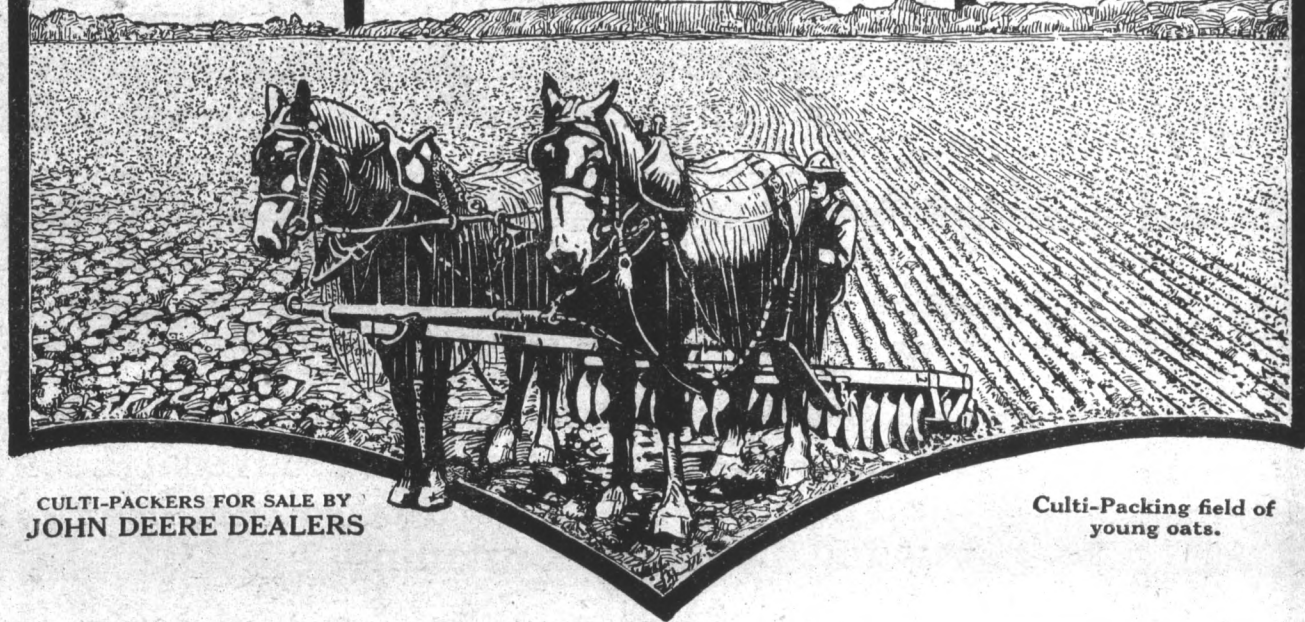
The Dunham Cultivator-Packer will be busy more days of the year than any other tool on the farm.



Preventing winter killing by Cultivator-Packing winter wheat in early spring.



Cultivator-Packing directly after seeder to cause quick germination.



CULTIVATORS FOR SALE BY JOHN DEERE DEALERS

Cultivator-Packing field of young oats.

Muskkrat!



The World looks to us UP TO \$2.50 for its supply of Muskrat. We have a tremendous demand now, prices running as high as \$2.50 each for extra fine skins. Ship us all you have—take advantage of the high market today! Whether you ship extra large or average skins, blue pelted or prime you will get the most money from FUNSTEN

We are also paying extremely high prices for Skunk, Mink, Fox, Civet Cat, Wolf, Marten, Otter, Ermine, and Lynx. Don't wait until season closes. Ship to FUNSTEN and make big profits now!

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Farm drainage demands durable tile. Our drain tile are made of the best Ohio clay, thoroughly hard burned—everlasting. You don't have to dig 'em up to be replaced every few years. Write for prices. Sold in carload lots. We are also manufacturers of the famous NATCO Silo, NATCO Corn Crib, NATCO Building Tile and NATCO Sewer Pipe. Send for the new edition of our book, "Natco on the Farm".
National Fire Proofing Company, 1115 Fulton Building, Pittsburgh, Pa.

LANDOLOGY

A magazine giving the FACTS in regard to the land situation. 3 months' trial subscription FREE if for a home or investment you are thinking of buying good farm land, simply write me a letter and say, "Mail me Landology and all particulars free." Address: EDITOR, LANDOLOGY, Skidmore Land Co., 381 HALL AVE., MARINETTE, WIS.

SEED OATS

Pedigree M. A. C. test College Success Oats. Test field weight 38 lb. per bu. Weeds none. 98% germination. Worthy Oats, 35 lb. per bu. Weeds none. 95.5% germination. Prices 1-5 bu. \$1.00; 5-24 bu. \$1.40; 25-200 bu. \$1.30; over \$1.20. Stocks furnished free. THE JENNINGS FARMS, Bailey, Mich.

SEED CORN FOR SALE

Golden Dent long grown and acclimated in Michigan. Deep kernels, large ear and stalk. A heavy cropper. In ear 70 lbs. \$5.00 Shelled per bu. \$4.00. C. B. COOK, R. 1, Owosso, Mich.

SEED CORN. Old reliable Mich. Yellow

and tested. Also regenerated Swedish Select and Scottish Chief Oats. Circular and samples on request. F. A. BYWATER, Memphis, Mich.

Pedigree Worthy Oats For Sale

Write JOHN J. BRENNAN, Emmett, Mich.

Sweet Clover seed. Special sacrificed, hulled and unshelled. Circular and prices on request.

John A. Sheehan, R. 4, Falmouth, Ky.

Seed Ped. College Success oats test 39 lbs. pure worthy oats test 37 lbs. Wis. Ped. Barley test 11.5 all tested by Ex. Ass'n. No weeds. Write for prices.

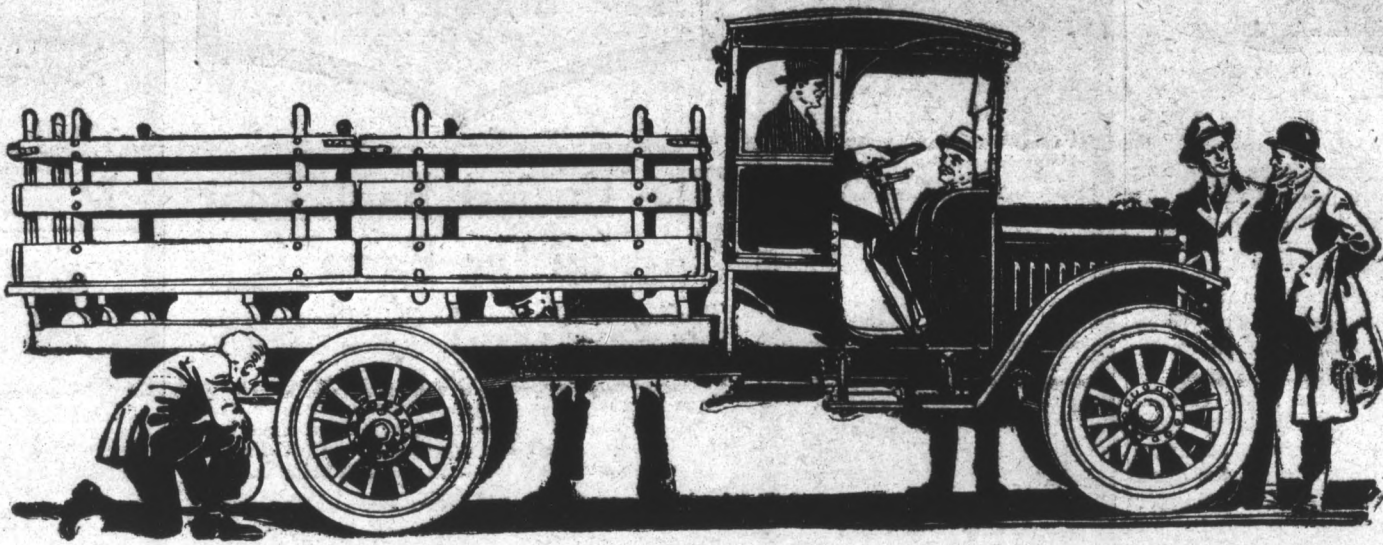
EARL C. McCARTY, Bad Axe, Mich.

Irish Cobler Seed potatoe \$1.25 & \$1.50 per bu. F. O. B. Manton in sacks. John V. Harrison, Sec'y Manton Potato Growers Ass'n. Manton, Mich.

Binder Twine Get our low 1919 prices. Farmer agents wanted. Sample free.

THEO. BURT & SONS, Melrose, Ohio

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Four sound horses cost as much as a Maxwell Truck

AND the Maxwell will outwork three good teams. It feeds as it runs. Puts in a net day's work and piles up no expense. It will carry and fetch a thousand miles for a thousand hours at a stretch. No wagon can keep up with it—weather can't hold it indoors. Never founders or flounders and never has a "Blue Monday" or glanders. No animal or machine its equal for willing and competent service.

Does more work, more sorts of work, more hard work, more often under more unfavorable conditions than any carrier. Designed for the heaviest hauling and the hardest mauling.

The Maxwell goes farther and faster than the biggest truck and travels where they can't. 2400 pounds. Only one farmer in ten ever needs a heavier machine and at that only one time in ten. Farmers the land over are operating Maxwells because it answers every average purpose and costs least to own and least to operate.

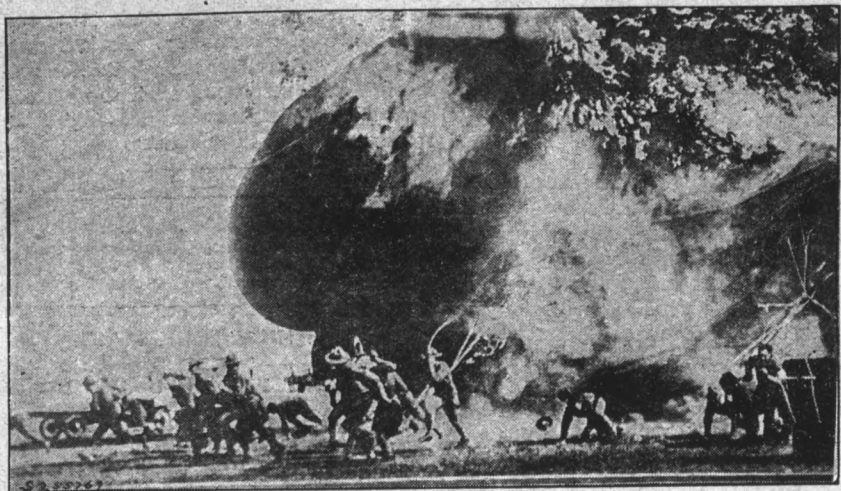
The same type of worm drive which \$5000 trucks advertise as their great feature. \$5000 truck construction and sold with a \$5000 truck guarantee. 10-foot loading space. Electric lights and generator. Chassis \$1085 f.o.b. Detroit.

Pays its way from day to day.

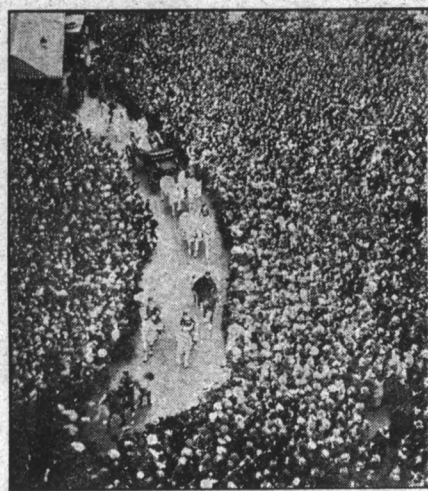
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Detroit, Mich.

WORLD EVENTS IN PICTURES



Actual Scene of Military Kite Balloon Explosion. The Hydrogen Gas was Ignited by the Static Caused by Soldier's Hair Brushing Against Bag.



First Photos of the Wedding of Princess Patricia, who Relinquished the Style of Royal Highness, to Wed the Honorable A. Ramsey.



Marvelous Wireless Telephony Apparatus Broke all Records Transmitting Messages 150 Miles from Airplane.



The Recently Opened Pennsylvania Hotel, New York City, is the Largest Hostelry in the World, having a Capacity of 2,200 Guest Rooms. Special Elevators Convey the Guests to the Ball-rooms, or Social Parlors, while Another Operates to the Roof, where one may Dine in an Elegantly Appointed Restaurant, which Affords, from its Elevation, a View of the Entire City.



Street Fighting in Berlin. Above, the Firing Line of Spartacans. Below, Government Troops and Field Piece.



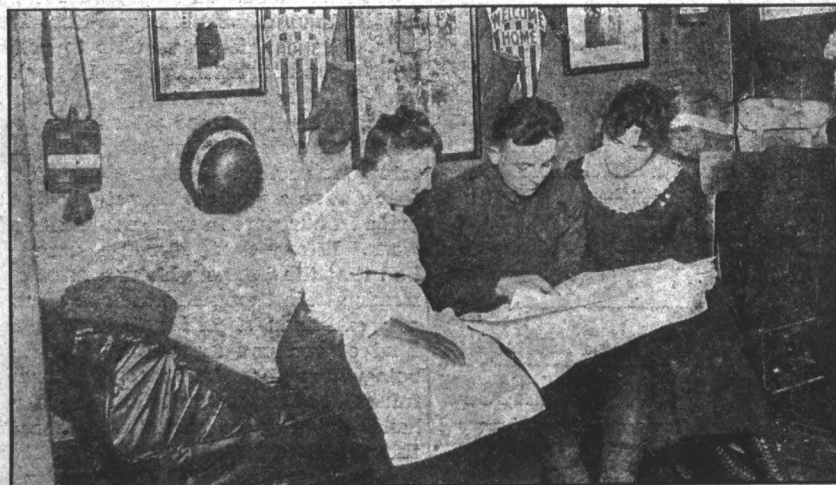
Miss Moira Michael and Victory Emblem she Designed, Entwining Flanders Poppy with Torch of Liberty.




Magdelaine Brard, French Girl Delights Audiences at Metropolitan Opera House, with exquisite piano playing.



A Happy Group of War Brides Just Arrived "Over Here" from "Over There," Wives of Enlisted Men and Officers of Army and Navy.



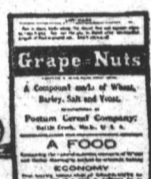
Taking Mother "Over the Top." Our Soldier Boy is Reviewing His Experiences to a Proud Old Mother and Admiring Sweetheart.



A Delicious Mixture of Wheat & Barley

For health value, sound nourishment and a sweet nut-like flavor impossible in a product made of wheat alone, eat

Grape-Nuts



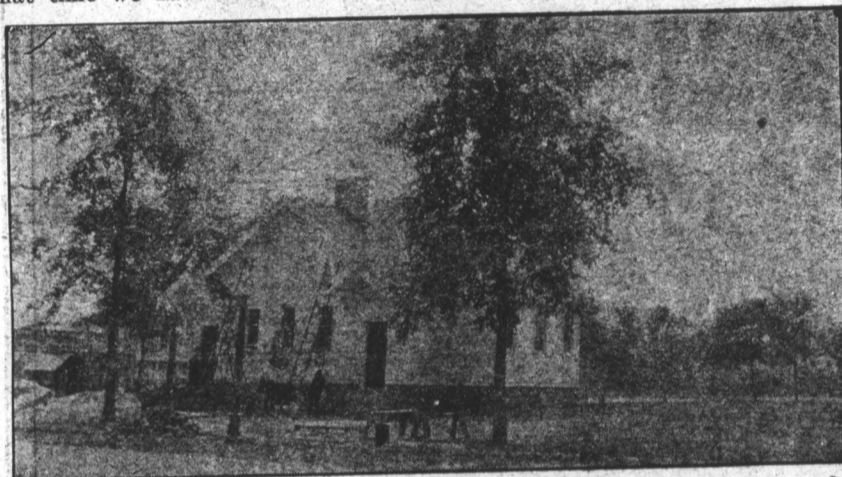

Preserving Our Local War-Time Records—By C. C. Johnson

RECENTLY I read in a newspaper that more than one-third of the American soldiers who went overseas were from the farm. This statement seems reasonable when I count up the number from our own neighborhood. Some of our boys are back again, and we expect the rest before a great while—all but two who gave up their lives.

Our village is only about two hundred population, but we have a good graded school building. When the war ended last November we held a jubilee meeting at the school house. On that occasion someone proposed that we organize a War Historical Society. The idea was adopted. Since that time we have had a number of

prediction. Now that this improbable experience has come and gone, what it meant to us should remain a big thing in our lives and have a deep significance to our posterity.

Another point with regard to our society is the pleasure and instruction we will be getting out of the meetings. We have already had a taste of this. Two weeks ago we got two of our soldier boys on the platform to tell us of their experiences. They did not have much to say. It was not that they lacked material, but they did not seem to know how to make use of it. Then the audience began to ask questions. Pretty soon they forgot their awkwardness and warmed up to the subject, under the sympathetic interest of their



meetings, and the movement is well under way.

The object of the society, in the main, is to gather up and preserve all kinds of information pertaining to our neighborhood war activities. One committee has charge of an official record of each soldier. It begins with the date of his leaving home and follows him up to the training-camp and then all through his service until he is mustered out. His entire time will be accounted for, and every incident of his career as a soldier recorded. The human interest factor is being handled by another committee. Letters written to parents and others have been pretty generally preserved, and they supply much interesting incident, humorous and otherwise. Then we are hearing some good stories from the boys who have come home.

All war-time activities of those of us who stayed at home are also to be given full consideration in the way of permanent record. Patriotic meetings, leave-taking demonstrations, Red Cross work, amounts subscribed by the neighborhood as a whole in money-raising campaigns, crop statistics and so on, will be included. In short, we are going to have a complete war-time history. It will take some time to get it in shape, but eventually it will be printed. The copies are to be sold for a nominal sum, but our plan is to bear most of the expense by giving an entertainment or two.

We have a pardonable neighborhood pride in our part in this greatest of all wars. In any event it would seem too bad that the things which so filled our minds at the time and which so stirred our emotions should not have some kind of common memorial, instead of being allowed to drift into half forgetfulness. If anyone had told us beforehand that the mad ambitions of a man thousands of miles away would have involved our quiet little community to the extent of taking away our boys, and even limiting us in our food, we would have laughed at such an absurd

own home folks. In the end we had learned more about trench life and other features of soldiering than we had ever known from our reading. We propose that all of the boys shall contribute in this way in course of time. Some of the stories will be worth repeating over and over again.

We were represented in different branches of the service. I might tell of a neighbor lad who had never been a hundred miles away from home before he went into military training. Within a year he was fighting above the clouds in a foreign land which he perhaps never expected to see, and in a machine with which he was previously familiar only through having seen pictures of it. He has now taken up his farm work where he left off. Such things almost stagger the imagination when you know the lad and he stands before you.

All of these experiences I suppose will be told glibly enough at future "campfires," long after we older people have passed on, but it is a great privilege for us to hear them now, and at first hand. We believe that our society will be a permanent institution. What it stands for will have a larger significance the further we get from the war. At the outset we will not let the interest lag by making the meetings too heavy. There will be music and other forms of entertainment, and the social feature will be emphasized. There are scarcely any of us but what had some part in war activities of one kind or another, and we like to get together and gossip over these matters.

Located somewhere in the school house, we want to have a little war museum. Added to some war relics sent or brought back by the boys from the front, which will be given or loaned to the society, there will be charts and maps prepared by the society itself to show up in a ready-reference way facts about the war as it relates to the neighborhood. Future pupils will have a greater enthusiasm for the study of history in seeing how their

home community was hooked up with one of the greatest of world events.

Taking our society movement as a whole, we are inclined to think very highly of it. In no other way, to my mind, could we so fittingly honor our young men who risked their lives for the cause of democracy. As a living memorial to their sacrifice, this organization will mean more to them than would a marble monument, though that may come, too, in due time.

"By the Way"

THE NEW MILK MAID.

"Where are you going my pretty maid?" We once asked a land-girl so neatly arrayed in brown boots and leggins, with soft hat and smock, But the answer she made fairly gave us a shock. "I'm about," said the damsel (a pail in her hand), "To proceed to the structure where quadrupeds stand Of the species called 'bovine,' from whom, with much tact, The fresh lactic liquid I daily extract."

SOME THAT COULD SMILE.

"Well, little miss," said the grocer, "what can I do for you?" "Please, sir, mother wants a bottle of good-natured alcohol."

Cousin Abel says: "The early bird catches the worm. No man ever succeeded by getting on the job at ten in the morning."

DISCRIMINATING.

Two political candidates were discussing the coming local election.

"How did the audience take it, when you told them you had never paid a dollar for a vote?" queried one.

"A few cheered, but the majority seemed to lose interest," returned the other.

HER INTRODUCTION.

"When did you first become acquainted with your husband?"

"The first time I asked him for money after we were married."

DON'T HURRY.

The telephone bell rang with anxious persistence. The doctor answered the call.

"Yes?" he said. "Oh, doctor," said a worried voice, "something seems to have happened to my wife. Her mouth seems set, and she can't say a word."

"Why, she may have lockjaw," said the medical man.

"Do you think so? Well, if you are up this way some time next week, I wish you would step in and see what you can do for her."

Today's Riddle

WHAT PART OF



WEIGHS MOST?

(Answer)




SAFETY

says: Don't take chances with lightning—insurance won't repay the property loss when it strikes—nor bring back the life that's snuffed out by a thunderbolt.

Security Lightning Rods Give Guaranteed Protection

Made of 99.8% pure Lake Superior Copper—the best lightning conductor known. Endorsed by National Board of Fire Underwriters and State Insurance Exchanges.

Our Patented Security Water Ground Connection insures permanently moist grounding under all conditions.

