

"—for all the Farmers of Michigan!"



MICHIGAN

BUSINESS FARMING



The only Independent Farmer's Weekly owned and Edited in Michigan

U. S. Crop Report Unjust to Michigan

Department of Agriculture is not Warranted in Depreciating Crops

THERE IS NOTHING ENCOURAGING to Michigan farmers in the department of agriculture's recent crop reports. A liberal interpretation of these reports would lead anyone not acquainted with the facts to believe that Michigan's apple prospects were ruined by the frost, her peach crop nipped in the bud by the leaf curl, and her grains and early planted vegetables are languishing from heat and drought.

Michigan's Crops Far From Being Ruined

Now as a matter of fact none of these statements are true. We have talked with farmers the past few days in many different sections of the state and have found that all crops are in much better condition than usual at this season of the year. It is true that the first two weeks of June were hot and dry. There have been no general rains, but nearly every section has been visited by occasional showers which supplementing the heavy general rains of late May have been sufficient to meet the demands of the growing crops.

The actual extent of this damage to the fruit by the spring frosts seems to be a matter of opinion. For a few days following the frosts the press carried stories to the effect that the major part of the crop had been ruined.

But a few weeks of warm weather disproved these statements and showed that the damage was very slight excepting for a few limited localities.

Now comes the department of agriculture announcing that Michigan's crops have suffered greatly from frost

and drought. In both general and special reports misleading assertions are made which are bound to cause much harm to Michigan's great industry. Among the weekly crop notes by field agents, dated June 11th, the following report is given for Michigan, "too hot and dry but recent rains are giving promise of much improvement especially to meadows and pastures." The state of Maryland has been without rain, too, but the situation there is summed up as follows: "Very little rain the past two weeks. General crop condition promising." Michigan is one of the greatest producers of rye in the union and her crop this year is very promising in all sections. We have seen some rye six and seven feet tall, but the department makes no mention whatever of our rye prospects. The oat prospects in this state are described as follows: "The weather has been too hot and dry. The ground has become very hard on clay soils and the stands are thin and uneven. The acreage was not all planted because of delay by continued wet weather during the seeding period." We could go on and quote many other extracts from this report which in our judgment are contrary to fact.

Only Part of Reports Quoted

The government special report on apples and peaches quoted on the next page. But we have not room to repeat all the points noted. Farmers want the real facts. If the reporters for the government, working in this field, are only stupid and not crooked—well there are lots of intelligent farmers in Michigan qualified for the work.

Farmers Demand Warehouse Amend't

THE LEADERS of the farm organizations are meeting this week at Lansing to lay their plans for circulating initiative petitions on the warehouse amendment. The farmers of the state are now thoroughly aroused over the refusal of the legislature to let them vote on the proposition, and are pledging their support and money to help circulate the petitions. M. B. F. has on file several hundred letters from every section of the state endorsing the warehouse idea and absolutely disproving the argument of many legislators who voted against it, that "the farmers don't want it." Granges, farmers' clubs and Gleaner Arbors have passed resolutions criticizing the action of the legislature and demanding explanations from those who "couldn't trust the people."

Nine-Tenths of Farmers Favor It

The warehouse amendment will be submitted to the people either at the fall election of 1920 or the spring election of 1921. The friends of the amendment feel that it would have a better chance of passing if submitted at the later date. It is freely predicted that the amendment will receive a favorable vote. Nine-tenths of the farmers will vote for it, and the farm leaders have received assurances from many of the labor leaders that the labor organiza-

tions will get actively behind the measure and help to put it through. With the combined support of farmers and laboring men the amendment will be easily adopted.

Petitions will probably be ready for circulation within the next thirty days, and every farmer who is willing to devote one or two evenings to help circulate the petitions among his neighbors is urgently requested to send in his name and address to M. B. F. or to the headquarters of any of the farm organizations. It will require some money to bear the expense of printing and mailing the petitions, so any contributions will be welcomed. Here is an opportunity for every farmer to help in bringing about the first piece of legislation devised in this state for helping to solve the marketing problem.

Work in Other States Studied

There will be plenty of time both before and after the petitions are circulated in which to discuss the details and the merits of the plan. The editorial staff of the M. B. F. is now engaged in compiling the histories of ventures of similar character in which other states and municipalities have engaged. All facts, both favorable and otherwise, gleaned from these studies will be presented to our readers all in due season.

Rural Motor Truck Express Urged in Michigan

U. S. Bureau Points out Helpful Statistics on Organizing Agricultural Deliveries

FARMERS' MOTOR Truck Express prospects are being brightened by the news these days. With the good roads' bonding issue over the top and with 229 big U. S. trucks being delivered for Michigan road work, along comes the proposal from farm leaders to drum up the co-operative motor truck express work in certain parts of the state where it is most needed.

All sectors of the country send in reports of successful operation. To aid Michiganders, thinking of starting up such lines, along comes the federal government bulletin with the following:

The motor truck as a medium for the carriage of farm products is now assuming a permanent place in the general scheme of transportation. It was to be expected that the motor truck would find its greatest usefulness in solving the problem of the "short haul," one of the most difficult problems which has confronted transportation experts during the last decade. The steady growth of our larger centers of population and their increasing demands for larger quantities of food have stimulated the development of producing areas adjacent to these consuming centers.

Gardeners and dairy farmers who, a few years ago, were faced with a short haul to the nearby market, now find the horse-drawn vehicle of other days entirely inadequate to cover the increased distance to market. Here the motor truck has offered itself as a transportation medium capable of working effectively within a much wider radius than the horse and wagon. The development of rail facilities for the short haul has not kept pace with the development of crop producing districts near the larger centers of population. The rapid growth of the truck manufacturing business during the past five years in itself would have directed the attention of manufacturers to rural territory as a profitable sales field.