Write for free book—Stop Lightning Losses

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505 Pine St. Burlington, Wis.



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THE original Pivot Axle, a slight foot pressure moves both the shovels and wheels instantly to the right or left, with the gangs instantly adjusted while machine is in motion. Horses furnish power, driver only steers.

Cultivates Hillsides, Uneven Land and Crooked Rows

Simplest in construction—least number of parts—nothing to get out of order. Steel frame. All castings malleable iron. Every part accessible. Built for wear and work. Light draft and perfect balance. Made in high and low wheel and KRAUS PIVOT GANG. Can be equipped with The Akron Fertilizer Distributor.

The greatest improvement in recent years. Applies commercial fertilizer while cultivating. Our booklet contains most up-to-date and valuable information. Send for it today.

THE AKRON CULTIVATOR CO.
DEPT. 611 AKRON, OHIO.



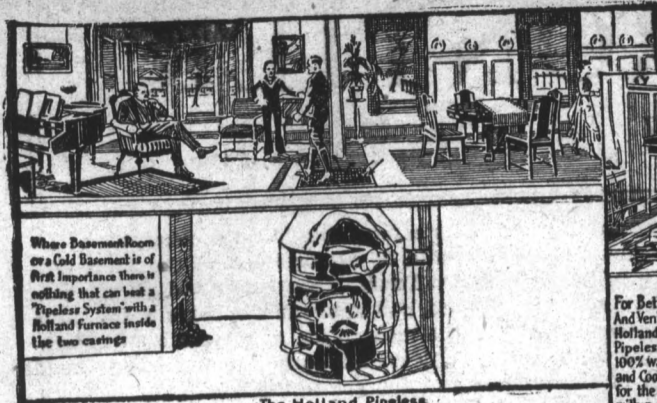
"More Potatoes"

From ground planted secured by use of The **KEYSTONE POTATO PLANTER** than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.
BOX 3 STERLING, ILL.

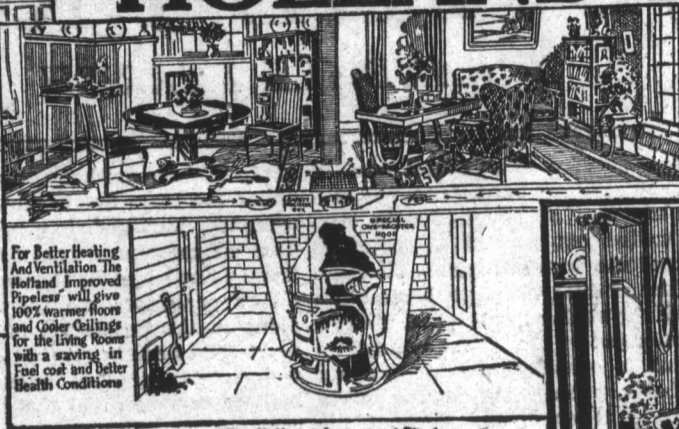
HOLLAND FURNACES

Make Warm Friends



When Basement Room or a Cold Basement is of first importance there is nothing that can beat a Pipeless System with a Holland Furnace inside the two casings.

The Holland Pipeless.

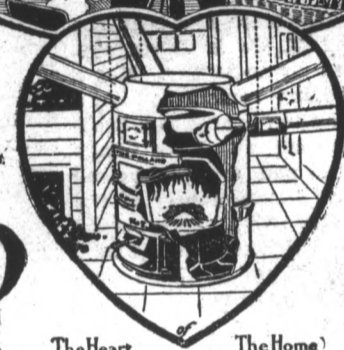


For Better Heating And Ventilation The Holland Improved Pipeless will give 100% warmer floors and cooler ceilings for the living room with a saving in fuel cost and better health conditions.

The Holland Improved Pipeless



The Holland Complete System.



The World's Best Heating Plant. Fills every desire for Heating and Ventilation with Fuel Economy - Cleanliness - Durability and ease of operation, second to none.

The Heart of The Home

What Type of Heating Plant Fits Your Home Best?

THERE are three ways to install a furnace. One way is the pipeless installation, where all the warm air comes up through the center of one big register placed directly over the furnace and with cold air going back to the furnace down between the inner and outer casings;

—another way is the improved pipeless installation with one big register for warm air, allowing cold air to go back to the furnace through separate flues, intakes for which are placed in the coldest parts of rooms;

—and another way is the complete pipe furnace installation with a warm-air register for each room, giving individual room heating and ventilation.

Which type fits your home best? Write and let us tell you. You can get any of these three types of installation with a



MR. V. W. CHERVEN
Chief Heating Engineer, Holland Furnace Company

When Uncle Sam wanted the best heating engineer he could find as Superintendent and General Inspector of Warm-Air Heating Systems for his Industrial Housing Department, he sent for Mr. Cherven. He is now back with us, serving HOLLAND Furnace buyers. Send him a sketch of your floor plans and let him tell you the type of heating system that will fit your home best.

of the Government. Send him a rough sketch of your floor plans and let him show you the best type of heating system for your home. You will save money—and own a more comfortable home.

Mail the Coupon or a Postal or write a letter and let us tell you more about this free service that goes to you with a HOLLAND Furnace. If possible send in your floor plan sketches with your inquiry. But if you don't want to take the time now, send in your name anyway and get the Holland catalog and circulars. No matter what type of heating system you want, you can get it in a HOLLAND—the furnace with the cone center rocking grate. And no matter what system you get you can have HOLLAND Service show you the best method of installing. Ask for Catalog No. F.

HOLLAND

The Furnace With the Cone Center Grate

Here's the furnace that *all* home owners want. It's the furnace with the famous cone center rocking grate; the easiest grate in the world to operate; rests on a center pivot; you can shake it with one finger.

The grate throws the fuel to the outer walls of the firepot, where it burns from the sides and over the top—the natural way for a fire to burn—compels 100% heat radiation.

Burns the soot and gases—gets all the heat from the coal. Burn any fuel without changing grates.

It's the furnace that is built without bolts and with less joints than any other furnace made. Backed with a permanent guarantee covering all material and workmanship.

It's the furnace that has made warm friends out of over 100,000 satisfied owners and that is outselling any other furnace in America. Over half the homes in Holland, Michigan, are heated with HOLLAND Furnaces. That shows how HOLLANDS are used where people know them best.

You cannot compare the HOLLAND with any other type of furnace. It has a distinctly new and better plan of fuel combustion; it's easier to operate; lasts longer; and is planned by heating engineers to fit the exact condition of your home.

Don't Let Someone "Guess" a Furnace Into Your Home

HOLLAND Furnaces are not sold like ordinary heating plants. Before a HOLLAND Furnace goes into your home, the HOLLAND heating engineers must approve the type of installation. Millions of tons of coal are wasted every year in improperly planned heating systems. Over half the sickness, coughs, colds, etc., can be traced to poor home heating. You don't want your home over-heated or under-heated. You don't want cold floors and hot ceilings. You don't want to shoot coal bills up the chimney.

Get the Free Service of a Great Heating Engineer

Have your heating system planned by Mr. V. W. Cherven, our Chief Heating Engineer, who has just returned to this company after serving as Superintendent and General Inspector of Warm-Air Heaters for Industrial Housing for the United States during the war. He has designed and supervised the installation of more than three thousand complete warm-air heating systems for the Industrial Branch

Holland Furnaces Make Warm Friends



Holland Furnace Co.
Holland, Michigan

Please send me your catalog No. F.

Holland Furnace Company

World's Largest Installers of Furnaces

Two Factories: Holland, Michigan, and Cedar Rapids, Iowa 150 Branches

Name.....

Address.....

"BEYOND THE FRONTIER"

By RANDALL PARRISH

We Meet with Danger.

IT was late in the afternoon of the second day when we arrived at the forks of the Chicago river. There was a drizzle of rain in the air, and never saw I a more desolate spot; a bare, dreary plain, and away to the eastward a glimpse of the lake.

A hut of logs, a mere shack scarcely fit for shelter, stood on a slight eminence, giving wide view in every direction, but it was unoccupied, the door ajar. Barbeau, in advance, stared at it in surprise, gave utterance to an oath, and ran forward to peer within. Close behind him I caught a glimpse of the interior, my own heart heavy with disappointment.

If this miserable place had been the headquarters of M. de la Durantaye, evidently it was so no longer. Not a vestige of occupancy remained, save a rotten blanket on the floor, and a broken bench in one corner. Rude bunks lined two walls, and a table hewed from a log stood in the center of the dirt floor. On this was a paper pinned to the wood by a broken knife blade. Barbeau grasped it, and read the writing, handing it back to me. It was a scrawl of a few words, yet told the whole story.

"Francois Cassion, under commission of Governor la Barre, arrived with party of soldiers and Indians. At his orders we accompany the force to Fort St. Louis.

"De la Durantaye."

"Perhaps it is as well," commented De Artigny lightly. "At least as far as my good health goes; but 'tis like to make a hard journey for you, Madame."

"Is it far yet until we attain the fort?"

"A matter of twenty five leagues; of no moment had we a boat in which to float down stream, but the trail, as I remember, is rough."

"Perchance there may be a boat," interrupted Barbeau. "There was the wreck of an Indian canoe a mile below here on the Des Plaines, not so damaged as to be beyond repair, and here is a hatchet which we will find useful." He stooped and picked it up from under the bench. "One thing is certain—'tis useless to remain here; they have left the place as bare as a desert. 'Tis my choice that we make the Des Plaines before dark."

"And mine also; are you too greatly wearied, Madame?"

"I? Oh, no—to escape this desolate place I will go gladly. Have men really lived here?"

"Ay, more than once," replied De Artigny. "'Tis said the engages of Pere Marquette built this hut, and that it sheltered him an entire winter. Twice I have been here before, once for weeks, waiting the arrival of the Griffin, alone with Sieur de la Salle."

"The Griffin?"

"The ship which was to bring us provisions and men. 'Twas a year later we learned that she went down in the sea, with all aboard. How long was M. de la Durantaye on station here?" he turned to Barbeau.

"'Tis three months since we came from St. Louis—a dreary time enough, and for what purpose I could never guess. In that time all we have seen has been Indian hunters. I cannot bear to remain even for another night. Are we ready, Madame? Shall we go?"

The Des Plaines was a very narrow stream, flowing quietly through prairie land, although bordered along its shores by a thin fringe of trees. We moved down along its eastern bank for perhaps a half league, when we came

to the edge of a swamp and made a camp. De Artigny built a fire, and prepared my tent of boughs, while Barbeau waded out around a point in search of the wrecked canoe. He came back just at dusk towing it behind him through the shallow water, and the two men managed to drag it far enough up the bank to enable the water to drain out. Later, aided by a flaming torch, we looked it over, and decided the canoe could be made to float again. It required two days' work, however, before we ventured to trust ourselves to its safety.

But the dawn of the third day saw us afloat on the sluggish current, the two men plying improvised paddles to increase our speed, while I busied myself in keeping the frail craft free from water by constant use of a tin cup. This oozed in through numerous ill-fitting seams, but not fast enough to swamp us in mid-stream, although the amount gained steadily on me in spite of every effort, and we occasionally had to make shore to free us of the encumbrance.

Yet this voyage south along the Des Plaines was far from unpleasant, despite the labor involved and the discomfort of the leaking canoe. The men were full of cheer and hope, some of it possibly assumed to strengthen my courage, but no less effective—Barbeau telling many an anecdote of his long service in strange places, exhibiting a sense of humor which kept us in continuous laughter. He was, indeed, a typical adventurer, gay and debonaire in presence of peril, and apparently without a care in the world. De Artigny caught something of the fellow's spirit, being young enough himself to love excitement, and related in turn, to the music of the splashing paddles, numerous incidents of his wild exploits with La Salle and De Tonty along the great rivers of the west.

It all interested me, these glimpses

along this stream before us. At night, under the stars and beside the blaze of campfire, Barbeau sang rollicking soldier songs, and occasionally De Artigny joined him in the choruses. To all appearances we were absolutely alone in the desolation of the wilderness. Not once in all that distance did we perceive sign of human life, nor had we cause to feel the slightest uneasiness regarding savage enemies.

Both men believed there was peace in the valley, except for the jealousy between the white factions at Fort St. Louis, and that the various Algonquin tribes were living quietly in their villages under the protection of the Rock. De Artigny described what a wonderful sight it was, looking down from the high palisades to the broad meadows below, covered with tepees, and alive with peaceful Indians. He named the tribes which had gathered there for protection, trusting in La Salle, and believing De Tonty their friend—Illini, Shawnees, Abenakies, Miamis, Morgans—at one time reaching a total of twenty thousand souls. There they camped, guarded by the great fort towering above them, on the same sacred spot where years before the Jesuit Marquette had preached to them the gospel of the Christ. So we had no fear of savages, and rested in peace at our night camps, singing aloud, and sleeping without guard. Every day Barbeau went ashore for an hour, with his rifle, tramping along beside us through the shadowing forest screen, seeking game, and always coming back with plenty. We would hear the crack report of his gun breaking the silence, and turn the prow of our canoe shoreward and pick him up again.

Owing to the leaking of our canoe, and many difficulties experienced, we were three days in reaching the spot where the Illinois and the Fox rivers joined their waters, and swept forward in one broad stream. The time of our

its safety—the faithful comrades of La Salle in explorations of the unknown, De Tonty, Boisrondet, and all the others, had long since become to my mind the incarnation of romantic adventure. Wilderness born, I could comprehend and appreciate their toils and dangers, and my dreams centered about this great, lonely rock on which they had established a home. But the end was not yet. Just below the confluence of the rivers there was a village of the Tamaroas, and the prow of our canoe touched the bank, while De Artigny stepped ashore amid a tangle of low-growing bushes, that he might have speech with some of the warriors, and thus learn conditions at the fort. With his foot on the bank, he turned laughing and held out his hand to me.

"Come, Madame," he said pleasantly, "you have never seen a village of our western tribes; it will interest you."

I joined him gladly, my limbs feeling awkward under me, from long cramping in the boat, yet the climb was not difficult, and he held back the boughs to give me easy passage. Beyond the fringe of brush there was an open space, but as we reached this, both paused, stricken dumb with horror at the sight which met our view. The ground before us was strewn with dead and mutilated bodies, and was black with ashes where the tepees had been burned, and their contents scattered broadcast.

Never before had I seen such view of devastation, of relentless, savage cruelty, and I gave utterance to a sudden sob, and shrank back against De Artigny's arm, hiding my eyes with my hand. He stood and stared, motionless, breathing heavily, unconsciously gripping my arm.

"Mon Dieu!" he burst forth, at last. "What meaneth this? Are the wolves again loose in the valley?"

He drew me back, until we were both concealed behind a fringe of leaves, his whole manner alert, every instinct of the woodsman instantly awakened.

"Remain here hidden," he whispered, "until I learn the truth; we may face grave peril below."

He left me, trembling and white-lipped, yet I made no effort to restrain him. The horror of those dead bodies gripped me, but I would not have him know the terror which held me captive. With utmost caution he crept forth, and I lay in the shadow of the covert, watching his movements. Body after body he approached seeking some victim alive and able to tell the story. But there was none. At last he stood erect, satisfied that none beside the dead were on that awful spot, and came back to me.

"Not one lives," he said soberly, "and there are men, women and children there. The story is one easily told—an attack at daylight from the woods yonder. There has been no fighting; a massacre of the helpless and unarmed."

"But who did such deed of blood?" " 'Tis the work of the Iroquois; the way they scalped tells that, and besides I saw other signs."

"The Iroquois," I echoed incredulous for that name was the terror of my childhood. "How came these savages so far to the westward?"

"Their war parties range to the great river," he answered. "We followed their bloody trail when first we came to this valley. It was to gain protection from these raiders that the Algonquins gathered about the fort. We fought the fiends twice, and drove them back, yet now they are here



of rough forest life, and I questioned them both eagerly, learning many a truth the histories fail to tell. Particularly did I listen breathlessly to the story of their adventurous first voyage along the Illinois, following the trail of raiding Iroquois, amid scenes of death and destruction. The very horrors pictured fascinated me even, although the grim reality was completely beyond my power of imagination.

'Twas thus we passed the hours of daylight, struggling with the current, forcing our way past obstacles, seeking the shore to drain off water, every moment bringing to us a new vista, and a new peril, yet ever encouraged by memory of those who had toiled

arrival at this spot was early in the afternoon, and, as De Artigny said Fort St. Louis was situated scarce ten miles below, our long journey seemed nearly ended. We anticipated reaching there before night, and, in spite of my fear of the reception awaiting us, my heart was light with hope and expectation.

I was but a girl in years, excitement was still to me a delight, and I had listened to so many tales, romantic, wonderful, of this wilderness fortress, perched upon a rock, that my vivid imagination had weaved about it an atmosphere of marvel. The beauty of the view from its palisades, the vast concourse of Indians encamped on the plains below, and those men guarding

again. Come, Adele, we must return to the canoe and consult with Barbeau. He has seen much of Indian war."

The canoe rode close in under the bank, Barbeau holding it with a grasp on a great root. He must have read in our faces some message of alarm, for he exclaimed before either of us could speak.

"What is it—the Iroquois?"

"Yes; why did you guess that?"

"I have seen signs for an hour past which made me fear this might be true. That was why I held the boat so close to the bank. The village has been attacked?"

"Ay, surprised, and massacred; the ground is covered with the dead, and the tepees are burned. Madame is half crazed with the shock."

Barbeau took no heed, his eyes scarce glancing at me, so eager was he to learn details.

"The fiends were in force then?"

"Their moccasin tracks were everywhere. I could not be sure where they entered the village, but they left by way of the Fox. I counted on the sand the imprint of ten canoes."

"Deep and broad?"

"Ay, war boats; 'tis likely some of them would hold twenty warriors; the beasts are here in force."

It was so still, so peaceful about us that I felt dazed, incapable of comprehending our great danger. The river swept past, its waters murmuring gently, and the wooded banks were cool and green. Not a sound awoke the echoes, and the horror I had just witnessed seemed almost a dream.

"Where are they now?" I questioned faintly. "Have they gone back to their own country?"

"Small hope of that," answered De Artigny, "or we would have met with them before this or other signs of their passage. They are below, either at the fort, or planning attack on the Indian villages beyond. What think you, Barbeau?"

"I have never been here," he said slowly, "so cannot tell what chance the red devils might have against the white men at St. Louis. But they are below us on the river, no doubt of that, and engaged in some hell act. I know the Iroquois, and how they conduct war. 'Twill be well for us to think it all out with care before we venture farther. Come, De Artigny, tell me what you know—is the fort one to be defended against Iroquois raiders?"

"'Tis strong; built on a high rock, and approachable only at the rear. Given time they might starve the garrison or drive them mad with thirst, for I doubt if there be men enough there to make sortie against a large war party."

"But the Indian allies—the Algonquins?"

"One war whoop of an Iroquois would scatter them like sheep. They are no fighters, save under white leadership, and 'tis likely enough their villages are already like this one yonder, scenes of horror. I have seen all this before, Barbeau, and this is no mere raid of a few scattered warriors, seeking adventure and scalps; 'tis an organized war party. The Iroquois have learned of the trouble in New France, of La Salle's absence from this valley; they know of the few fighting men at the Rock, and that De Tonty is no longer in command. They are here to sweep the French out of this Illinois country, and have given no warning. They surprised the Indian villages first, killed every Algonquin they could and are now besieging the Rock. And what have they to oppose them? More than they thought, no doubt, for Cassion and De la Durantaye must have reached there safely, yet at the best, the white defenders will scarcely number 50 men, and quarreling among themselves like mad dogs. There is but one thing for us to do, Barbeau—reach the fort."

"Ay, but how? There will be death now, haunting us every foot of the way."

De Artigny turned his head, and his eyes met mine questioningly.

"There is a passage I know," he said gravely, "below the south banks yonder, but there will be peril in it—a peril to which I dread to expose the lady."

I stood erect, no longer paralyzed by fear, realizing my duty.

"Do not hesitate because of me Monsieur," I said calmly. "French women have always done their part, and I shall not fail. Explain to us your plan."

CHAPTER XXIII.

The Words of Love.

His eyes brightened, and his hand sought mine.

"The spirit of the old days; the words of a soldier's daughter, hey, Barbeau?"

"A La Chesnayne could make no other choice," he answered loyally. "But we have no time to waste here in compliment. You know a safe passage, you say?"

"Not a safe one, yet a trail which may still remain open, for it is known to but few. Let us aboard, and cross to the opposite shore, where we will hide the canoe, and make our way through the forest. Once safely afoot yonder I will make my purpose clear."

A dozen strokes landed us on the other bank, where the canoe was drawn up, and concealed among the bushes, while we descended a slight declivity, and found ourselves in the silence of a great wood. Here De Artigny paused to make certain his sense of direction.

"I will go forward slightly in advance," he said, at last, evidently having determined upon his course.

"And we will move slowly, and as noiselessly as possible. No one ever knows where the enemy are to be met with in Indian campaign, and we are without arms, except for Barbeau's gun."

"I retain my pistol," I interrupted.

"Of small value since its immersion in the lake; as to myself, I must trust to my knife. Madame you will follow me, but merely close enough to make sure of your course through the woods, while Barbeau will guard the rear. Are both ready?"

"Perhaps it might be well to explain more clearly what you propose," said the soldier. "Then if we become separated we could figure out the proper direction to follow."

"Not a bad thought that. It is a rough road ahead, heavily wooded, and across broken land. My route is almost directly west, except that we bear slightly south to keep well away from the river. Three leagues will bring us to a small stream which empties into the Illinois. There is a faint trail along its eastern bank which leads to the rear of the Rock, where it is possible for one knowing the way to attain the palisades of the fort. If we can attain this trail before dark we can make the remaining distance by night. Here, let me show you," and he drew with a sharp stick a hasty map on the ground. "Now you understand; if we become separated, keep steadily westward until you reach the stream flowing north."

In this order we took up the march, and as I had nothing to bear except a blanket, which I twisted about my shoulders, I found little difficulty in following my leader. At first the underbrush was heavy, and the ground very broken, so that oftentimes I lost sight entirely of De Artigny, but as he constantly broke branches to mark his passage, and the sun served as guidance, I had small difficulty in keeping the proper direction. To our right along the river appeared masses of isolated rock, and these we skirted closely, always in the shadow and silence of great trees. Within half an hour we had emerged from the retarding underbrush, and came out into an open wood, where the walking was much easier.

(Continued next week.)

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Mention The Michigan Farmer When Writing Advertisers



PLANNING the housekeeper's day is a prolific subject of remark for writers and housekeepers, too. About every so often the magazines take a whirl at the subject, and if the questions which come into editorial offices from tired women were to be counted, I've an idea that the count of how to plan the day right would equal in number all the rest of the queries combined. Certainly there is no more important thing to be considered. With the multiplicity of things screaming for the attention of the home-maker, something is bound to be left out. And what that thing shall be is, of course, of supreme importance. I know it was a tired home-maker who inspired these words:

"Labor with what zeal we will, something still remains undone; Something uncompleted still, waits the rising of the sun."

Of course, no one schedule can fit all cases. Individuality enters into the scheme of things so largely that what would suit my home would not suit yours, so, after all, the question is one for the woman to settle herself. None of us can take a cut-and-dried schedule and use it. We must adapt it to our own circumstances. In thinking over all the articles I have read on the subject and all the advice I have received personally from more experienced women, it seems to me that all have omitted the most important thing from the schedule—have classed the thing which should be done if all else remains undone, as one of the non-essentials.

How many articles have you read which placed "getting out every day" as first on the list of essentials? I can not recall that I ever saw it. And yet it is the most important thing in life. First, because we all need fresh air for our physical well-being, and second, because we need change for our mental and spiritual growth.

A doctor recently called in to prescribe for a woman suffering from a bad case of nerves diagnosed the case as oxygen starvation, and prescribed simply out-door living. The woman had been one of the careful housekeepers who labored zealously from morn till night chasing dust, and insisted on closed windows to keep out dirt. She never had time to go for a drive with her husband, or fishing with son, or for a stroll down the lane with daughter. A spotless house was to her the prime

Woman's Interests

A Different Sort of Starvation

essential, and to get it and keep it she gave up, not only the love and companionship of her family, but her health as well. Oxygen starvation, starving for fresh air. And she lived on a farm where fresh air is supposed to be the easiest thing in the world to get. I have no doubt she pitied the poor folks living in cities who hadn't fresh air to breathe, yet she never took time to go out doors and breathe

it, and wouldn't let it in her house if she could help it, lest it bring dust with it.

As much as we need the air for our bodies we need change for our minds. Did you ever wonder how Sarah Bernhardt and Georges Clemenceau, both well up to eighty years of age, "could do it?" Perhaps you have noticed the same ability to keep young in other nationalities, so you know it isn't be-

cause they are French. They retain their wonderful powers now because they have kept their minds young and active by rubbing against other minds all their lives. They have realized that life is more than meat and the body than raiment, and that it is more essential to feed the mind and soul than to feed the body. They have lived with their fellows and for them. They have got out and rubbed up against men and women, and now in the ebb tide of life they are still able to carry on.

The oldest person I know is a woman of thirty-six who thinks "a woman's place is at home." She is old in mind and soul and looks, and is ageing rapidly in body because her sluggish mind reacts on her physical well-being. Her home is so small it doesn't occupy all her time and mind, so she has plenty of leisure to dwell on fancied ills which she is rapidly magnifying into important things. At first in good physical condition, she has doped herself so consistently with patent medicines, that she is really becoming a physical wreck. Had she gone out in her spare time and kept alive, she wouldn't have had time to think about herself.

The war freed a great many women from the thralldom of things. But there are still too many groaning in the bondage of non-essentials. To get time to knit and roll bandages and sew and do canteen work mothers of boys "over there" learned to let a lot of things go which they had before deemed as sacred as religious rites. They found the family grew and prospered when the cake wasn't frosted and the pie was crustless and the parlor went undusted and the beds were unmade until time to tumble into them at night. Many other women could learn the same lesson to their physical and mental advantage.

I've been thinking a great deal about the thing on which Christ placed emphasis when he planned women's work. You remember Martha, good careful housekeeper, complained that Mary was a slacker, running around listening to lectures and new-fangled teaching when she ought to be home in the kitchen—woman's place. And you also remember what Christ said, "Martha, Martha, thou art careful and troubled about many things, but one thing is needful, and Mary has chosen that good part which shall not be taken away from her." DEBORAH.

From Producer to Consumer via American Red Cross



IN one of the remote districts of Washington, where she is far removed from the busy marts of trade, lives "Grandmother" Hegg, a loyal American. Anxious to do her bit, through the American Red Cross, toward keeping the Yankee fighting men warm and comfortable, and, in order to expedite matters, she brought forth her spinning wheel, long since consigned to the attic, to produce her own yarn.

Grandmother Hegg well remembers the time when all wool was spun by hand in private homes for family consumption, and, although she had been out of practice for many years, it did not take her long to acquire her old-

time dexterity at the picturesque task.

And, here in the illustration, she is shown at her work—a work that has provided yarn for more than eighteen hundred knitted garments since April 7, 1917. At the left is Mrs. Ella Wolf, who has carded the wool preparatory for spinning, and, at the right, Miss Cora Hegg is demonstrating the final step in the process of producing a sweater made from the wool spun by Grandmother Hegg. It is believed these garments, hand-made in every sense of the word, are the nearest thing to wearing apparel direct from producer to consumer that have been distributed to the men in the service.

Are You Too Stout? ---By Emma Gary Wallace

MANY people do not take on flesh in a symmetrical, all-over manner, but accumulate it rather in ridges or localized accumulations which are both humiliating and distressing. Improper carriage, overmuch sitting, careless dressing or too free indulgence in the pleasures of the table, will result many times in taking on flesh about the hips and abdomen, throwing the whole body grotesquely out of proportion.

All this is very distressing and the best way to remedy the trouble is to take exercises especially directed to the reducing of the unsightly masses of adipose tissue. The individual should also eat somewhat less of all

kinds of food, not reducing the amount taken to the point of starvation by any means, but simply refusing second helpings and eating moderately.

A valuable exercise to reduce the abdomen, thighs, calves, ankles, and feet can be taken in one's own room. Remove all the clothing except one loose garment, stand perfectly erect with the feet slightly apart and the hands resting on the hips with the thumbs to the back. Bring the weight of the body upon the toes, rising slowly as you count five until standing on tip-toes.

Sink gradually on a second count of five, at the same time bending knees at a sharp angle until the thighs and legs are double upon each other. Do

not let the sole of the foot or the heel touch the floor, but support the weight upon the toes. Keep the spine perfectly erect. On a third count of five rise to the first position. Repeat this exercise five times at first and gradually increase the number as the muscles grow stronger to ten, twenty, forty, and fifty times. Do not be discouraged if at first you cannot sink and rise rapidly for as the muscles become trained and hardened they will do their work better.

Deep breathing helps in reducing the flesh and in bringing the body to normal symmetry. Put the hands to the sides, palms inward. Hold the body erect. Inhale a long, deep breath, dis-

tending the muscles over the stomach and contracting the abdomen. Try to imagine that you are increasing your body measure three inches at a point about four inches above the waist line. Repeat five times.

Stretch the hands out as though you were reaching to touch something both to the right and left of you. Imagine this "something" to be just beyond your reach. Try and touch it. Breathe deeply as indicated in the last exercise twice. Keep the body perfectly erect. Be careful not to shove the shoulders up, but rather to push the chest forward.

Raise the hands slowly directly above the head and again try to ima-

gine that you are endeavoring to take something from a high shelf, such as matches or toothpicks. Reach until you can grasp the articles between the thumb and fingers; lower the arms gradually without bending the knees until you can lay the imaginary articles upon the floor in front of you. Exhale as you do this. Repeat ten times.

To reduce a double chin, the ridge of fat between the shoulders, and a high abdomen, lie flat on the back with the crown of the head on the floor. Raise the head until the chin touches the chest. Keep the shoulders, the calves, and the heels on the floor. Repeat five times at first and increase until this exercise can be taken fifty or even one hundred times.

Stand erect and slowly bend the head backward as far as possible. Close the teeth firmly, then open the mouth wide; now close the jaws, and repeat five times. There should be a distinct stretching of the front muscles of the neck, a splendid exercise for reducing a double chin.

Bring the head to an upright position and then turn to the right five times, if possible touching the shoulder or nearly doing so. Each time bring the head to an upright position. Repeat five times in the opposite direction. Increase the number each day until backward and left and right movements can be repeated easily thirty-five or forty times.

Do not think that you can reduce any appreciable extent by exercising once in a while. You must keep at it day after day, week in and week out, and the process will be hastened and the flesh made firm if, following the exercises taken the first thing on arising a cool sponge bath is taken followed by a brisk rubbing with a Turkish towel. Ten minutes of this process will cause the blood to flow rapidly.

One of the causes of over-stoutness frequently is a sluggish liver. Rich foods should be avoided, also irregular eating. Plenty of water should be taken, but that between meals. The amount taken at meals should not exceed half a glass, including soup. Do not drink for an hour before or two hours after eating. Take an abundance of water then and at least a pint upon arising and retiring. Limit the quantities of sweets, fats, and starches. After awhile it becomes comparatively easy to do with a thin film of butter instead of a thick layer, to refuse fat meats, oil-dressed salads, pastry, macaroni, potatoes, untoasted bread, rich gravies, and to partake lightly of meat. All of the body habits should be carefully regulated, a reasonable amount of sleep taken, but not too much, and daytime naps, unless a necessity at the direction of a physician, should be avoided. Most stout people do not walk enough. It is a good plan to set a stint and go a little farther every day until one takes pride in walking instead of riding.

The over-stout or the over-thin are lacking in efficiency. Measure yourself, find what your weight should be, and endeavor to bring your weight to normal, but do it by reasonable means continued over a sufficient period of time that violence is not done to the system. No drugs should be taken for the reduction of flesh unless under the direction of an expert physician of whom one has personal knowledge and in whom one has every confidence. Certain conditions may exist which need remedying. If so, let a physician prescribe. You would not pour strange, unknown mixtures into your motor car for fear of doing injury to its internal apparatus and yet money will buy a new machine. Do not tamper with your health, for money may not restore it again.

If you are over-stout you have proof positive of error in diet and living. The point is to remedy that error. It is your duty to keep yourself as physically fit as you can.

FROM ONE HOUSEKEEPER TO ANOTHER.

To wash raisins or other small fruits put them in a corn popper and shake in a pan of water.—Mrs. R. G.

To take the best possible care of your cook book, take a pane of window glass, bind the edges with passepartout binding or even with paper or cloth, and when using the book lay it open on the table with the glass on top. The glass, being heavy, keeps the book open, does not obscure the print, and also serves to keep any spatters from the book.—E. I. L.

To clean tarnished silver apply kerosene with either a brush or cloth. Rub well then rinse in scalding water and the tarnished pieces will take on a fine and lasting luster.—Mrs. J. J. O'C.

To cure a felon, a paste made of equal parts of lard, saltpeter and brimstone bound on will bring relief in a short time.—M. A. P.

During muddy weather when the shoes often become very wet it is necessary to resort to stringent measures to keep them soft and shapely. Clean the shoes and stuff them with newspapers. To restore the softness to the leather rub them with castor oil or sweet oil; apply oil with a sponge and rub it into the leather thoroughly with the fingers.—Mrs. J. J. O'C.

After stuffing a fowl, do not sew up the opening; instead insert wooden toothpicks and with a piece of string or stout thread lace back and forth over the opening. When the bird is roasted slip out the toothpicks and with them the string; the opening will be closed and no unsightly marks left to tell how the trick was done.—Mrs. J. J. O'C.

Keep a wire teapot standard and place it in the bottom of the kettle before putting in meat to boil. This will prevent the meat from sticking to the bottom of the kettle and burning.—Mrs. L. M. T.

Do not cover your bread to steam the crust soft when you take it from the oven; just rub a little butter over the top of the loaves, it will soften just as well and the bread will not mould nearly so quickly.—Mrs. D. D. C.

"FEEDING THE FAMILY."

Perhaps at no time in the history of the world has the attention of men—and women—been so consistently centered on food and proper feeding. The farmers long ago learned the importance of correct feeding if they were to have the best sort of stock. Women are just now learning the even greater importance of correct feeding if they are to raise the highest strain of human beings.

In order to feed correctly certain rules must be known and followed, and these few simple rules are told nowhere better than in "Feeding the Family," by Mary Swartz Rose, Assistant Professor, Department of Nutrition, Teachers' College, Columbia University. Dr. Rose treats her subject simply, yet exhaustively, leaving out nothing the conscientious house mother needs to know, yet telling her facts in such every-day language that the hurried, tired woman does not need a technical dictionary to enable her to get the gist of the matter.

The various sorts of foods needed are considered, the work of the digestive organs, 100-calorie portions tabulated, and the needs of the entire family considered in chapters variously headed, "Food for the Adult Woman," "Food for the Adult Man," "Food for the Baby—the Two-year-old Child—Children Three and Four Years Old—Children Five to Seven Years Old—and Children Eight to Twelve Years Old." There are chapters considering food for adolescence and youth, diet after fifty, menus for the family group and advice as to calculating and reducing cost of the family dietary.

Special cases are treated, as for example, diet for sedentary men and women, for reducing fat, for a thin woman, for a nursing mother, and for the sick and convalescent—those suffering from tuberculosis, diabetes, gout and typhoid fever.

The woman in search of simple, concrete advice on the all-important subject of feeding her family wisely could scarcely find better help than in this book. Published by The Macmillan Co., New York City. Price \$2.10.



Two Ways to Spell a Good Thing

Teacher: "Spell Dessert."
Bobbie: "Is it where the camels live?"
Teacher (severely): "Certainly not. It is the best part of dinner."
Bobbie: "Oh, I can spell that—"

"J-E-L-L-O"

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Any of the patterns illustrated may be secured by sending order to Pattern Department, Michigan Farmer, Detroit, enclosing the amount set opposite the patterns wanted.



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No. 2740—A Smart Frock. Cut in three sizes, 16, 18 and 20 years. Size 18 requires 5 1/4 yards of 40-inch material. With plaits extended, the skirt measures about 1 3/4 yards at the foot. Price 10 cents.

No. 2762—Ladies' Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5 1/2 yards of 44-inch material. Price 10 cents.



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Mention the Michigan Farmer when writing Advertisers

Our Boys and Girls

At Work and play

A Hot School Lunch Cupboard

WHEN a new idea is introduced into the school system, we, of an older generation, are wont to cry "fad." Fads, many of the ideas are, and quickly prove themselves by dying an early death. But among the ideas

Tools.—Hand-saw, plane hammer, screw drivers, brace and bit, square, rule, try-square.

Directions.
Work down all stock to dimensions given in figures showing detail drawings, and as directed in bill of mate-

Top Back Piece.—Next fit in the top back piece so that its back surface will produce a smooth surface with the back edges of the end and top pieces. Nail it on with 1½-in. brads through the sides and the under surface of the top piece.



Casings.—Fit in and nail the top, side and center casings with 1½-in. brads.

Top Casing.—The top casing will fit into the cut made on the side pieces, and underneath the top piece which projects out, the thickness of the casing. Nail this casing on to the side pieces and through the top piece with some 1½-in. brads.

Side Casing.—Nail the side casings over the edge of the side pieces, using 1½-in. brads.

Center Casing.—The center casing will have to be nailed to the bottom piece, top casing and each shelf with some 1½-in. brads.

Doors.—The doors can be made out of 13½-in. or 14-in. stock if that size is available. The doors can also be made by piecing two or three boards by means of 1½x10-in. cleats. Place cleats so that they will not coincide with the edge of the shelf when the door is closed.

Next attach door to cupboard by placing the hinges on the doors first with some half-inch screws. The hinges should be set in about six inches from the top and bottom of the door. Then attach the hinges on to the casing in such a way that the door will swing freely.

Facing the Back.—Then the cupboard will be ready for the facing of the back with beaver board or half-inch boards. Either of these materials can be fastened with one-inch brads.

Finishing.—It is advisable to stain

which have sprung up in the last decade and become a permanent institution we must count the hot school lunch. Its practicability, and indeed, its necessity if we are to obtain the highest grade of work, have been conclusively proven.

Who that remembers the old dinner pail of twenty years ago, with its frozen bread and butter, ice cold sauce and soggy sinkers, can help but rejoice that the boys and girls of today have been spared its horrors. Indeed, if we could find the underlying reason of why John left the farm, nine times out of ten we would find that same old cold school lunch at the bottom of it.

If we are to have the hot lunch, of course we must have something to work with. But a very small equipment will suffice to make a start. A covered pail, a spoon and a paring knife will enable us to do quite a little. We can make a kettle of soup on the regular school stove, or boil potatoes or make chocolate enough for the entire school. If this is all we can do it is better than nothing. But a real live school needn't stop at that. It can get the simple outfit shown in the picture.

An entertainment or two or a social will earn the money for the stove and dishes and a room full of boys can easily make the table and cupboard. The extension department of the Michigan Agricultural College furnishes the working directions for the cupboard. The entire outfit is that of the department's exhibit at the recent farmers' conference.

Materials Needed.

Finished Stock.—Two pieces of 1x12 in. by 4 ft. 6 in., side pieces; one piece 1x12 in. by 3 ft., bottom piece; one piece 1x2 in. by 2 ft. 10 in., top piece; three pieces 1x10½ in. by 2 ft. 10¼ in., shelves; one piece 1x6 in. by 2 ft. 10¼ in., top back piece; one piece 1x3 in. by 3 ft., top casing; three pieces 1x3 in. by 3 ft. 8½ in., side and center casings; two pieces 1x4 in. by 1 ft. 2 in., bottom cleats; two pieces 1x13½ in. by 3 ft. 9 in., doors.

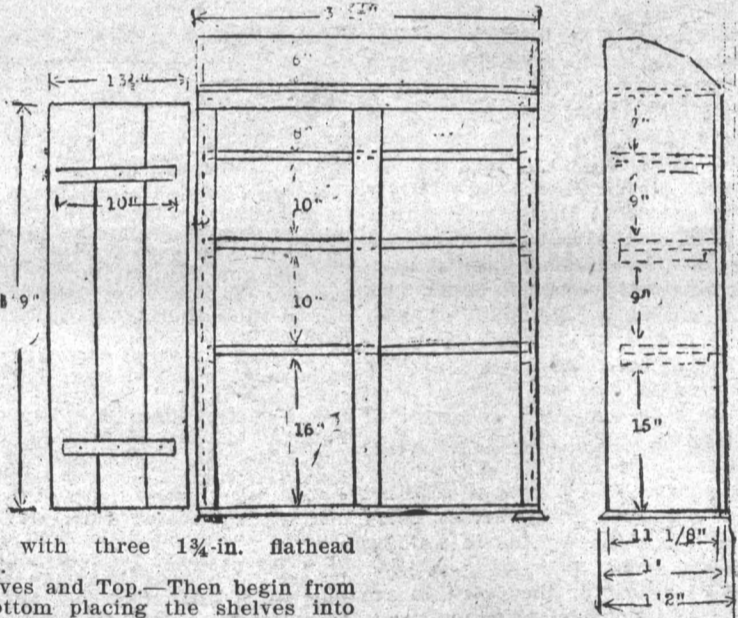
For facing back of shelves use half-inch boards of beaver board, twelve square feet of material is needed.

Hardware.—Five dozen 1¼ in. flathead screws; six dozen 1¾ in. flathead screws; two dozen ½-inch flathead screws. About five or ten cents worth of 1½-in. brads.

rial listed under finished stock.

Side Pieces.—When the material is worked down. Take square and mark off places for cleats on the side pieces. Make eight cleats for these shelves 1x1x9 inches. Fasten each cleat with two 1½-in. flathead screws.

Bottom Piece.—Next fasten the bottom piece on to the ends of the side



pieces with three 1¾-in. flathead screws.

Shelves and Top.—Then begin from the bottom placing the shelves into place and nailing them on the cleats with 1¼-in. brads. It is not necessary to use any larger nails or screws in fastening the shelves to the sides, but use two 1¼-in. screws to fasten the top to the sides.

Bottom Cleats.—Next fasten cleats to the bottom with 1¼-in. screws.

or enamel the cupboards for it will then present a more pleasing appearance in the school room. Before doing any finishing work be sure that your article is dry and free from dirty spots and that it is sand-papered clean.

Club Champions for 1919

THE spirit revealed by the farm boys and girls of the state of Michigan during the past year indicates that they recognize the responsibilities that are soon to rest upon them. The fact that these boys and girls are doing things speaks well for the future of Michigan agriculture.

girls whose minds are filled with more than second-hand ideas and information. To boys and girls who are capable of meeting life's problems and doing things.

We see so many boys and girls whose training seems to have consisted entirely in copying something that was put before them, that we feel like taking our hats off to the boys and

State Bean Club Champion.
 First Place.—Henry Bjork, of Kent county; age 17; yield 16 bushels per acre; profit \$60.70 per acre; cost \$1.30 per acre.
 Second Place.—Merle Touse, Hillsdale county; age 15; yield nine bushels per acre; profit \$40.90 per acre; cost \$2.05 per bushel.
 Third Place.—Vining Wilson, Mecos-

ta county; age 15; yield 12.6 bushels per acre; profit \$38.76 per acre; cost \$1.58 per bushel.

Fourth Place.—Ray Barrett, Kent county; age 17; yield 7.12 bushels per acre; profit \$22.47 per acre; cost \$2.25 per bushel.

State Canning Club Champion.
(Senior).

Martha Curtiss, Eaton county; age 15; number quarts canned 868; value \$345.55; cost \$149.76; profit \$196.79.

Second Place.—Martha Ealy, Osceola county; age 16; quarts canned 710; value \$402.15; cost \$231.17; profit \$170.98.

Third Place.—May Tuttle, Osceola county; age 16; quarts canned 654; value \$315.80; cost \$235.55; profit \$80.25.

State Junior Canning Club Champion.

First Place.—Verla McClish, St. Joseph county; age 14; quarts canned 433; value \$141.55; cost \$108.25; profit \$33.30.

Second Place.—Theresa Fast, Hillsdale county; age 13; quarts canned 348; value \$125.07; cost \$37.00; profit \$88.07.

Third Place.—Mary Kline, St. Joseph county; age 14; quarts canned 286; value \$80.60; cost \$52.30; profit \$28.30.

Fourth Place.—Marion Waters, of Branch county; age 14; quarts canned 205; value \$67.15; cost \$26.58; profit \$40.57.

State Corn Club Champion.

First Place.—Lester Jenson, Barry county; age 17; yield 59.5 bushels per acre; net profit \$73.08 per acre; cost \$1.97 per bushel.

Second Place.—Lawrence Hammond, Barry county; age 16; yield 60 bushels per acre; net profit \$67.96 per acre; cost \$0.52 per bushel.

Third Place.—Cleo Powderly, Hillsdale county; age 15; yield 65 bushels per acre; profit \$46.95 per acre; cost \$0.20 per bushel.

Fourth Place.—Clarence Payne, Barry county; age 13; yield 35 bushels per acre; profit \$66.10 per acre; cost \$0.37 per bushel.

State Garden Club Champion.

First Place.—Darwin Baker, Ingham county; age 14; size of garden, 174240 square feet; income \$738.39; profit \$685.28.

Second Place.—Fred Schmid, Iron county; age 12; size of garden, 87120 square feet; income \$396.50; profit \$385.30.

Third Place.—Fred Kibbe, Branch county; age 17; size of garden 47420 square feet; income \$186.08; profit \$98.75.

Fourth Place.—Albert Roberts, of Charlevoix county; age 12; size of garden 1000 square feet; income \$253.90; profit \$178.

State Junior Garment-making Champion.

First Place.—Edna Warhop, Branch county; age 12; number of garments made, three; value \$4.00; cost \$1.74; profit \$2.26.

Second Place.—Carrie Hickey, of Branch county; age 18; garments made, three; value \$10; cost \$1.75; profit \$8.25.

Third Place.—Cecil Vester, of Barry county; age 13; garments made, eight; value \$15.15; cost \$5.16; profit \$9.99.

Fourth Place.—Helen Lawson, Dickinson county; age 12; garments made, three; value \$3.65; cost \$2.11; profit \$1.54.

State Senior Garment-making Club Champion.

First Place.—Margaret Lotter, Saginaw county; age 15; garments made, four; value \$9.40; cost \$2.19; profit \$7.21.

Second Place.—Ida Peppers, Chippewa county; age 16; garments made, three; value \$6.25; cost \$2.00; profit \$4.25.

Third Place.—Helena Hoerup, of Wayne county; garments made, three; value \$7.25; cost \$3.00; profit \$4.25.

Fourth Place.—Frieda Woods, Cheboygan county; age 17; garments made, three; value \$9.75; cost \$4.54; profit \$5.21.

State Handicraft Club Champion.

First Place.—Bohn Musgrave, Luce county.

Second Place.—Clarence Egerer, of Saginaw county.

Third Place.—Morris Collings, Ingham county.

Fourth Place.—Clement Sullivan, of Dickinson county.

State Pig Club Champion.

First Place.—Eva L. Stephens, Genesee county; age 14; breed, Duroc Jersey; average daily gain 1.87 lbs; total expense \$39.05; net profit \$67.95.

Second Place.—Leo Martzka, Clinton county; age 13; breed, Poland China; average daily gain 1.63 lbs; total expense \$49.41; net profit \$25.59.

Third Place.—Wayne Clark, St. Joseph county; age 16; breed, Poland China; average daily gain 1.3 lbs; total expense \$34.52; net profit \$15.48.

Fourth Place.—Roman McPrangle, Clinton county; age 11; breed, Poland China; average daily gain 1.67 pounds; total expense \$42.28; net profit \$32.72.

State Potato Club Champion.

First Place.—Wallace Kreiger, Marquette county; age 11; yield 492 bushels per acre; net profit \$437.60 per acre; cost \$0.07 per bushel.

Second Place.—Vernon Linderoth, Schoolcraft county; age 16; yield 396 bushels per acre; net profit \$467 per acre; cost \$0.118 per bushel.

Third Place.—Louis Stark, Emmet county; age 14; yield 243 bushels per acre; net profit \$258 per acre; cost \$0.20 per bushel.

Fourth Place.—Donald Hall, Barry county; age 16; yield 194 bushels per acre; net profit \$163.74 per acre; cost \$0.17 per bushel.

State Poultry Club Champion.

First Place.—Elon Spotts, Hillsdale county; age 17; fowls produced 90; value of eggs and meat sold \$84.90; income \$225.90; profit \$187.10.

Second Place.—Eugene Barrett, of Hillsdale county; age 18; fowls produced, 30; value of eggs and meat sold \$88.26; income \$115.76; profit \$67.53.

Third Place.—Fay Welden, Hillsdale county; age 16; eggs set, 100; chicks hatched, 65; income \$84; profit \$55.88.

Fourth Place.—Jay Schenk, of Kent county; age 17; eggs set, 60; chicks hatched, 29; income \$57.15; profit \$40.45.

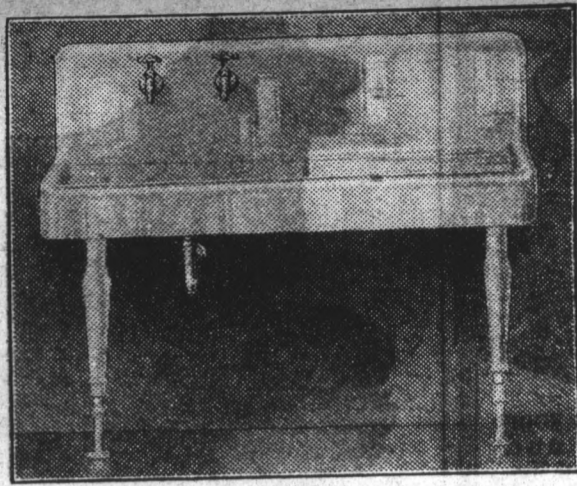
JUNIOR LIVE STOCK FEEDING CONTEST.

FOR the purpose of encouraging a practical interest among the young people on farms in the feeding of cattle, sheep and swine, the Union Stock Yard & Transit Company of Chicago offers the following prizes on animals fed by boys and girls from ten to nineteen years old:

- A. Steer, Spayed, or Martin Heifer (pure-bred, grade or cross-bred), dropped between January 1 and September 1, 1918. Feeding period begins on April 1.
- First prize \$50.00
 - Second prize 40.00
 - Third prize 30.00
 - Fourth prize 20.00
 - Fifth prize 10.00
- B. Steer, Spayed or Martin Heifer (pure bred, grade or cross-bred), dropped since September 1, 1918.
- First prize \$50.00
 - Second prize 40.00
 - Third prize 30.00
 - Fourth prize 20.00
 - Fifth prize 10.00
- C. Pen of three lambs of any of the mutton breeds. Feeding period begins August 1.
- First prize \$50.00
 - Second prize 40.00
 - Third prize 30.00
 - Fourth prize 20.00
 - Fifth prize 10.00

Conditions.

- 1.—All entries to be made in the name and by the feeder and filed with International as soon as possible after date when feeding period begins. Contestants are limited to two entries in any one division. Exhibitors will be required to personally select and care for their animals without the aid of an assistant.
 2. Within thirty days after feeding period begins the animals must be weighed and an accurate record of feeding kept thereafter.
 3. In judging these classes, quality and finish will count fifty per cent; gain, twenty per cent; cost of gain, twenty per cent, and records kept and written reports, ten per cent.
 4. Notice of intention to enter one or more of these feeding contests to be mailed to B. H. Heide, Secretary, International Live Stock Exposition, Union Stock Yards, Chicago, at the beginning of the feeding period, who will upon receipt of notification, mail you formal entry blanks. No entrance fees will be charged in above classes.
- As these contests are to be kept on a short feeding basis, some assurance must be had that the animals were not on feed previous to the date of opening the contest and contestants must be ready to produce the necessary evidence if requested to do so.
- Prizes in addition to the above will be announced from time to time.



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"Standard" Kitchen Sinks

are sanitary—each made complete in one piece without a crack, joint or crevice, and beautifully enameled. They are easy to work at, being adjustable from 30 to 36 inches from the floor to suit a woman of any height. No strain, no backache from working over a sink set too low. We have patterns to meet every size and space requirement.

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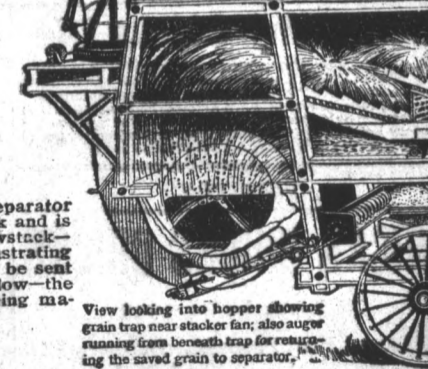
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"We threshed 36 days. The Grain-Saving Stacker got a good bit of threshing from us and saved enough to pay the threshing bill."
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The Grain-Saving Stacker




has a device in the hopper which returns to the separator the grain that otherwise goes to the straw stack and is lost. You need never again have a green strawstack—sprouting from wasted grain. Booklet fully illustrating and describing the Grain-Saving Stacker will be sent you by any of the manufacturers named below—the makers of North America's standard threshing machines, agricultural tractors and implements.

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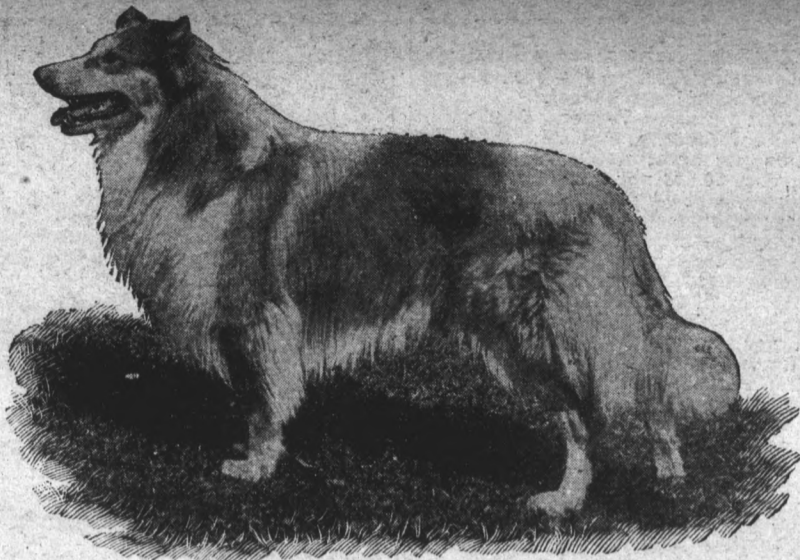
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DR. HESS DIP
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DISINFECTANT

Give your poultry and animals the best living conditions by using Dr. Hess Dip and Disinfectant. It is a powerful germ destroyer—helps to keep off contagious diseases. Make the rounds of the poultry house, pig pens and stables regularly with the sprinkling can. Kills hog lice. Don't neglect the garbage cans, drains, foul-smelling and disease-breeding places. An excellent disinfectant for the home. One gallon makes 100 gallons solution.

Dr. HESS & CLARK
Ashland Ohio



Poultryman's Dog Necessary

At a time when all the bad features of dog-owning are emphasized, it may not be unwise to write of the poultryman's situation. Dogs must be controlled and made to stay at home at night. The dog which does not stay on the home farm is a nuisance to the neighbors and of little value to its owner. At the same time, some articles would lead us to believe that the farmer's dog is only a food waster and a sheep killer which should be immediately killed or taxed out of existence.

One of the handicaps in the poultry business has been the danger of thieves. The greatest protection to the farmer has been his dog, which has quickly discovered the presence of strangers on the farm and given the alarm. Right now, considerable energy is being expended to induce farmers to increase their flocks of poultry, but the farmer who has had experience with poultry thieves is not anxious to run the risk. If he cannot own a dog with a clear conscience he may feel like getting rid of the dog and also cutting down his poultry flocks where they will supply the family with eggs and not cause any serious financial reverse if thieves make several visits to the poultry house while he is sleeping or absent from home.

Here is an example of the situation in some communities. A farmer has been owning from 100 to 300 good pure-bred fowls and may have maintained them profitably in spite of war conditions. The road is improved and it benefits him. It also increases the amount of automobile traffic from the city, and the speed with which those motors can visit the farm and then lose themselves in the city. A farmer with a poultry flock of that kind cannot safely continue in the poultry business without the protection of a good dog.

Poultry houses cannot be built like the vault in a bank, as the open front is necessary for ventilation, and expensive construction is not possible in any kind of poultry house if the birds are to lay enough eggs to pay the rent and their board bill at the same time. In addition, the farm is more or less isolated and does not receive the same protection from thieves that is received by the city taxpayer within a short distance from the police station. Before the coming of the good road and the automobile, the farmer did not need as much protection as now. At the present time some of the rougher element of the city not infrequently tour the country in search of pleasure and anything else they can pick up, and the farmer needs a good dog as a protection for the farm and the farm home.

The sheep-breeder who finds several of his best breeders killed by dogs has a feeling of discouragement and disgust that causes him to hate dogs and lose interest in the sheep business. The poultryman who finds that thieves have wrung the necks of twenty or thirty of his best pullets and cockerels and left the heads on the ground, has a

feeling of disappointment over the loss, mixed with a hatred for the type of man who will be a chicken thief. The sheep breeder can obtain a certain amount of compensation for his loss under the present law. The poultryman has no form of compensation coming to him except the possibility of another visit from the same thief. The passing of a dog law "with teeth" is all right, but at the same time the sheep breeders should not fail to note the financial value of the poultry and egg crop in the country and not be too hard upon the poultry breeder who has found by experience that the dog is the only protection from his flock that he can find which gives satisfaction.

Very often the dogs that cause the losses among sheep come from the city or small town, several miles from the farm. In every town, several dogs can usually be seen upon the streets. Frequently they are only pets, but very often they are used as watch dogs to protect the property of the owner, and they do it. The farmer should enjoy the same privilege if he cares to own a dog, without feeling that he is being unpatriotic because he does not trade that dog for a brood sow, as was suggested in one recent article. The brood sow will not be stolen like poultry, but she will not be a watch dog for the farm property. The farm boy who sees his dog friend traded for another sow will register one more reason for leaving the farm as soon as possible. I know of one business man who left the farm many years ago, even after obtaining an agricultural education. His favorite story about farm life is the way he felt when his father gave his dog to a cattle buyer to sort of help out in closing a deal. The friendship of the farmer and his family for a good watch dog is well known. By the number of dog pictures in some of the farm journals, it is evident that the editors like dogs. Some journals who use photographs on their covers seem to select dogs more often than any other kind of livestock. It is only evidence of the place which good dogs have found in farm life.

The food bill of the dogs in the country looks rather large on paper, but it is not all lost. Dogs keep down the losses from weasels, rats and skunks. They dig up moles which injure the fields and gardens. They can be trained to chase away any hawks or crows that fly near a poultry range. They locate rattlesnakes among the berry bushes, so that the snakes can be killed before a picker of berries is bitten. No mention is necessary of the hundreds of cases where dogs have saved children from death, and the dog's record on the battlefield is well known.

This article is not intended as opposition to the dog law, but to emphasize the value of a dog on the farm for the man who needs one. There is something to the poultry business beside selling eggs, and the fact that nearly all poultrymen keep a dog after trying to do without one, is evidence of the

Ring Necked Pheasants

Lay 40 to 50 eggs each per year. Why raise chickens to eat when these are much more profitable and raised as easily? Weigh 3 pound at six months, and bring \$1.00 a pound in the market. Set the eggs under chickens—feed and care for the young the way you would chickens. Are economical as they only require one-half as much food. Are very hardy and not subject to disease. Best eating bird in America. Eggs guaranteed from vigorous, healthy unrelated stock.

\$ 6.00 for 15 eggs
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Genuine Wild Mallard Ducks
Lay 50 to 60 eggs per year. We guarantee our breeding stock to be the best in the country as they are entirely wild trapped Mallards and not the coarse semi-wild strain.

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Giant Bronze Turkeys
Have a wonderful flock, headed by prize-winning 55 lb. tom.
\$1.50 per egg

Bloomfield S. C. Rhode Island Red Chickens
Fine laying strain of prize birds'
\$ 5.00 for 15 eggs
25.00 for 100 eggs

Get order in early and send check with it. Send for free booklet and instructions.

Bloomfield Farms
1714 Penobscot Bldg.
Detroit, Michigan



PHEASANTS

EASY TO RAISE

Eat only one third as much as a chicken. Worth four times as much at six months old. Ring Neck are larger than the Golden and the peer of all game birds. Golden have the most brilliant plumage, and for pet and show birds are unequalled.

GOLDEN - 15 eggs for \$6.00
RING NECKS - 15 eggs for 5.00
7 GOLDEN Eggs and 8 RING NECKS Eggs - 5.50

Eggs are from strong healthy birds and are guaranteed not to be over three days old when they leave the farm. Directions for hatching and care of birds with each order.

MISS ANNA L. WADE
Dept. 7 Edwardsburg, Mich.

BABY CHICKS

The average cost of producing a BABY CHICK under the hen is 22½ cents. We will supply you with the breeds listed below at 12½ cents to 20 cents.

Barred Rocks
White Rocks
Buff Rocks
Brown Leghorns
White Leghorns

Buff Leghorns
White Wyandottes
Rhode Island Reds
Black Minorcas

Anconas
White Orpingtons
Buff Orpingtons
Assorted, for Broilers

Two millions for 1919, delivered anywhere by Parcel Post. Catalog free.

The Smith Standard Company
1967 W. 74th St., Cleveland, Ohio

CHICKS

100,000 This Season. 10 varieties, best pure blood stock hatched right and guaranteed to reach you in right condition, hatching eggs prepaid. Pekin duck eggs. Illustrated catalog free.

STANDARD POULTRY CO., R. 7, Nappanee, Ind.

Bred-To-Lay White Leghorns. Leading M. A. C. Demonstration Farm in 1918. Average production for 150 hens last year 185 eggs each. Eggs for hatching, \$2.00 per 15, or \$10.00 per 100.
ANNA R. LINDSAY, Glenburnie Farmstead, Romulus, R. R. 2, Box 54, Mich.

Baby Chicks Bred to Lay S. C. W. Leghorns \$15.00 per 100. From stock that produced the winners in the state demonstration farm work last year. Circular free.
SUNNYBROOK FARM, Hillsdale, Mich.

Baby chicks from Bred-to-Lay S. C. White Leghorns \$12 per 100. Thompson Strain Barred Plymouth Rocks \$18 per 100. Safe delivery guaranteed. Send for chick folder and order early. Custom hatching 4c per egg. Russell Poultry Ranch, Petersburg, Mich.

Baby Chicks Superlative quality. 11 cts. each and up. 24 leading breeds. Satisfaction guaranteed. Catalog free. Springfield Hatcheries & Poultry Farms, Box K, Springfield, Ohio.

Barred Rocks egg contest winners, eggs from strain with records to 280 a year. \$2.00 per setting prepaid by P. P. Circular free.
FRED ASTLING, Constantine, Mich.

BARRED Rocks exclusively. Get your baby chicks and hatching eggs on time by ordering now. Prices and folder free.
H. H. PIERCE, Jerome, Mich.

BARRED Ply. Rock eggs for hatching \$2.00 per 15 delivered by post. A few small cockerels \$3.00 each.
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Buff Leghorns and White Leghorns. Cockerels, hens, pens, and eggs. 500 April chicks of each breed. Place your order now. Prices reasonable. Dr. William Smith, Petersburg, Mich.

Baby Chicks Hatching eggs, seven leading varieties, best quality. Lowest prices. Catalog free.
Goshen Poultry Farms, R. 19, Goshen, Ind.

\$10.95 Buys 140-Egg
Champion Belle City Incubator

Hot-Water, Copper Tank, Double Walls, Fibre Board, Self-Regulated. With \$6.35 Hot-Water 140-Chick Brooder both only \$15.95.

Freight Prepaid East of Rockies. Allowed on express. Guaranteed. My Special Offers provide ways to earn extra money. Order Now or write for book, "Hatching Facts." It's Free and tells all. Jim Brown, Pres. Belle City Incubator Co., Box 14, Racine, Wis.

Clean Out the Mites

Give your hens a chance to do their best. Keep the houses, runs and brooders sanitary with a BROWN'S AUTO-SPRAY. Use it, too, in the garden and for spraying home fruit trees and doing many other jobs.

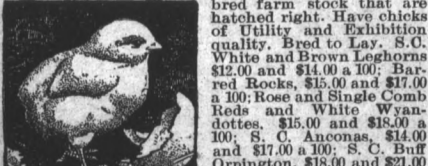
Send today for Catalog and Spraying Calendar—free.
THE E. C. BROWN CO.
852 Maple St., Rochester, N. Y.

Tells Why Chicks Die

E. J. Reefer, the poultry expert, 4813 Poultry Bldg., Kansas City, Mo. is giving away free his valuable chick book entitled "White Diarrhea and How to Cure It." The book tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 95% of every hatch. It is absolutely free. Every poultry raiser should have one. Write Mr. Reefer today for your copy.

POULTRY CHICKS CHICKS CHICKS

350,000 FOR 1919
By Parcel Post Prepaid. Delivered To Your Door. Guarantee Live Delivery.



Strong chicks from pure bred farm stock that are hatched right. Have chicks of Utility and Exhibition quality. Bred to Lay. S. C. White and Brown Leghorns \$12.00 and \$14.00 a 100; Barred Rocks, \$15.00 and \$17.00 a 100; Rose and Single Comb Reds and White Wyandottes, \$15.00 and \$18.00 a 100; S. C. Anconas, \$14.00 and \$17.00 a 100; S. C. Buff Orpington, \$18.00 and \$21.00 a 100; S. C. Black Minorcas, \$18.00 a 100; Odds and Ends, \$12.00 a 100. Eggs for hatching, \$7.00 to \$8.00 a 100. Combination offer on chicks, Hovers and brooder above. Give us your order and we will make you a satisfied customer the same as hundreds of others. Before ordering elsewhere get our free illustrated catalog. Get your order in early.

HUBER'S RELIABLE HATCHERY
EAST HIGH ST., FOSTORIA, OHIO.

dog's necessity on the poultry farm. When dogs are not used by the poultryman to protect his flocks he will soon find that it will pay to trade the poultry for pigs and raise something that cannot be carted away by the bagful in the back of a wheezy fiver. As the dog has been severely criticised because of the losses to sheepmen, some may feel that the dog has no excuse for existence, but at the same time dogs are doing good service in the protection of farm houses, and they should receive some credit for that at this time.

R. G. KIRBY.

SHADE FOR THE POULTRY YARD.

THE farm flock will keep in a more thrifty condition if they are provided with shade and there is no better shade than the fruit trees which protect the birds and furnish a profit at the same time. Raspberries will form a fine shade in a poultry yard. The canes covered with thick foliage form a dense shade where the birds can dust or hide from hawks. The birds do not injure the fruit as might be supposed. The berries seem to be hidden from them by the leaves and they cannot jump up high enough to discover the berry and then pick it off.

Blackberries also can be raised on a poultry range but we have not found them as satisfactory as red raspberries. Currants and gooseberries grow too low on the bush to permit their production where the poultry can find them.

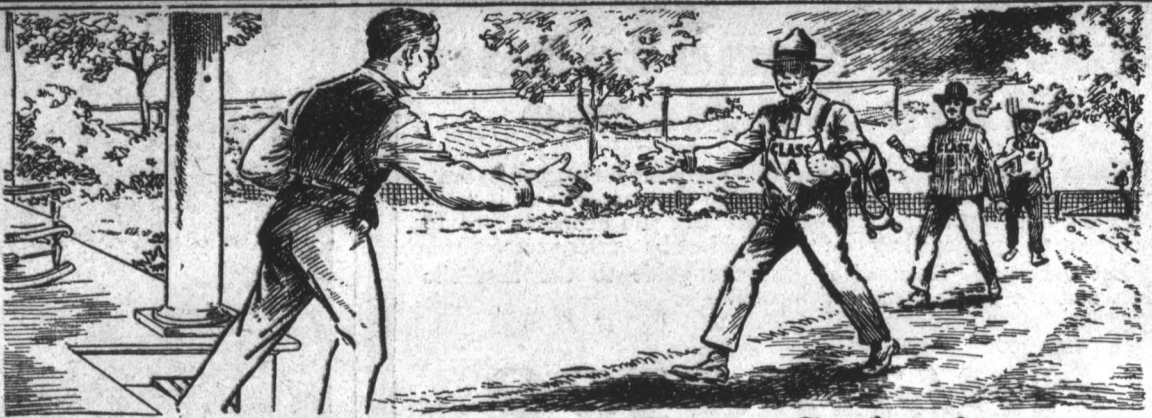
Of the fruit trees, plums are undoubtedly best for the poultry range. Peaches have a thick foliage and they will do for shade but they have to be sprayed often to produce good fruit and it is sometimes awkward to spray trees near poultry buildings than when they are growing in the orchard. Apple trees do not grow as rapidly as plums and we have not found them as desirable as plums in poultry yards.

Sunflowers can be planted in yards and the birds allowed to run among them as soon as they are a little over one foot high. The seed are valuable in the ration in the fall during the moult and if the stalks are broken over, the birds will do all the harvesting. Sunflower seed are valuable when saved for winter. The entire heads can be stored in bins and the birds will enjoy picking out the seed on cold winter days. The stalks when planted in rows form densely shaded pathways over which the birds can run and dust on the hot days of summer. For a permanent windbreak and a desirable shade for the yards, it pays to plant evergreens. They are hardy and grow quite rapidly and need little care after once obtaining a start. They form a pleasant shade for the hens and in the winter they are valuable as a windbreak. They do not produce a profit, of course, but the fact that they need no care may serve to balance. Fruit trees will not produce a profit unless they are properly sprayed and pruned and, of course, this costs money and takes time in the spring when the poultryman or general farmer is very busy.

ENCOURAGING THE USE OF GOVERNMENT BULLETINS.

DURING the winter, County Commissioner of Schools, Roy Noware, cooperating with the county agricultural agent, made up lists of farmers' bulletins and bulletins of the Michigan Experiment Station, which are of special interest and have particular application to Wexford county conditions, consisting of about one hundred bulletins from the Department of Agriculture and twenty-five from the Michigan Experiment Station.

These lists were sent out to all teachers in the county, and the teachers were asked to secure copies for the school libraries. Many schools have already received these bulletins and much interest is being shown by the pupils.



Farm Help—the New Solution

Plenty of help this summer after all! Sounds good, doesn't it? Less help needed hereafter, and more help available at harvest time. Better help in each of the three classes. More work accomplished per dollar

spent for wages. The farm help situation really cleared up and lines of action pointed out in this new and practical article "Farm Help Follows the Dollar" in the April issue of

The Farm Journal Over 1,000,000 a month

A splendid, big, beautiful farm magazine, jammed with the most interesting and useful new and up-to-the-minute reading and pictures.

"The Farm with Anemia"

by Dr. W. J. Spillman
Owners of run-down farms, where the soil has lost its vitality or the buildings have gone to ruin, will want to read the common-sense advice of Dr. Spillman in this level-headed article.

"Let's Have More Farmers in Congress"

By One of Them
With so many economic problems arising, which affect the welfare of all farmers, we must see to it that more practical farmers are sent to Washington to have a voice in framing future laws. Why don't YOU go to Congress? You may be just the man. Read the article, anyhow.

"Good Roads Cheaper Than Ever Before"

This is the first of a series of articles which will run all through the season of 1919. Never has the importance of cheap transportation been so emphasized as of late, and farmers will find in this chapter on good roads a worth-while discussion of a very timely subject.

Other Treats in the April Issue

Of special interest to women will be the full page of Spring fashions, and the boys and girls will like not only their regular section of The Farm Journal, but the article on "Tree Planting" as well. A big page of implement pictures, showing the newest labor-saving machinery and devices will appeal strongly to the men. All these good things, and much more, go to make up our April number, and assure you that in quality now, as always, The Farm Journal leads all farm magazines.



Other Top-Notch Articles in the April Number

- Baby Beef the Shortest Road to Beefsteak
- Selling Fruit by Mail
- Fire-proof Farm Houses
- Know Your Oil Stove
- Expert Farm Shop Work
- Inoculation the Biggest Word in Soil Building
- Make This a Silo Year
- Drainage Pays Good Dividends
- Making the Old Car New
- Ninety Cows on Sixty Acres
- Married Men Are Good Farm Hands
- Latest News of the \$10,000 National Crop Contest and Gold Medals.

50c—for 2 Full Years

Send 50 cents for subscription from July, 1919, to June, 1921, and we will send April, May and June issues FREE. Money back any time you ask. Ask at nearest newsstand for April Farm Journal.

The Farm Journal, 182 Washington Square, Philadelphia

Shear With Machine

Old ways of shearing leave too much wool on the sheep. Wool is scarce and commands high prices. Buy that sheep shearing machine NOW—they're going to be scarce this season. Get a Stewart No. 9 Bull Bearing Machine with 4 sets of knives. Price only \$14. If your dealer can't supply you send us his name. Write for 1919 catalog.

CHICAGO FLEXIBLE SHARP COMPANY, Dept. B127, 12th St., and Central Ave., Chicago, Ill.

No More White Diarrhea

Ritz's Citra makes it safe to raise all the little chicks you wish without the dread of losing them. After four years of every kind of test, we offer this wonderful discovery on a "money back if not satisfied" guarantee.

FREDERICK RITZ CO., 56 Lafayette Boul., Detroit, Mich.

POULTRY

HOMESTEAD FARMS

A Federation of Interests

Our new Catalog of Pure Breed Practical Poultry is now ready. Some breeds are sold out for a number of weeks. Orders for chicks are still being booked for

- Barred and White Rocks.
- Rose and Single Comb Rhode Island Reds.
- White Wyandottes.
- Single Comb Black Minorcas
- Single and Rose Comb White Leghorns
- Single and Rose Comb Brown Leghorns.
- Single Comb Anconas
- White Orpingtons

Eggs for Hatching

Eggs from any of the foregoing breeds for settings or in quantities for incubators. Special price for 500 to 1000 eggs during season; and on eggs for broilers.

- Eggs from White Pekin Ducks, and from Gray Toulouse Geese.
- Pullets—4 White Wyandottes; 9 Barred Rocks.
- Cockerels—1 Buff Rock.
- Hares—Belgians and Flemish Giants.

Orders should be sent now, in advance, so that your order will not be crowded out by orders that have been sent earlier. Send for catalog.

BLOOMINGDALE FARMS ASSOCIATIONS, Bloomingdale, Michigan

100,000 BABY CHICKS

for 1919, sent safely everywhere by mail or express. Single Comb White and Brown Leghorns and S. C. Anconas. Grand laying strains. Strong, vigorous, hatched-right kind. Tenth season. Satisfaction guaranteed. Order now for spring delivery. Prices right. Free catalogue. W. Van Appledorn, R. 7, Holland, Mich.

BABY CHICKS—11 Varieties, \$10 per 100 up, 2 weeks old 25c up, 4 weeks 45c up. Hatching eggs \$1.50 per 15 and \$8 per 100. Brd. White and Buff Rks., Buff and White Orp., S. & R. O. R. I. Reds, White Wyand., S. C. W. Leg., S. & R. C. Br. Leg., Alredale Paps, Cir. free. Sunny Side Poultry Farms & Hatchery, Blanchester, O.

Baby Chicks: S. C. White and Brown Leghorns. Good laying strains of large white eggs. Guaranteed to reach you in first class condition by parcel. Catalogue with price list free. WOLVERINE HATCHERY, R. 2, Zeeland, Mich.

Baby Chicks S. C. White and Brown Leghorns and Barred P. Rocks, by parcel post or express, safe delivery guaranteed. Knoll's Hatchery, R. 3, Holland, Mich.

BABY Chicks and Eggs. Barron English White Leghorns, "The Big Kind" 238 to 338. Egg stock. Write Mrs. E. L. GARLOCK, R. 7, Howell, Mich.

Baby Chix Barron Strain S. C. White Leghorns. Large healthy vigorous stock farm raised, bred to lay. Aim satisfaction. Bruce W. Brown, R. 3, Mayville, Mich.

Baby Chicks S. C. White Leghorns, Ferris strain. \$15 per hundred postpaid. Safe delivery guaranteed. Ralph Totten, Pittsford, Mich.

Chicks—Young's Strain Heavy Laying S. C. Baby White Leghorns \$14.00 per 100, \$7.50 per 50. By parcel post. Book orders now. WOLVERINE CKICKEY, 711 Delaware St., Grand Rapids, Mich.

Chicks Barron Strain White Leghorns. Pay a little more and get a good start next season. Early hatched chicks are always the best. My cockerels come from hens with an egg record of over 250 eggs their pullet year. March \$16, April \$15, May \$14 per 100. Circular free. Folly Cove Farms, R. 1, Holland, Mich.

LOOK BABY CHICKS \$11 A 100 UP

By Special Delivery Parcel Post, postage paid 20 different thorough breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

CHICKS AND EGGS

Rose and Single Comb R. I. Reds. Barred Plymouth Rocks. Pure bred stock. Farm raised and of superior quality. Write for catalog. INTERLAKES FARM, Box 39, Lawrence, Mich.

CHIX:- S. C. W. Leghorns
\$18 per 100. Full count live chick guaranteed. Pullets of same blood averaged 70+ yield through December and January. Morse White Leghorn Farm, Beiding, Mich.

Blue CUSTOM HATCHING Hens

Fifteen dozen eggs incubated and chicks boxed and shipped \$5.50. Less than full compartment 50c per dozen. Order April chicks now. Many varieties send for circulars. Crescent Egg Company, Allegan, Mich.

Barred Rocks S. L. Wyandottes and Light Brahma cockerels for sale \$3 to \$5 each. Eggs in season. C. V. BERK, Allenton, Mich.

Purebred Barred Rocks. Eggs from vigorous stock of good laying ability. \$2 per 15; \$19 per 100. Prepaid by parcel post. R. G. KIRBY, R. 1, East Lansing, Mich.

Chicks That Live \$15 per 100 S. C. W. Leghorns. Send for catalogue. SNOWFLAKE POULTRY FARM, R. 1, Grand Rapids, Mich.

Chicks. We ship thousands, orders booked now for spring delivery, booklet. FREEPORT HATCHERY, Box 12, Freeport, Mich.

Chicks with vigor and pep. Leading varieties. 12 1/2 cents up. Order now for spring delivery. F. A. LESTER, Mason, Mich.

English Barron S. C. White Leghorn chicks at \$14.00 per 100; \$55 per 500 immediate special delivery. 6,000 chicks each week. Guarantee safe delivery full count of lively sturdy quality chicks that will mature into most profitable and persistent layers. Hatching eggs \$8 per 100. Write us your wants and send for valuable catalogue giving rearing & feeding methods. DEVRIES LEGHORN FARM, Zeeland, Mich.

Eggs for Hatching Indian Runner Ducks, white egg kind, price \$1.75 for 11; 22 for \$3.00. Partridge Rock Rainbow strain, the great winter layers price \$1.75 for 15; 30 for \$3.00 postage not included. Mrs. J. S. KENNEDY, R. 3, Cassopolis, Mich.

CHICKS from Barron Strain S. C. White Leghorns stock direct from M. A. C. with records up to 279. Chicks \$25 per 100. G. Keizer, R. 4, Hudsonville, Mich.

English Barron S.C. White Leghorns, farm raised. Eggs for hatching \$8.00 per 100. Pleasant Hill Poultry Farm, F. A. O'HARROW, Clarksville, Mich.

Fenton Chicken Hatchery, Fenton, Mich. F.M. Milliken, Proprietor. Thoroughbred Day Old Chicks, 25 for \$5.50; 50 for \$10.00; 100 for \$18.00; Single Comb W. Leghorns Tom Barron English Strain. White, Buff and Barred Plymouth Rocks, Buff Orpingtons, Anconas, W. Wyandottes, R. I. Reds, B. Leghorns.

Fowler's Buff Rocks Cockerels \$4 up. Utility eggs for hatching \$2.00 for 25. R. B. FOWLER, Hartford, Mich.

For sale "Buy the Best" eggs for hatching from 200 egg strain Barred Plymouth Rock. \$2.00 per 15, \$5.00 for 45 eggs. H. B. PROCTOR, Grand Haven, Mich.

Hatching eggs Plymouth Rocks, all varieties, and Anconas. Illustrated catalog 3c. Sheridan Poultry Yards, R. 4, Sheridan, Mich.

John's Big Beautiful Barred Rocks are hen hatched, quick growers, good layers 30 eggs \$3, 100 \$8. Postage paid, Circulars, photos. John Northon, Clare, Mich.

Laybilt S. C. W. Leghorn

Large, great layers, pure whites, strong day-old chicks. March 15c each; April 15c each. Parcel postpaid. Lots of 25 or over, guaranteed delivery alive and lively. Hatch every week after March 17th. No circular. Please book order direct from adv. and send orders early. V. A. MORSE, Ionia, Mich.

Pine Crest White Orpingtons. Egg that will hatch good, strong chicks 3 and 5 dollars per 15. (No baby chicks or eggs by 100). Mrs. WILLIS HOUGH, Pine Crest, Royal Oak, Mich.

R.C. Br. Leghorn eggs \$1.50 per 15, \$8 per 100. Pekin duck, \$1.50 for 8. W. Chinese goose eggs 40 cents each. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

S. C. Brown Leghorns. Heavy laying strain. Farm raised. Eggs 15 \$1.25; 30 \$2.25; 45 \$3; 100 \$6. Postpaid. Floyd Robertson, R. 1, Lexington, Ind.

S. C. Anconas, W. Leghorns. Book orders now for Day Old Chicks and Hatching eggs. Circular free. Elmhurst Poultry Farm, Brighton, Mich.

Silver, Golden and White Wyandottes. Plenty of good Golden and White cockerels \$1.50. Few Silver pullets \$3 each. C. W. Browning, Portland, Mich.

Snowy White Rocks. Fishel Strain. Dandy layers. Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$3 per 100. All prepaid. Mrs. Earl Dehnhoff, Vanuren, Ohio.

S. C. B. Minorcas. Eggs from pen 1, \$3.00 per 15. S. C. from pen 2, \$2.00 per 15. Incubator eggs \$7.00 per hundred. R. W. MILLS, Saline, Mich.

White Wyandottes Free range flock 80 Duston's Strain hens mated to T. Martin's Regal Strain Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$3 per 100. VERN MOORE, Hartford, Mich.

White Wyandottes choice stock: cocks, hens, cockerels, and pullets. Send for 1918 circular. David Ray, 709 Norris St., Ypsilanti, Mich.

Okah White Wyandotte eggs for hatching, \$2.00 per 15, \$10.00 per 100 prepaid. E. W. BANKS, R. 3, Box 178, Lansing, Mich.

Pekin ducks, either sex, \$4.00 each. Mammoth Bronze turkeys, Toulouse geese, S. C. W. Leghorn cockerels, Berkshire gilts and sows, Chase Stock Farm, Marlette, Mich.

Ten Pure Toulouse geese eggs for \$3.50. Parcel post paid. JAMIE SOUTHWORTH, Allen, Mich.

This Is A Time to Buy Silos By Name

Today, every dollar must be made to produce its utmost in buying power; every purchase must accomplish the utmost in utility. A good silo should last for generations; therefore you cannot afford to experiment and perhaps buy one that will last but a few years.

Let the name "Kalamazoo" be your guide to the best silo values and the greatest silo satisfaction.

Kalamazoo

TILE and WOOD SILOS
"THE WORLD'S STANDARD"

Considered from any standpoint—food conservation—economy—better feeding—better live stock—bigger profits—the Kalamazoo Silo is a valuable asset to any farm. During the twenty-eight years they have been on the market, no Kalamazoo Silo has ever "worn out" or passed the usable stage. Think of that!

GLAZED TILE SILOS

"Permanent as the Pyramids"—fire-proof, frost-proof, storm-proof, moisture-proof, acid-proof, rot-proof, vermin-proof. Galvanized reinforcing. Require no paint, no upkeep expense or repairs. Easy to build—and solve the silo problem forever.

WOOD STAVE SILOS

Your choice of four of the best time-drying woods. Shipped complete, ready to set up. Quickly and easily erected by inexperienced home labor. All Kalamazoo Silos, whether wood or tile, have the famous Kalamazoo Galvanized Steel Door Frames and continuous doors.

Investigate Now

There is no reason to postpone action any longer. A little investigation and study of the silo question will quickly show that the Kalamazoo is the best for you. We offer special inducements to early buyers, and easy terms, too, if desired. Write for catalog today.

KALAMAZOO TANK & SILO CO.
Dept. 223 Kalamazoo, Mich.



Do Sheep Pay in Michigan?

THE county agent of Marquette county assisted forty farmers during the month of November, 1917, in getting sheep. Farmers bought all the way from two to fifty each. The farmer who wished to do so could pay half of the purchase price and the banks took a mortgage on the flock for the balance. The banks were made secure by the mortgage and also by the backing of the County Farm Bureau. Western breeding ewes were purchased and given to the farmers at cost. Pure-bred Hampshire rams were purchased by the farmers with a flock, making it worth while. Community rams were used in several instances. Today the sheep are all paid for and no mortgages foreclosed, or was such a thing even thought of. Complete records were kept of four of these flocks. The smallest of four and the largest of fifty with sizes between were kept. The same average was undoubtedly true of all the farm flocks in the county.

the upper peninsula to have closed sheds for wintering sheep. We have proven that this is not true. The accompanying illustration shows an open shed where the sheep were allowed to run in or out at will. The owner has told me that the sheep laid outside nearly every night all winter, only going inside when stormy or extremely cold. The writer saw the sheep in March and took the picture. The sheep were in good condition. None were lost. Other farmers have reported the same conditions as to the sheep staying outside when allowed to do as they pleased.

Sheep have given a nice profit during the last few years. The profit may not be so large from now on but if mutton and wool go down one-half of the price of last year other things must go down some and still there will be profit in a small farm flock.

In 1910, according to the census, there were 185 sheep in the county.

HUSTLE UP THE FARM LOANS
(Continued from page 497).
An honest man, of good reputation, a

Results of the Four Flocks.

Size Flock	Original Cost	Expense and Losses	Returns Wool	Returns Lambs	Net	Net per Head	% of Born	% of Saved
8	\$120.00	\$ 45.30	\$ 30	\$105	\$ 94.60	\$11.82	100.0	100
23	364.00	121.30	97	150	151.00	6.55	90.5	74
4	51.32	26.00	24	40	44.00	11.00	100.0	100
52	701.00	369.23	189	451	390.00	7.70	94.0	87
87	\$1,236.32	\$591.93	\$340	\$746	\$680.37	\$36.07	96.1	90

There were not many more than this prior to 1917. Today there are approximately two thousand head in the county and many more farmers will purchase during the coming summer if market conditions will warrant it. Besides this there is expected many a western flock to be brought in for pasturing at least, some to stay permanently.

Average cost per head.....\$14.21
Average expense per head..... 6.80
Average returns for wool..... 3.92
Average returns for lambs..... 10.97
Average net returns per head... 7.82
Average per cent of profit on investment..... 55
Average per cent lambs dropped... 96
Average per cent lambs saved... 90

In the above table the value of the manure has been taken into consideration. The flocks have been charged in all cases with items of depreciation, taxes, interest, labor, shearing, etc. A complete record has been kept in every way. Where the lambs were not sold and kept for breeding stock the same price was credited to them as to the wethers sold for mutton. The great variation in the net per head is due to the percentage of lambs dropped and saved and also to losses by death of some of the mothers. The farmers with the fifty-two head bought aged ewes and lost some of them; most of the others were yearling ewes.

Some farmers, and others, have thought that it must be necessary in

good manager and one who keeps up the fertility of the soil, is a good man to loan money.

Farming on a clay soil, however, was a mania with this particular appraiser, and I trust that he was the exception to the rule, and that other federal appraisers are men of broader views. I am only referring to this one with the hope that other communities who attempt to organize a loan association may know what to expect from a one-sided appraiser.

The appraiser was shown about by the loan committee, w/o, knowing the different farmers, pointed out the good ones from the poor farmers. The appraiser, however, needed no instructions, he had a chart to go by and nothing could divert him one fraction from the rules laid down. He judged farms as the judge of a show ring judges draft horses, depending solely on the score card. A horse may score ninety-eight on the card, yet if the animal has a false joint in one leg, the animal for the purpose a horse is intended, is no good. The score card indicates an animal of excellence, yet the animal for the one defect must be disqualified. So also in judging farms and farmers, the rules must be used only as a guide to one's better judgment.

In the list of farms that were visited one farmer, owning eighty acres, was rejected because his clearing was too

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small. Attention was called to the fact that that farmer had been there but a short time, he was married, not yet thirty, and was a man noted for his honesty. The chart said that the clearing was too small, and that settled it. In another instance, a farmer who owned thirteen acres, wanted to pay off a mortgage on his place which he had recently bought. This man has a family of seven children and will pay the mortgage without government aid, although a lower rate of interest and easier payments would have been appreciated. He is a valuable man to his community as he plows gardens in the spring, helps his neighbors harvest crops during busy seasons and at spare times cultivates his own potatoes, and raises fodder for his few cattle. We can not lend money on a farm smaller than fifteen acres, said the appraiser.

In this Michigan community farmers having no financial credit were accepted as eligible for a loan. Squatters and brush cutters, who will leave the country at the first snow storm, and who are a detriment to any community, could be taken as good loans simply because they were located on a clay soil.

About six weeks later the Federal Land Bank notified the secretary-treasurer that eight out of the sixteen applications had been rejected. This prevented the other eight from getting money, since an association must consist of ten or more members. The Land Bank also called attention to the fact that one member of the loan committee, prosecuting attorney of Mackinaw county, was not a farmer. Another, a civil engineer of prominence, and one who knows every farmer in Mackinaw county, was not eligible to act on a loan committee. In order that this association may get a loan they must reorganize, must again send for the appraiser, and must wait another year before they will know what action the government will take.

This article is not intended as unfair criticism of the Federal Land Banks. It merely calls attention to defects that might be remedied by reducing red tape to a minimum and by employing appraisers who are soils experts instead of strong-headed farmers. It is exasperating to believe that the east half of Mackinaw county is prevented at this critical period from taking advantages offered by the Federal Loan Act through red tape and honest ignorance on the part of an appraiser.

FOOD SPOILAGE.

THIS term applied to agriculture has an important meaning. Food spoilage, especially on our farms, amounts to a great deal, and from a national standpoint it is stupendous. It is difficult always to prevent this spoiling or wasting of food, especially in busy seasons and unfavorable weather; but much can be prevented, and as we advance in efficient production and economy, we will give more attention to this important branch of farm management. Without doubt, the greatest spoilage of food in this country is that of fodder, especially with the corn plant. It is estimated that from twenty-five to thirty per cent of the value of this plant is wasted each year after it has been grown. Millions of dollars worth of this forage go to waste each year, while at the same time stock food is in great demand and commanding high prices. A more liberal use of silos would prevent much of this unnecessary wastage.

Even where the corn fodder is put in shocks the spoilage is great, as winds, rain and snow all break down and destroy the value of the forage. By spring little is left which could be termed good or palatable feed. The silo would save this forage and preserve it in the best possible form. Other fodders, such as sorghum, kafir corn, millet, oats, peas, soy beans and clover are greatly damaged by weather and

unfavorable conditions at the time of harvest. Much wastings and spoiling could be prevented by properly housing, or placing in silos where it could be kept, if need be, for several years in good condition.

A wet season at the time of harvesting clover or alfalfa will often make it impossible to cure the forage and produce hay of any value. With a silo this food could all be saved and put in the best possible form. A rainy season in the fall will likewise prevent the curing of such forages as cane, kafir corn, millet, and a late cutting of alfalfa. The silo could here be used to save the feed.

There is a fearful loss each year due to frosted fodder. This loss often runs into the millions, especially in the northern states. It has been found that corn will make excellent silage even though frosted if put in immediately after the freezing, before the drying out process. It is a common practice among many of the extreme northern farmers to allow their corn to stand in the field until it is frosted before putting in the silo. In this way they gain every possible day of growth for their crop. Corn frozen before it matures will make excellent silage if put in immediately after the freezing. In this way all fodder grown can be saved. Corn damaged by hail can be saved in the same way. So long as there is any forage left it can be siloed. Drought-stricken corn or forage crops of any kind may also be turned to valuable feed. There is always enough forage grown in this country to feed at least twice as much live stock as we keep, but the spoilage and wasting gets rid of at least half the fodder we grow. The economy demanded of us during the progressive years to come will frown upon this spoiling. We will find it necessary to use progressive economic methods in our industry, and the silo must be considered one of the first equipments to prevent this great waste.

A SUBSTITUTE FOR HAY.

As I have no new seeding this year what would you advise me to raise this spring for hay, (to take the place of hay), for cows? I expect to plant soy beans. What should I raise beside ensilage? Would you advise me to try billion dollar grass, as I want to get the largest and best yield possible per acre?

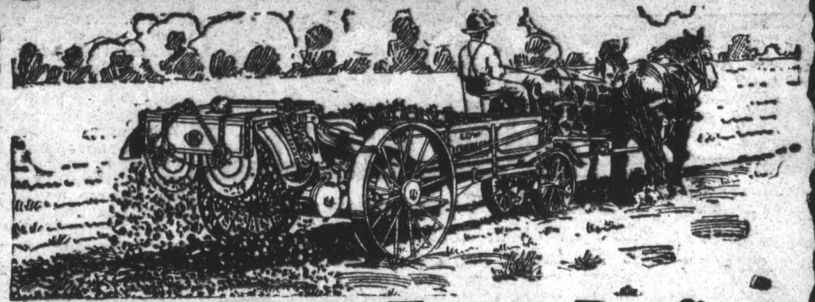
Kalamazoo Co. J. B.

Peas and oats mixed equal parts by measure and sown at the rate of two and one-half bushels per acre, make an excellent substitute for hay. Cut them when the oats are in blossom and the pods just nicely formed on the peas, and cure them as you would clover hay. You will be as well satisfied, practically, as you would with clover hay. If you get these in early and harvest them early, the ground can be disced up at once and sown to Hungarian grass and you will stand a chance, if there is a sufficient amount of moisture, of getting a very good crop of this, which makes excellent hay for all kinds of stock if it is cut before it gets too mature. Don't allow the seed to form.

Soy beans are also an excellent substitute for clover hay. You can sow them in drills or broadcast. They should be cut early for hay, when the pods are nicely formed. You can also leave them until they mature, save the seed and use the straw in place of hay. This straw looks very uninviting but is relished very well indeed by all kinds of live stock.

I would advise you to sow a small amount of the billion dollar grass but not very much at first. Try it out in a small way. Perhaps you will want to grow it, but it hasn't become very popular. C. C. L.

A report from Washington says that conditions caused by rising prices of hogs and pork products will be considered in the near future by the Food Administration.



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RAPE PASTURE FOR HOGS.

MANY farmers will be planning how to make their none-too-plentiful corn crop last through until next harvest, in their hog feeding operations. As the hog is naturally a foraging animal the use of supplemental crops will aid largely in cutting down the amount of corn for both growing and fattening hogs.

If clover is not available for pasture rape provides an excellent substitute which will be suitable for pasture within fifty or sixty days after planting. Rape has an advantage over clover in that it will pasture more hogs per acre in a given time than clover and will give gains equivalent to that of clover.

It produces an abundance of leaves which are large and succulent. When these leaves are nipped off by the hogs it persists in putting on new ones if not pastured too close. Under close pasturing the hogs bite off or pull up the stalks, injuring it so that it may be useless for future pasture, so that it is best to put a fence across the lot and pasture a half of it at a time while the other half is making a new growth.

Rape makes a fine pasture for young pigs. It is very desirable for spring-farrowed pigs; it will cut down their corn ration and be an advantage to get them out for exercise during a quick growing period. Usually for pigs it will provide forage before or by the first of May when planted some time before the first of April. The spring-farrowed pigs should be turned on it when it is from six to eight inches high, as the leaves are then small and exceptionally tender and can be reached easily by the small pigs. Later the brood sows and larger hogs can be turned on it without danger of injuring it except by close pasturing.

Rape can be planted just as soon as the ground can be prepared for it in the spring, usually the early planting will give the best results. It is naturally adapted to a cool season and is hardy enough to withstand pretty hard frosts. Usually it may be planted as early as the middle of March or first of April, and successive plantings may be made all through the summer and early fall.

The yield of forage will depend very largely on the kind of soil in which it is sown. Being a heavy feeder it requires a soil that is comparatively fertile. It may be a waste of seed and land to sow it in a thin or worn soil unless this soil has been heavily manured before plowing. On worn soil it produces a thin, straggly stand which will not pasture more than four or five head of hogs to the acre.

The seed may be sown either broadcast or in drills; it needs only sufficient covering to insure the seed reaching moisture to start germination. When broadcasted the seed may be covered by harrowing if the soil has been well pulverized beforehand; four to six pounds per acre will be sufficient seed. If it is sown in rows the hogs will follow between the rows and not knock down so many of the plants as when sown broadcast; under this plan less seed is required, two or three pounds being sufficient. Sown in rows cultivation is necessary, and while rows twenty inches apart are convenient for pasturing they are difficult to cultivate sometimes because of the narrow distance between them. For this reason broadcasting is often preferred except where weeds are bothersome, though a lighter yield of forage may be obtained by making the rows from twenty-eight to thirty inches apart.

Rape should not be pastured with hogs until it has attained five or six weeks' growth or until it is about fifteen inches high. By this time it will have made a sturdy growth and will pasture from ten to fifteen head of hogs per acre, according to their size and the thickness of the stand.
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GUERNSEYS must reduce herd, so offer a few choice females of Glenwood breeding also bulls, all stock of A. B. breeding, herd tuberculin tested.
Battle Creek, Mich.

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

Guernseys Grade Heifer Calves Registered Bull Calves; write your requirements.
WALTER PHIPPS FARM, 30 Alfred St., Detroit, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large fine growthy type, guaranteed right in every way. They are from high producing A.R.O. ancestors, Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

BULL CALVES Sired by Mapleside Korndyke
No. 112849. The sire's dam at 2 1/2 years, granddam at 3 1/2 years, and great granddam have semi-official records averaging 842 lb. butter in 1 year. Dams of calves have A. R. O. records up to 19.23 lb. butter in 7 days. Write for breeding and prices.
PEACELAND STOCK FARM
Three Rivers, Mich. Chas. Peters, Herdsman
C. L. BRODY, Owner Port Huron, Mich.

CATTLE



HOLSTEIN COWS FOR CHEESE MAKING

They are large, vigorous, and easy to care for, and on coarse feed they produce a large quantity of milk of a quality especially desirable for invalids and infants.

Interested in HOLSTEIN CATTLE Send for our booklets—they contain much valuable information.

BULL OF BLUE BLOOD BREEDING

Born January 21st, 1919. While a little dark has plenty of white behind him and is certainly a splendid individual in type.

DAM: Has an A. R. O. record of 22 lbs. as a 3 yr. old. Cow of good type and a very persistent milker.

Home of the Mich. Champions. We have just purchased the entire herd of Scotch cattle belonging to the Estate of the late A. D. Flintom.

Stockers & Feeders For Sale 100 Shorthorn Steers ave. 1065 lbs. 170 Hereford Steers ave. 980 lbs.

Milking Shorthorns Clay bred young bulls 3 to 10 months old. DAVIDSON & HALL, Tecumseh, Mich.

Parham's Pedigree Stock Farm offers Reg. Holstein cattle, Chester White Swine, extra bargains in calves and fall pigs.

Bulls All Sold, have two Reg. Oxford ewes at \$50.00 each. Due to lamb soon. J. ROBERT HICKS, St. Johns, Mich.

\$150 Buys one reg. heifer two months old and one bull calf one month old. Not akin. Pontiac breeding. Both light colored. B. B. Keavey, Akron, Mich.

Registered Holstein Bull, yearling, extra good, 25 lb. granddam, sire's dam 27 lb. 3 yr. old. \$125 at barn. LEWIS WALKER, Howell, Mich.

For Sale 1 Registered Holstein Bull 2 yrs. old \$300. A. J. STUART, Rockwood, Mich.

The JERSEY advertisement featuring an illustration of a cow and text describing the breed's qualities.

Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew the new World's Champion, Sophie's Agnes. Also R. C. Red eggs and chix. IRVIN FOX, Allegan, Mich.

BUTTER BRED JERSEY BULLS FOR SALE CRYSTAL SPRING STOCK FARM, Silver Creek, Allegan County, Michigan.

JERSEY BULLS Ready for service FOR SALE WATERMAN & WATERMAN, Ann Arbor, Mich.

The Wildwood Jersey Farm. Bulls for sale by Majesty's Oxford Fox 134214 and Eminent Lady's Majesty 150934, and out of R. of M. Majesty dams. ALVIN BALDEN, Capac, Mich.

LILLIE Farmstead Jerseys. Young bulls ready for L service from R. of M. cows. A few bred heifers and cows. COLON G. LILLIE, Coopersville, Mich.

For Sale Registered Jersey bulls ready for service and bull calves. SMITH & PARKER, R. 4, Howell, Mich.

Jerseys \$200 buys our herd of ten Registered and high grade cows, ages 2 to 8 yrs. 6 milking two months, 4 will freshen within 30 to 60 days. Herd bull 2 yrs. old, sure breeder, calves 1 reg. bull, 1 reg. heifer, 4 h.g. heifers. ROBT. P. REAVEY & SON, Caro, Mich.

Harwood's White Faces KEEP ON 508019 A Tom Bull Heads the Herd The beef cattle of the day. Only 2 yearling bulls left. My 1918 crop of bulls ready for sale.

Lakewood Herefords Strong in the blood of Anxiety 4th the strain that breeds true to type and predominates the leading show and sale rings of the country.

HEREFORDS

Both sexes and all ages for sale also horned and polled bulls in service. Governor by Prince Donald by Prime Lad 9th, Militant Farmer by Imported Farmer, Fairfax Farmer by Militant Farmer, Dam by Perfection Fairfax.

ALLEN BROS., Paw Paw, Mich. Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable. COLE & GARDNER, Hudson, Mich.

Herefords Bob Fairfax 494027 at head of herd. Stock for sale, either sex, polled or horned, any age. Priced right. EARL O. McCARTY, Sec'y. H. B. Ass'n, Bad Axe, Mich.

BIDWELL SHORTHORNS For Beef and Milk. Registered bulls, cows and heifers—Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. C. depot. 1 hour from Toledo, Ohio. Automobile meets all trains. Write BIDWELL STOCK FARM, Box B, Tecumseh, Mich.

Richland Farms Shorthorns Home of the Mich. Champions. We have just purchased the entire herd of Scotch cattle belonging to the Estate of the late A. D. Flintom.

Shorthorn Cattle of both Sex for Sale W. W. KNAPP, Howell, Michigan. Shorthorns Scotch and Scotch Topped cows and heifers, priced right. Come and see them or write W. B. McQUILLAN, R. 7, Howell, Mich.

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Maxwellton Sulton and White Hall Sulton by the Oscola Co. Shorthorn Breeders Ass. JOHN SCHMIDT, Sec. Reed City, Mich.

Stockers & Feeders For Sale 100 Shorthorn Steers ave. 1065 lbs. 170 Hereford Steers ave. 980 lbs. 2 cars of yearling Herefords ave. 750 lbs.

Milking Shorthorns Clay bred young bulls 3 to 10 months old. DAVIDSON & HALL, Tecumseh, Mich.

Rosemary Farms, Williamston, Mich. young bulls ready for service, Shorthorns bred for milk & beef. Herd estab. by Prof. C.H. Burgess, Mich. Agr. College.

Shorthorns Central Mich. Shorthorn Breeders Ass. offer 37 bulls all ages. 17 females for sale. Write Oscar Skinner, Sec'y, Gowen, Mich.

Shorthorn Breeder No stock for sale at present. CHAS. WARNER, Jr., Imlay City, Mich.

Shorthorns 100 head to select from. Write me your wants, price reasonable. Wm. J. BELL, Rose City, Mich.

The Kent Co. Shorthorn Breeders have both males and females for sale. Ask about them. L. E. LEONARD Sec., Oaledonia, Mich.

Shorthorn Bulls All Sold W. F. BARR, Aloha, Mich.

Milking Shorthorns of best Bates breeding and O. I. C. Bulls for sale 1 mo. to 1 yr. old. E. H. KURTZ, Mason, Mich.

Hogs all sold, have a nice Shorthorn bull calf, six months old, good individual price \$100 if taken soon. JOHN D. WILEY, Schoolcraft, Mich.

Cattle For Sale Stockers & feeders, from 500 to 1,000 lb. Write your wants. ISAAC SHANSTROM, Fairfield, Iowa.

Brown Swiss, 2 bull calves, 5 and 9 mos. old, sired by grandsons of College Bravura 2nd. E. T. SPENCER, R. 1, Portland, Mich.

Polled Durham, 3 heifers raised one calf each. 2 bulls under year. Dandy heifer 2 mos. Marquis Spring Wheat. Frank Bartlett, Dryden, Mich.

HOGS Boars and White Leg-horn Cockerels. PRIMEVAL FARM, Osseo, Mich.

Serviceable Berkshire Serviceable Berkshire Boars and White Leg-horn Cockerels. PRIMEVAL FARM, Osseo, Mich.

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him.

It paid this man to use one of our boars it will pay you. We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer.

Brookwater Farm, Ann Arbor, Mich. HERBERT W. MUMFORD, owner. J. BRUCE HENDERSON, Manager.

Duroc Jersey's—A few extra good fall boars sired by Orion Cherry King Col. 2nd. Bred sows all sold. W. C. TAYLOR, Milan, Mich.

Registered Duroc Gilts Descendants of the leading strains: Cherry King, Defender, King of Col's, The Professor, all bred to Col. Defender the 26 th. No. 12875, his sire, Pal's Premier Col. T. No. 81021. Dam, Royal Defendress No. 23150, one of the most promising herd boars in Michigan. Prices reasonable. Write for prices and further information. THE JENNINGS FARMS, R. 1, Bailey, Mich.

50 DUROC bred sows and 50 fall pigs. You need a litter by Orion's Fancy King the biggest pig of his age ever at International Fat Stock show. Catalog tells all. NEWTON BARNHART, St. Johns, Mich.

OAKWOOD FARM

Nothing for sale at present booking orders for spring pigs (Durocs). Tax Payer and Gold Model breeding. RUSH BROS., Romeo, Mich.

DUROC--JERSEYS E. D. HEYDENBERK, Wayland, Mich.

DUROC JERSEYS Gilts bred for June farrow of the heavy boned type also fall pigs either sex pairs not akin. F. J. DRODT, R. 1, Monroe, Mich.

Duroc Jerseys. A few choice gilts bred to Brookwater King Special 11167. (A full brother to Brookwater Lass D, the grand champion sow at the 1918 International). Carey U. Edmonds, Hastings, Mich.

Duroc Jersey Sows, Large type, heavy boned, 1000 lb. heart boar. JOS. SCHUELLER, Weidman, Mich.

FOR Sale Duroc Jerseys of the big boned type fall pigs of either sex and taking orders for spring pigs. CHAS. BRAY, Okemos, Mich.

Hampshires Boars at a bargain bred gilts all sold. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Hampshire Hogs The International Grand Champion Hog of 1918, both sexes for sale. Spring deliveries booked now. ELI SPRUNGER & SON, Saginaw, W. S., Mich.

Raise Chester Whites Like This the original big producers. Illustration of a pig.

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 4 months old. Write for my plan—More Money from Hogs. S. S. BENJAMIN, R. F. D. 10, Portland, Michigan

Chesters, March and April pigs in pairs or trios from prize winning stock prices reasonable satisfaction guaranteed. F. W. ALEXANDER, Vassar, Mich.

Breed The Best THE WORLD NEEDS LARGE FAT HOGS Why lose money breeding and feeding scrub hogs? Two of our O. I. C. Hogs Weighed 2806 Pounds.

We are the most extensive breeders and shippers of pure bred hogs in the world. Write today for the true story of the real O. I. C. Hogs. All foreign shipments U. S. Government Inspected

We have bred the O. I. C. Hogs since 1863 and have never lost a hog with cholera or any other contagious disease. WRITE TODAY—FOR FREE BOOK "The Hog from Birth to Sale"

THE L. B. SILVER CO. 196 Heights Temple Bldg. CLEVELAND, OHIO

THE WORLD'S CHAMPION big type O.I.C.'s. Stock of all ages for sale. Herd headed by Galloway Edd, the World's Champion O. I. C. boar assisted by C. O. Schoolmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. O. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Grandell's prize hogs, Cass City, Michigan.

Shadowland Farm O. I. C.'s Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express paid and registered in buyers name. J. CARL JEWETT, Mason, Mich.

O. I. C. and Chester White Swine Strictly Big Type with QUALITY. I am sold out of everything but fall pigs. These pigs are as good—and I think better than any I ever bred. I am one of the oldest breeders of Big Type in the U. S. NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

O. I. C.'s big type serviceable boars. Yearling sows and gilts bred for spring farrow. G. P. ANDREWS, Dansville, Mich.

O. I. C. Bred Gilts All Sold. H. W. MANN, Dansville, Mich.

O. I. C. Boar, 14 months old. Large fall pigs of either sex. O. J. THOMPSON, Rockford, Mich.

O. I. C. Gilts bred for summer farrow and a few fall boar pigs any of them good enough to ship. C. O. D. E. C. BURGESS, R. 3, Mason, Mich.

O. I. C. Gilts to farrow in March and April. Also fall pigs, either sex. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C.'s 2 last July and 4 last Sept. boars, good growthy follows. Farm 1/2 mile west of Depot. OTTO B. SCHULZE, Nashville, Mich.

O. I. C. fall boars and gilts extra large boned. Best I ever raised Priced to sell. Will Thoman, ELM FRONT STOCK FARM, Dryden, Mich.

FRANCISCO FARMS SHORTHORNS--POLAND CHINAS! Three choice heifers and a few young cows to offer. Also fine good gilts bred for late spring farrow. Prices are attractive. P. P. POPE, Mt. Pleasant, Mich.

For 25 Years We have been breeding Big Type Poland China hogs of the most approved blood lines. Our new herd boar "Michigan Buster" is a mighty good son of the great "Giant Buster", dam "Mou's Miss Queen 2". Some breeding! We are all sold out except a few fall pigs at \$25.00 each. J. C. BUTLER, Portland, Mich.

Big Type Poland Chinas A 400 lb. Ang. 28, yearling and a few 250 lb. Apr. gilts. Quality stuff, registered, and cholera immune. Bred for Mar. and Apr. farrow. WESLEY HILE, R. 6, Ionia, Mich.

P.C. bred gilts sold. For sale herd boar prospect 17 mo. old, wt. 600 lb. with quality, sire Buster Giant, 288593, dam Nemo L. 548940 an 800 lb. sow in flesh. Sire sold for \$1500, priced reasonable. Free Livery from Parma. W. E. LIVINGSTON, Parma, Mich.

Big Poland Chinas with quality. For sale, summer and fall gilts, open or bred. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Large type Poland China's breed gilts all sold. Fall pigs of either sex for sale. Sired by 800 lb. yearling. A. A. FELDKAMP, Manchester, Mich.

MICH. Champion herd of Big Type P.C. Nothing for sale but fall pigs; orders booked for spring pigs. E. R. LEONARD, St. Louis, Mich.

L. S. P. C. A few gilts bred for April & May farrow at bargain to close them out at once. E. O. SWARTZ, Schoolcraft, Mich.

Big type P. C. fall boars the big prolific kind, their breeding traces to the best herd in Ill. Iowa, & Neb. C. E. GARNANT, Eaton Rapids, Mich.

Large Type P.C. Nothing for sale now. Will be marketed with better than ever this fall. If herd stuff counts. W. J. HAGELSHAW, Augusta, Mich.

Big Type P. C. boar and bred gilts. Choice for sale. Aug. pigs at a bargain. A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowa's greatest Big herds, the big bone prolific kind with size and quality. E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland's all sold out, nothing for sale at present. Booking orders for spring pigs. Thanking my customers. L. L. Chamberlain, Marcellus, Mich.

Mammoth Poland Chinas all sold. General Jones No. 317249, son of Gerstade Jones heads our herd. Clyde Weaver, Ceresco, Mich.

HORSES

Pure Bred Belgian Draft Horses We have some extra good Belgian Stallions for sale, coming three and four years old. They are heavy, of good conformation and sound. You can see their sires and dams. They are raised in Michigan and acclimated. We have no agents on the road for which you or we would have to pay. You cannot buy them any better nor cheaper in the world. Our studs and mares carry the best blood Belgium has produced. We prove this by their pedigrees. We invite you to see our stock before buying. You can see them any day of the week except Sunday. Write for particulars and catalog to the OWOSSO SUGAR COMPANY, Prairie Farm, Alicia, Mich.

Saginaw Valley STOCK FARM Belgian and Percheron Stallions and Mares and registered Holstein Cattle, of the best breeding, for sale. Eli Sprunger & Son, Saginaw, W. S., Mich.

Stallions For Sale One Percheron Stallion and one Imported English Shire for sale. These stallions will be sold at sacrifice prices in order to close out a business which I have charge of. Arch. Marshall, Trustee, Bear Lake, Mich.

Horses Will Be Horses Soon We have on hand at all times a choice selection of young Percheron Stallions. PALMER BROS., Belding, Mich. R. R. Orleans.

One Reg. Clyde Stallion coming 3 years old. Sired by an Imported Stallion weight 2100 lbs. and out of Imported Mare weighing 1800 lbs. the mare won first at Michigan State Fair 1916. This colt will make a 3000 lbs. horse. Priced to sell, write or call at once. WM. I. CRANDELL, Cass City, Mich.

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

Percheron Stallions and mares at reasonable prices; inspection invited. F. L. KING & SON, Chartotte, Mich.

For Sale two Registered Black Percheron Stallions one 3, one 5 years old in spring both sound. JOHN LULHAM, Carson City, Mich.

Must Be Sold Registered Percheron Stallion. A beauty and a bargain. Address Box 410 Chelsea, Mich.

SHEEP

"TIX-TON MIX" with salt the year around keeps flock healthy and free from worms and ticks. Saves you big money—\$1.00 sample box by parcel post will include a barrel of salt. Write for club offer—booklet on "Nature and Care of Sheep." PARSONS TIX-TON CO., Grand Ledge, Mich.

MORE to the Kids of Mich: I have sold all the ewes that I care to sell, but judging from the many inquiries I have received there are many of you kids who still want to get started in registered ewes. Now then, here is a new proposition: I have selected one beautiful Shropshire ewe, she will lamb in the course of the next month; she is worth at least \$50.00. I will give this ewe, absolutely free, to the boy or girl who gives me, in my opinion, the best reasons why they should be the one to get her. I may give away more than one. S. L. WING, Kope-Kon Farms, Coldwater, Mich.

SHROPSHIRE SHEEP We have about 50 ewes in lamb for sale, of best breeding. Registered. HARRY E. SAUER, Seedsman, 109-111 E. Ottawa St., Lansing, Mich.

80 Breeding Ewes 2 years old in good condition will lamb in April must be sold this month. ALMOND B. CHAPMAN, So. Rockwood, Mich.

For Sale Bred Reg. Shrop. Ewes at a reasonable price also ewe lambs. H. F. MOUSER, R. 6, Ithaca, Mich.

Shropshire Sheep Nothing to offer before June 1-1919 ARMSTRONG BROS. R 3 Fowlerville, Mich.

For Sale a flock of 52 good coarse wool breeding ewes commencing to lamb. Apr. 12. E. B. RYND, Clinton, Mich.

Additional Stock Ads on Page 519



SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, March 27.

WHEAT.

A stronger wheat market prevails in this country and prices have advanced eight cents since a week ago. The visible supply of the country shows an unusual decrease, having been reduced by 9,636,000 bushels since last week. The consumptive demand is broadening and mill feeds are being more eagerly sought. The growing crop gives good promise at the present time. One year ago the local trade was paying \$2.17 per bushel for No. 2 red. Present Detroit prices are:

No. 2 red	\$2.43
No. 2 mixed	2.41
No. 2 white	2.41

CORN.

Corn values keep on climbing. In Chicago with a broad demand quotations reached the highest level for the season. Exporters are taking corn out of the country. While deliveries at country elevators have increased by reason of better roads and prices, the increase has not been sufficient to prevent the visible supply from being cut down 575,000 bushels. A year ago No. 2 corn was quoted here at \$1.70 per bushel. Present prices here are:

No. 3 corn	\$1.65
No. 3 yellow	1.70
No. 4 yellow	1.65
No. 5 yellow	1.62
No. 3 white	1.67

Chicago prices are substantially higher as follows: No. 3 yellow \$1.61@1.63; No. 4 yellow \$1.56@1.57; No. 5 yellow \$1.53@1.55; May \$1.48; July \$1.38.

OATS.

The market for oats continues easy and the recent advance has scarcely been maintained. Oat seeding is progressing rapidly throughout the Ohio valley. The visible supply shows a decrease of 1,489,000 bushels for the past week. A year ago standard oats sold on the local market at 97½¢ per bushel. Present prices here are:

Standard	69½
No. 3 white	69
No. 4 white	69

RYE.

This grain shows an advance of a dime since a week ago. The market reacts about steady on the higher basis. Exporters continue to take the grain but the release of government holdings has prevented wider gains in prices. At Detroit cash No. 2 is quoted at \$1.68.

BARLEY.

Increased buying has been evident with advanced prices resulting. On our local market cash No. 3 barley is now quoted at \$2.10@2.20 per cwt.

BEANS.

There are good signs of improvement in the tone of this market. While not all our country elevators are taking beans, the price paid by those that are doing business is around \$6 to the farmers. Growers in southern California are forming a pool to stabilize the price for their holdings. New York growers are also organizing. California's crop is estimated somewhat lower by the federal crop reporters than in the December and January reports. With the reduction in Michigan's crop to the figures as reported by threshermen of this state, the total production for the country is substantially the same as in 1917 instead of being nearly 2,000,000 bushels greater, as reported by the federal crop reporter for December. The movement reflects a better general demand and prices show an upward tendency in large markets. No doubt some recent eastern buying of pea beans at \$6.75@7 has been done on export account. In New York choice pea beans are quoted at \$7@7.25; mediums at \$7@7.25. At Chicago the Michigan hand-picked beans have advanced to \$7.25@7.65, and the best red kidneys at \$12@12.50. In Boston Michigan choice pea beans are bought by jobbers at \$7@7.50. In Detroit buyers are getting interested and the quotation is up to \$7.50, an advance of \$1 since we made our protest to the jobbers for lowering the quotations to farmers to \$5.

Under date of March 20 Herbert Hoover, director general of foreign relief is quoted as follows: "With ocean

transport still restricted, food must be shipped overseas in its most concentrated forms, but that when more tonnage became available it is hoped such food stuffs as beans, rice and canned vegetables and fish, of which the United States has a surplus, may be sent abroad."

FEEDS.

Feed quotations are higher on this market, with bran at \$46; standard middlings \$46; fine middlings at \$50; coarse corn meal \$64; cracked corn at \$67.50; chopped feed \$52 a ton, in 100-pound sacks to jobbers.

SEEDS.

There is not enough clover seed to satisfy buyers and prices made new high levels. Detroit quotations are: Cash prime red clover \$29; alsike \$23; timothy \$5.

HAY.

The hay market is firm with demand good and receipts small. Quotations are: No. 1 timothy \$28.50@29; standard timothy \$27.50@28; light mixed \$27.50@28; No. 1 mixed \$26.50@27; No. 1 clover \$25.50@26.

Pittsburgh.—Receipts are extremely light and demand is growing urgent. Dealers have raised prices. Quotations are: No. 1 timothy \$31@32; No. 1 light mixed \$29@30; No. 1 clover mixed and No. 1 clover \$29@30.

POTATOES.

A somewhat better feeling prevails, although prices show little advance since last week. It is probable that

the consuming season for the 1918 crop will be somewhat extended because of the unusually short crop of early potatoes planted in the southern states. At Detroit U. S. No. 1 whites from Michigan are selling at \$2.60@2.65 per 150-lb. sack; in Cleveland the same grade is selling at \$2.85; in New York \$2.75@3; Pittsburgh \$2.70@2.75; Cincinnati \$1.85@1.90 per cwt; in Chicago \$1.70@1.80. Michigan growers are receiving \$1@1.25 per cwt. at the warehouse, with haulings in moderate volume.

BUTTER.

Prices have dropped to a lower basis, following slower export demand. In the central western markets dealers are looking ahead with the thought that grass will soon be here and the increased flow of milk resulting will give the butter makers a chance to again catch up with stock. Fresh creamery extras reached 57@58c on the Detroit market. At Chicago the range for creameries is from 54@59½¢ per pound. The New York trade is easy at 59@63c, and in Philadelphia the jobbers are paying 63c for western creamery.

CHEESE.

Quotations have entered higher levels on the basis of purchases made from factories last week. Many feel that the advance will not be for long while others contend that the European demand may not permit prices here to again sag until their hunger across the Atlantic has been assuaged. At Detroit Michigan flats are selling to

jobbers at 30½@31c; daisies single, 31½c. Philadelphia market is firm with full creams bringing 34@35c for new and 35@38c for old.

EGGS.

Egg prices are keeping up tolerably well considering the heavy supplies. Consumption is growing. At Detroit fresh firsts are going to jobbers at 40c and fresh extra firsts 40½c. The Chicago market is higher with firsts quoted at 39@39½c and ordinary firsts at 38@38½c. Trading in New York rules steady with nearby western stock going to jobbers at 42@47c. The Philadelphia trade quotes western firsts and firsts at \$12@12.15 per case.

POULTRY.

The supply of poultry is limited and values are firm at advanced prices. No. 1 springs are selling at 34@35c; stags 27@28c; hens 33@35c; roosters 24@25c; geese 25@26c; ducks at 40c; turkeys 35@36c per pound.

WOOL.

At the Philadelphia auctions of government wools, prices for the domestic fleeces were strong. All the better grades brought out sharp bidding and showed that manufacturers and dealers are anxious for this class of raw material. Much of the world's stocks of wool consist of inferior grades, while supplies of the better kinds are short. Growers are inclined to look for better prices for their fleeces than they expected a month or so ago.

DETROIT CITY MARKET

Not very many wagons are showing up at the market these days. Offerings consist largely of greenhouse products. Some potatoes are coming in and selling at \$1.05@1.10; apples range in price from \$2.25@4.50 per bushel; fresh eggs bring 45@48c; country butter 60c; dressed pork 21@22c; navy beans 6@7½c per pound.

GRAND RAPIDS

There was an advance in the price of secondary grains last week to growers: Rye to \$1.30; oats 70c; corn No. 2 yellow \$1.60; barley \$1. Hay is a little higher at \$27 flat at the city market, receipts light by reason of bad country roads. There has been a little better demand for beans but paying price to growers the same as previous week. Government reports show 28 cars shipped out of the state. During the past week some growers marketed potatoes at 85@90c per bushel, ungraded stock; but graded shows little or no change from previous week, \$1.10@1.15. Car shipments out of the state thus far on 1918 crop per government report is 6,463 against 5,710 a year ago. Reports from wheat growers in western Michigan show very little wheat winter killed, though uncovered most of the season. Caledonia growers have organized the Caledonia Farmers' Elevator Company, which will be operated on a cooperative basis. Michigan wool of this year's clip is coming into market. Opening price is 37c a pound.

NEWS OF THE WEEK.

(Continued from page 490.)
partment with powers to investigate complaints of excessive retail prices and to regulate costs and profits.
Monday, March 24.

HUNGARY joins in a confederacy with the Russian bolsheviks and against the entente allies.—Germany sends eighteen ships to sea from Hamburg, despite announced strikes among the seamen at that point.—The blockades around Austria and Hungary have been raised.—The Monroe doctrine will be sufficiently protected by the delegates at the peace conference, according to latest comment.—English mills are now buying American cotton.
Tuesday, March 25.

THE big powers purpose to have the peace treaty ready for signing within a week.—A plot to attack American soldiers located at Coblenz is reported by German radicals.—Teutonic leaders openly declare their intention to ally themselves with the Hungarian Reds.—The superdreadnaught Idaho, the largest fighting ship afloat, is turned over to the U. S. Navy Department.—The situation in Egypt is somewhat quieter, although the Arabs have attacked Britishers near Faum, but were beaten off.—Michigan troops parade in New York City.

Live Stock Market Service

Reports for Thursday, March 27th

BUFFALO.

On today's market pigs sold up to \$17.75 and other grades at \$19.75@20. Lambs were dull with the top at \$20.25 and calves at \$18. Cattle also ruled dull.

DETROIT

Cattle.

Receipts 2,725. Canners rule steady. All other grades are dull and 50@75c lower than last week's close.
Best heavy steers.....\$14.00@14.50
Best handy wt bu str.... 13.50@13.75
Mixed steers and heifers 12.00@13.00
Handy light butchers.... 10.50@11.00
Light butchers 8.00@ 9.00
Best cows 10.00@10.50
Butcher cows 8.50@ 9.00
Cutters 7.00@ 7.50
Canners 6.00@ 6.75
Best heavy bulls 9.50@10.00
Bologna bulls 8.50@ 9.00
Feeders 9.00@10.50
Stockers 8.00@ 9.00
Milkers and springers...\$ 65@ 120

Veal Calves.

Receipts 2,180. Market dull at Wednesday's close.
Best\$ 17.00
Others 11.00@15.00

Sheep and Lambs.

Receipts 1,514. Best 25c lower; other grades steady.
Best lambs\$19.50@20.00
Fair lambs 18.00@18.50
Light to common 15.00@16.00
Fair to good sheep..... 13.00@13.50
Culls 7.00@10.00

Hogs.

Receipts 7,577. Market steady.
Pigs\$ 17.50
Mixed 19.15@19.30

CHICAGO.

Hogs.

Estimated receipts today 24,000; holdover 64,061. Market uneven but strong and mostly 10@20c higher. Bulk of sales \$19.25@19.50; tops \$19.65; heavy, 250 lbs up, medium, good and choice \$19.50@19.65; medium, 200 to 250 lbs, medium, good and choice \$19.25@19.50; light 150 to 200 lbs common, medium, good and choice \$18.75@19.45; light lights 130 to 150 lbs, common, medium, good and choice \$17.50@19; heavy packing sows, 250 lbs. up, smooth, \$18.40@18.85; packing sows 200 lbs up, rough \$17.50@18.25; pigs, 130 lbs down, medium, good and choice \$16.50@17.25.

Cattle.

Estimated receipts today 8,000. Market, beef steers and best she stock is 25c higher. Other butcher cattle and

feeders steady to strong. Calves lower. Best steers, medium and heavy weight 1,100 lbs up, choice and prime \$18.50@18.90; do medium and good \$14@18.40; do common \$11.55@14; light weight, 1100 lbs. down, good and choice \$15.25@18.75; do common and medium at \$10.15@15.50; butcher cattle, heifers, common, medium, good and choice at \$7.50@15.50; cows, common, medium, good and choice \$7.15@15.25; bulls, bologna and beef \$8.40@12.50; canners and cutters cows and heifers \$5.50@7; do canner steers \$7@10; veal calves light and handyweight, medium, good and choice \$13@15.25; feeder steers, common, medium, good and choice at \$9.75@15.25; stocker steers, common, medium, good nad choice \$8.25@13.

Sheep and Lambs.

Estimated receipts today 10,000. Killing lambs opened full steady with late Wednesday market but 25@50c below Tuesday. Sheep steady. Lambs, 84 lbs. down, medium, good, choice and prime \$18@20.15; do 85 lbs. up, medium, good, choice and prime \$17.25@18; do culls and common \$14@14.75; yearling wethers medium, good, choice and prime \$15.75@18.50; ewes, medium, good and choice \$11.75@15; ewes, dull and common \$6@11.50; feeder lambs medium, good and choice \$17@18.

BUFFALO.

Cattle.

Wednesday, March 26.

Receipts five cars. Market is slow. Prime heavy steers at \$17@18; best shipping steers \$16@16.50; medium shipping steers \$14@15; best yearlings 950 to 1000 lbs \$15@16; light yearlings of good quality \$14@14.50; best handy steers \$13.50@14.25; fair to good kind \$12@13; handy steers and heifers, mixed \$12@12.50; western heifers at \$12.50@13; best fat cows \$11@12; butcher cows \$9@10; cutters \$7@8; canners \$5@6; fancy bulls \$10@11; butcher bulls \$9@10; common bulls \$6@7; best feeding steers 900 to 1000 lbs \$11@12; medium feeders \$10@11; stockers \$8@9; light, common \$7.50@8; milkers and springers \$75@150.

Hogs.

Receipts ten cars. Market 25c lower; heavy \$20@20.10; yorkers \$19.75@19.90; pigs and lights \$17.75@18.25.

Sheep and Lambs.

Receipts ten cars. Market steady. Top lambs \$20@20.35; yearlings \$17@18; wethers \$15.50@16; ewes \$14.50@15.

Calves.

Market steady. Tops at \$18; grass calves \$5@8.

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And elevates your Silage to any height with less power than any other machine. That's "Guaranteed" with the "Knife on the Fly-Wheel."

Ann Arbor DISC THROWER SILO FILLER

If overcomes all the faults you ever heard of in Silo fillers. A dozen important features that are innovations in Silo-filling machinery. You can't choke it and it won't blow up. It means better Silage with less labor, less power and less cost. Be ready to fill when your crop is ready. Get catalog giving complete details now. Book Free—write today.

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Complete Departments of HARDWARE, AUTO ACCESSORIES, VEHICLES, GROCERIES, FURNITURE, DRY GOODS, ETC.

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Capital Stock \$1,000,000. Assets over a million. Wholesale Purchasing Agents for Farmers Indianapolis, U. S. A.



Tanning Information Free Horse, cattle, fur coats made to order, from horse or cattle hides you furnish. Robes, Rugs, Gloves, Mittens, Ladies' Coats, Sets of Furs, Taxidermist work on Deer Heads, Rugs.

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WHEAT OATS RYE CORN BRAN—Middlings FEEDS Carloads

Ask for circular "July Oats Investments." Member Chicago Board of Trade

CARPENTER GRAIN CO.

Battle Creek Michigan

Send Today for Prices and Sample of Acclimated Michigan-Grown Early Yellow Dent

SEED CORN

High germination. Don't experiment this year—get the best seed.

D. WOODWARD & SON

Corn Breeders Clinton, Mich.

CULOTTA & JULL

Eastern Market, Detroit, Mich.

We need your shipments of Poultry, Veal, Dressed Hogs, Live Hens, Eggs, Live Rabbits and Game. Highest prices possible obtained on arrival. We can handle your Potatoes, Onions, Apples, Cabbage and root crops, carlots or less. Your shipments will be appreciated and have our best care and attention, and you don't have to wait for your money. Reference Peninsula State Bank.

Mr. POULTRY FARMER:

We make a specialty of White Henny Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henny Whites—We remit same day shipments arrive. Ship Often—Ship by Express

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Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank, Bradstreet. Detroit, Mich. Cad. 2378.

HAY Ship To The Old Reliable House

Daniel McCaffrey's Sons, 623-625 Wabash Bldg., Pittsburgh Pa.

Wanted: Michigan 80 to 125 pound healthy pigs in ear lots. We buy them all year. Write Danville Stock Hog Co., Danville, Illinois.

Experienced Stallion man age 43 single, temperate wishes employment for season. For cherons or Belgians preferred. Box 3329 Mich Farmer

CALIFORNIA BEAN PRODUCTION BY VARIETIES IN 1918.

FIELD Agent of the Bureau of Crop Estimates E. E. Kaufman, in a report a few days ago, said that owing to the importance of the bean crop and the difficulty experienced at harvest and threshing time in many sections of California on account of unseasonable rains, a special inquiry was instituted concerning the probable production by varieties, together with average "pick" and quality of the crop. Further data on the acreage harvested and average yield per acre was also secured.

The acreage harvested is estimated at 592,000; no change being made from the December figure.

The average yield per acre is reduced from fifteen to fourteen and a half bushels, making the revised figures on production 8,584,000 bushels—equivalent to 5,150,400 centals.

The quality of the 1918 crop was only eighty-five, compared with ninety-seven in 1917.

The average "pick" (trash, split and otherwise defective beans), was 10.5 per cent in 1918, compared to 4.3 per cent in 1917. In some counties the "pick" was exceedingly heavy, on account of rain, while hardly any district entirely escaped.

Following is the estimated production by varieties in centals, or 100-pound sacks: Limas 1,545,000; Small White 978,000; Large White 618,000; Pink 721,000; Red Kidney 26,000; Black Eye 463,000; Cranberries 103,000; Mexican Reds 154,000; Bayos 118,000; Teparys 257,000; Henderson Bush 134,000; Miscellaneous 33,000.

THE NEW YORK PRODUCE MARKET.

Butter.—Price conditions about on a par with those at the time the January break materialized, prevail at present. Since last Saturday the price of butter has advanced a full seven cents. While general conditions have warranted such an advance the majority of receivers look upon the situation with considerable misgiving. The spring increase in make is close at hand and with it must come a marked decline in price. That there will be another decided break soon is believed by all connected with the wholesale butter business. On Saturday of last week extras were quoted at 61½c. On Monday there was an advance of 1½c which was followed by advances of 2c on Tuesday, 1½c on Wednesday, 1c on Thursday and 1c on Friday. At the close the market is rather weak and it is expected that a decreased price will be seen soon. At the close yesterday established quotations were as follows: Extras 68¼@68½c; higher scoring than extras 69@69½c; firsts 66@68c; seconds 62@65c.

Cheese.—The cheese market has strengthened this week and the price on all grades of cheese has advanced. The demand is very good and all current shipments are cleaning up readily. Storage stocks have become nearly depleted and what is left is selling readily. Demand from European countries is strong and had it not been for scarcity of steamer space practically all stocks in storage would have gone to satisfy export demand. Latest reports are that large orders have been placed by the war department for deliveries in April, May and June for army consumption. Established quotations on cheese of current make are as follows. Average run 33@33½c specials 33½@33¾c. Average run held stock sells readily at 35½@36c and some high quality held stock is selling at 37@38c per pound.

Eggs.—During the week the market has been very irregular because of liberal arrival of shipments. Demand has decreased somewhat and there are increased accumulations which have a tendency to weaken the market. The demand for high quality stock has kept up well but the market on such stock weakened toward the close. With warm weather apparently near there is a feeling that very shortly we will see a marked decline in price. At the close fresh gathered firsts are selling at 41@42½c; storage packed firsts quoted at 42@43c; extras at 43½@44c.

Poultry.—Supplies of live poultry have been light during the week but the demand has also been light which has tended to keep the price about as for last week.

AUCTION SALE

My Entire Herd Of Eighteen Registered Jersey Cows

Ages from 2 to 12 yrs. Also Registered Bull. Herd from advanced registry stock and all recently Tuberculin tested. Several heifer and bull calves eligible to registration

APRIL 3rd, 1919

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HOLSTEIN DISPERSION SALE

Monday, April 14, 1919, 1 P. M.

40 Registered Holstein Cattle and 12 High-grades Headed by Long Beach Johanna Rue Lad. No. 199838

The records of his two nearest dams average: Butter, 7 days, 30.48 lbs. The dam, a 30 lb. cow, is a sister to Firderne Pride Johanna Rue, 1470.59 lbs. butter in 1 yr., also sister to the dam of Segis Fayne Johanna (50.68 lbs. butter in 7 days). The worlds record cow. A. R. O. cows in this sale from 19 lb. 2 yr. old to 23.82 lb. full age.

All animals over 6 months old, tuberculin tested, by state-approved veterinarian. Sale at Fair Acres Farm, 3 miles north of Ann Arbor, on Whitmore Lake road. Free transportation. For catalog, write

BRAUN BROTHERS, R. R. 1, Ann Arbor, Mich. COL. D. L. PERRY, Auctioneer

This \$4.50 Garden Plow with four tools as shown \$3.35

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Everything for the Farm and Home at WHOLESALE PRICES TO THE PEOPLE

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32-34 Hurst Block INDIANAPOLIS, U. S. A.



Allied Horses Clipped

Horses of Allied armies were clipped regularly. Army veterinarians knew that clipped horses were much less liable to sickness—did better work and gave longer service. The machine adopted was the Stewart Ball Bearing No. 1. The Stewart lasts a lifetime and costs only \$9.75. Send \$2.50—pay balance on arrival. Or write for new 1919 catalog. CHICAGO FLEXIBLE SHAFT COMPANY Dept. A127, 12th St. and Central Ave., Chicago, Ill.



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for sale by members of Michigan Crop Improvement Ass'n. J. W. NICOLSON, Sec'y EAST LANSING, MICHIGAN

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Early Jersey Wakefield, Charleston Wakefield Succession & Flat Dutch at \$1.50 per M. by express collect. 35c per 100 by post prepaid. Satisfaction guar. O. J. & O. Whaley, Martin's Point P. O., S. C.

Choice Dahlia

Tubers and Gladiolus Bulbs for sale. LUCY O'HARROW, Clarksville, Mich.

Potatoes

Bovee, Carman, Cobbler, Rose, Giant, Green Mt., Sixweeks, Queen, Raleigh, No-blight, C. W. Ford, Fishers, N. Y.

Pedigree & Utility

Flemish Giants, S. G., D. & G. & Black. Also Red Belgian's, some first class utility stock for sale. F. J. BAUGHMAN, Bloomington, Mich. Member N. F. of F. G. Breeders.

50 Belgian Hares,

all ages, good utility stock, some selected breeders, cheap. W. E. LECKY, Holmesville, Ohio.

ATTEN-SHUN FARMERS

Ship your own cream and get the profit yourself. We pay top prices and mail check promptly. Write for our proposition. FREEMAN DAIRY CO. Butter Dept. Flint, Mich.

Wanted

Bees. State how many colonies, style of hive used and name lowest cash price. A. W. SMITH, Birmingham, Mich.

Potato Bags

sold direct to the grower at wholesale prices LINCOLN BAGS CO., Springfield, Ill.

Farms and Farm Lands For Sale

Higrade Dairy Farm

for sale, 140 acres, 20 acres well watered pasture, balance A-No-1 clay loam soil, naturally and tile drained. Good woven wire fences. Ten acres splendid orchard, 30 acres fall crops. Three good wells. Large, hardwood finished residence. New, hip roofed, full basement modern cow barn 36x50 with adjustable steel stanchions and a stall. New, hip roofed, basement barn 36x46, new tool house and poultry house, other good outbuildings. Near Lapeer, on state improved highway. Will take good sixty or eighty. Particulars from Holman Real Estate Agency, Lapeer, Mich.

\$2000 Down Secures Farm

Pr. Horses, 24 Cows and Bull, brood sows, long list implements, crops; 1¼ miles R. R. town. 173 acres; 120 acres loam tillage, clay subsoil, 30-cow wire-fenced pasture, home use wood; 100 apple trees, other fruit, 9-room house, 100 ft. barn, 36-head granary, hay barns, pig, poultry houses. Owner retiring make slow price \$6750 for all easy terms. Details page 34 New Spring Catalog Bargains 19 States, copy free. STROUT FARM AGENCY, 814 C. C. Ford Bldg., Detroit.

HICLASS STOCK FARM

for sale, 150 acres, level, good mixed soil, well watered and fenced. Eight room dwelling. Extra fine full basement barn 40x80 with ell addition 24x56, all circle roofed, other outbuildings, near Lapeer. Want smaller farm. Ask for particulars. Remember, WE SELL FIRST CLASS FARMS, anywhere. Holman Real Estate Agency, Lapeer, Michigan

For Sale. My stock of farm implements, harness, colt, hays, feed, etc. Invoice \$600.00. Annual sales \$30,000. 30 acre farm, 50 a. cleared balance wood lot and pasture. Good 8 room house, barn, cement cellar and other out buildings. R.F.D. 1½ miles to store and shipping point. 6½ miles to county seat. Price \$2500. J. M. McFARREN, owner, Rapid City, Mich.

Model Poultry Farm

for sale ten large room dwelling, good barn, large fuel house, modern poultry house, 12 x 80 feet. Nicely located in Lapeer, Michigan. Price \$2,500. Owner's time is taken in other business. This is a sacrifice bargain. ELMER HOLMAN, Lapeer, Michigan

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County dairy farm fully equipped, including, International plowing out. 250 acres river bottom. Particulars, write sole owner, Travis Rutherford, Shinnopple, Del. Co. N. Y.

For Sale

120 acres in St. Joseph Co. level bur oak soil, \$35.00 per acre address 119 S. Superior St. Albion, Mich.

Rich Michigan Farms.

Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan

IF YOU WANT to sell or exchange

your property write me. John D. Black, 16th St. Chippewa Falls, Wis.

WANTED to hear from owner of good farm for sale

State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

For Sale

400 acre stock and general purpose farm in Sanilac county, Michigan. Ample buildings; grave roads to two markets four miles distant. S. A. Canary, Bowling Green, Ohio.

For Rent

500 acre stock farm in Wash-tenaw Co. Good house, three good barns, running water. Responsible party with equipment only. Address Box 410, Chelsay, Mich.

Mention the Michigan Farmer when writing Advertisers



NEW YORK BEAN GROWERS ORGANIZE.

THE bean market has sunk to a nominal basis and there are not enough beans moving to establish quotations. Bean growers are becoming discouraged at the outlook and unless conditions improve soon it looks as though there would be an extremely light acreage of beans planted this spring.

A special meeting of the New York State Bean Growers' Association was held in the city of Albion last Friday at which the feasibility of further organizing growers so as to control to some degree the selling end of the business was discussed.

White Knocks Dealers.

It was stated at the meeting that there are many thousands of bushels of beans in growers' hands, and that there is no outlet, although it appears that in some localities where organization has been effected that sales have been made. C. R. White, director of the bureau of cooperative associations, state department of Farms and Markets, in discussing the situation, said that organization of growers into local units, which in turn shall be federated into a central body maintaining a sales agency, seemed to be the hope of the bean industry. He asserted that as long as growers depend on dealers and commission men to handle their crops, there would be dissatisfaction and little hope of much betterment.

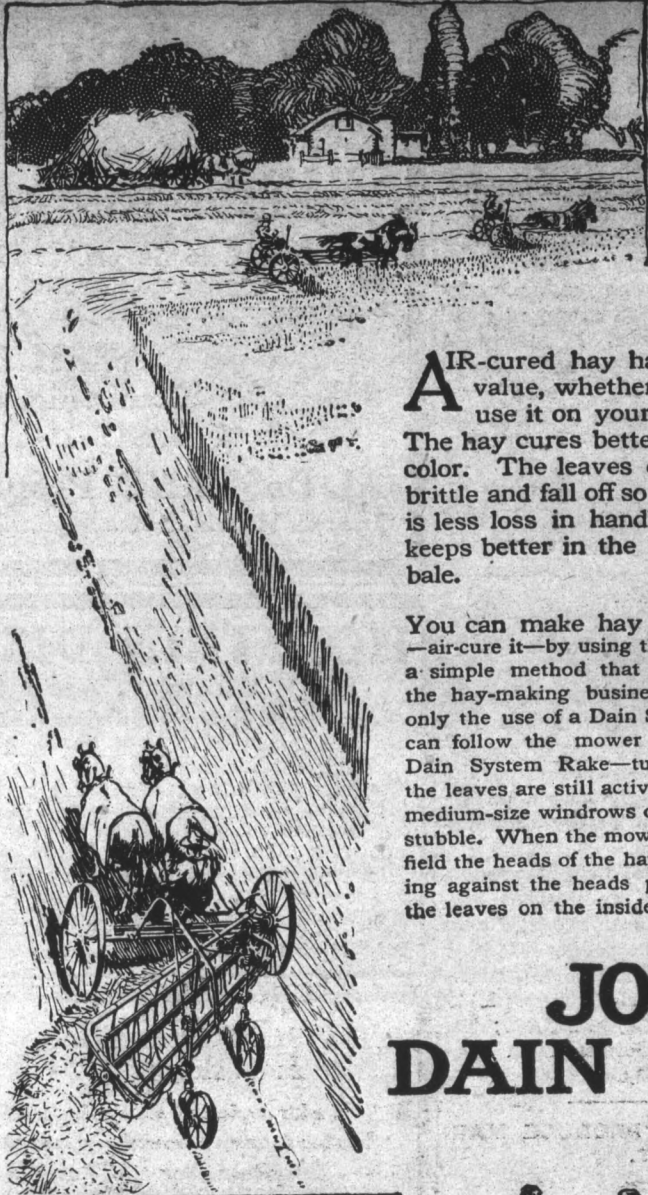
It was decided to make a start at once, and directors in the bean counties will be officially notified to make a survey in their territories and to begin organization into local units. F. S. Ruggles, of Washington, representing the Federal Bureau of Markets, United States Department of Agriculture, spoke at some length on the organization project.

Officers of the association are: President, F. M. Davis, Livonia; vice-president, A. Porter, Albion; secretary-treasurer, H. E. Cox, Industry.

PLANT ENSILAGE CORN EARLY.

NORTHERN and western farmers, especially dairymen, are urged by the United States Department of Agriculture to plant the strong germinating seed of ensilage varieties which they secure from sections farther south, at least two weeks earlier than the home-grown seed which they plant for grain production. Otherwise, according to the federal corn experts, the silage corn makes a rapid, long-jointed, tender, succulent growth, and is so green when fall frosts occur that it is heavy to handle, low in feeding value, and produces ensilage which is sloppy and too sour. On the other hand, if the silage corn is planted early in May it makes a slower, harder growth, it better withstands spring frosts and summer drouths, and reaches a more advanced condition of maturity and produces more grain. This applies particularly to the large-growing ensilage varieties, and usually does not include the early-maturing home-grown varieties, which, as a rule, are not benefited by unusually early planting. The northern ensilage crops should be judged by their feeding value, and not by their height or weight or the amount of labor necessary to ensilo them. Although earlier planting necessitates earlier cultivation, it pays. Early tillage dries and warms the soil surface and promotes the germination and early growth of the corn.

Sugar beet growers are contracting for the 1919 crop at \$10 a ton. The price before the war was \$5 a ton.



"Nature's Way" of Air-Curing Hay The Dain System

AIR-cured hay has the greatest value, whether you sell it or use it on your farm for feed. The hay cures better and holds its color. The leaves do not become brittle and fall off so rapidly. There is less loss in handling. The hay keeps better in the mow, stack or bale.

You can make hay Nature's Way—air-cure it—by using the Dain System—a simple method that is revolutionizing the hay-making business. This requires only the use of a Dain System Rake. You can follow the mower closely with the Dain System Rake—turn the hay while the leaves are still active, delivering it in medium-size windrows on clean, dried-out stubble. When the mower passes over the field the heads of the hay fall back. Raking against the heads places the bulk of the leaves on the inside where they can-

not sun-scorch, and the stems outside, insuring thorough evaporation of moisture.

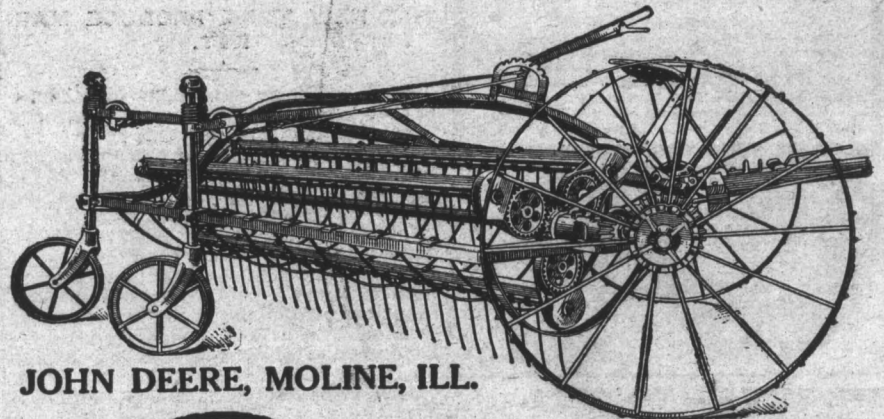
By adjusting the angle of the teeth, the density of the windrow is controlled, allowing free circulation of air. AND THE DAIN SYSTEM RAKE HAS THE WIDEST RANGE OF TOOTH ADJUSTMENT.

It is an easy rake to operate. You can put machine in and out of gear, change the angle of the teeth and raise or lower the raking head with levers that are easily accessible from the seat.

The Dain System Rake has unusual capacity. This is made possible by the high steel arch and an exclusive feature—the inclined frame, which is highest at the point where the windrow is largest.

The Dain System Rake is enabling thousands of farmers to make hay that grades high. Get this extra profit out of your hay land by employing the Dain System of air-curing hay.

JOHN DEERE DAIN SYSTEM RAKE



JOHN DEERE, MOLINE, ILL.

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A FARM FENCE FAMINE!

If you will need fence next spring and know where you can buy, DO IT NOW, even if you have to borrow the money. Don't wait for the price to come down nor buy more than you will really need, for many will have to go without. Reason for this prediction explained in our "Fence Famine Bulletin." Free for the asking. Not at all; you're welcome.

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**Turnbull Wagons
DEFIANCE MOTOR-TRUCKS**

BOTH RELIABLE

MOTOR TRUCK MODELS

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- 2 TON \$1995.00

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PEDIGREE Grain Worthy Oats \$1.35 per bu. Wolverine Oats \$1.50 per bu. Wisconsin Pedigree barley \$3.00 per 100. All grain re-cleaned and graded. Send bags by parcel post. Robt. P. Reavey & Son, R. 1, Caro, Mich.

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BROWN'S BARGAIN FENCE BOOK

DIRECT from FACTORY—FREIGHT PREPAID

The biggest money-saving fence catalog you ever received. Write for it today. See the money you can save—compare my Low Factory, Freight Prepaid prices on fence, gates, barb wire, etc. Don't buy until you get this Bargain Fence Book, 150 styles. Samples to test and book free.

THE BROWN FENCE & WIRE CO., Dept. 349 Cleveland, Ohio

Bee Supplies

Bee Hives, Sections, Comb Foundation, Smokers, etc. Send for catalog. Can supply beginner's outfit either with or without bees. Circular on request. Beeswax wanted.

Berry Baskets

Standard quart, wood berry baskets, and wax-lined paper baskets. 16 quart crates in flat. Send for price sheet.

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