Inquiries are constantly being received regarding the practices and methods of successful operators of rural truck routes. It is a regrettable fact that there are practically no rural truck operators whose general plans are worthy of study by less experienced operators. Most rural routes are in the formative stage.

Preliminary Survey of the Field

Too many beginners delay a canvass of their field of operation until they are definitely committed to the establishment of a motor route by an investment of funds. Such a beginning is decidedly an unwise one.

In the first place, an investigation may disclose the fact that it is unnecessary or undesirable to start the route at all. Secondly, a proper investigation may materially modify preliminary plans, particularly with respect to the investment of funds and the selection of equipment. Enthusiastic but inaccurate reports which have been given wide circulation in many districts, have been responsible for some amateur beginnings which should never have been undertaken. The motor route which has a chance for success must be founded on a careful business analysis of the field of operations.

Consideration should also be given to the nature of the products that will be hauled. Low-priced, bulky staples may not stand the transportation charges necessary to maintain a motor route. For example, it is rather unlikely that hay can be transported by motor truck for long distances except under unusual conditions with respect to price. Perishables may stand the motor truck tariff if the transportation service to market is speedier than the customary means of transportation. Commodities like cream, milk and eggs which are high in price as compared to bulk may bear a reasonably high transportation charge if more satisfactory facilities are offered.

It is manifestly impossible to outline an ideal investigation which would be satisfactory for all districts. It is necessary to correlate the preliminary canvass with local conditions. The items enumerated in the above outline, however, may offer some suggestions which will be helpful to those interested in the establishment of rural motor transportation routes.

Estimate of Operating Costs

One of the first questions to arise in the mind of the prospective motor truck operator is: "What will it cost to operate a truck?" Loads will be arranged, rates will be established, the route will be planned and the truck purchased on the basis of this estimated cost.

The costs of gasoline, oil and grease represent the first expense items which naturally occur to the mind of

the prospective operator, who will naturally investigate his local market.

The data collected by the Bureau of Markets show a very wide range in the gasoline mileage for trucks of different sizes under varying conditions. A study of about 60 typical motor routes showed a mileage of from 5 miles to 9 miles per gallon of gasoline for two-ton trucks, 4 miles to 6 miles for three-ton trucks, and 3 miles to 5 miles for five-ton trucks. These figures are not conclusive but will serve to indicate a range which was found under actual operating conditions.

Drivers' Wages

The wages paid drivers vary in different sections of the country and for trucks of different sizes. In districts where the cost of labor is high, operators have found it necessary to pay relatively high wages for drivers. Information gathered by the Bureau of Markets on a number of routes indicates a daily range of from \$2.75 to \$7.50. The higher wages were paid for expert drivers of heavy motor trucks in industrial regions where the general scale of wages was high. Drivers of small trucks in general farming districts were content with the smaller wage. Where the truck owner expects to act as his own driver, it is only fair that a reasonable wage for this service be entered on the books before an attempt is made to calculate profits.

Depreciation

Depreciation as a feature of expense is little understood by the average small operator, and there is an almost universal tendency to accord too little consideration to this important item. Investigations disclose the fact that this constitutes one of the heaviest items of cost per mile of operation.

Most operators who consider this item at all are inclined to set aside from 20 per cent to 33-1/3 per cent of the cost of the truck each year to cover depreciation. This is a very simple arrangement but it is not entirely a sound one. It is obvious that depreciation will be greatest on the truck which makes the greatest annual mileage. It will be seen, therefore, that unless the annual mileage, or prospective annual mileage, is considered, the preliminary estimate of depreciation is apt to be incorrect.

Repairs

The regular repair bill, when coupled with the annual cost of overhauling, is often a serious one. The experience of motor truck operators in various sections of the country show that this is an important item of expense. Naturally it is impossible to make an advance estimate of these costs with any reasonable degree of accuracy. The annual repair bill will bear a practical relation to operating conditions. Where care is used in hand-

ling the truck, the cost of repairs will be much less than where no attempt is made to exercise reasonable supervision over operation.

The cost of repairs increases with the age of the truck. Those operators who have purchased used equipment have found their repair bills relatively higher. Repairs during the first year of life of the new truck are not a very serious consideration. When the motor truck is in more or less continuous use throughout the year, it is usually laid up once each year and given a complete overhauling. The cost of this overhauling depends on the age of the truck, the care which it has received, and its size.

Data collected by the Bureau of Markets show annual cost of overhauling ranging from about \$100 to as high as \$800 or \$900. Those truck operators who make it a point to keep their trucks in a constant state of repair have relatively small charges to meet for annual overhauling. Those who operate their trucks as long as possible with no regular repairs must often face an extremely heavy charge for overhauling at the end of each year.

Tires

Tire cost is another heavy item of expense. This item varies directly with the use of the truck. Road conditions are a prime consideration in determining tire cost per mile of operation. It is often found that there is a very wide variation in tire cost of different trucks operating with varying loads and under changing conditions. Data in the possession of the Bureau of Markets show a range of tire costs of from one cent to four cents per mile where solid tires are used.

These figures cover a large number of trucks of different sizes, operating with different loads. They are offered as illustrative rather than as authoritative. It must be remembered that while the actual cost of the large truck heavily loaded may be relatively high per mile of operation, the cost per ton may be small, and in the final analysis the latter comparison is the only fair one. Where pneumatic tires have been used, it usually has been found that the actual tire cost is rather in excess of cost where solid tires are used, but in such cases the annual depreciation and the cost of repairs are usually less.

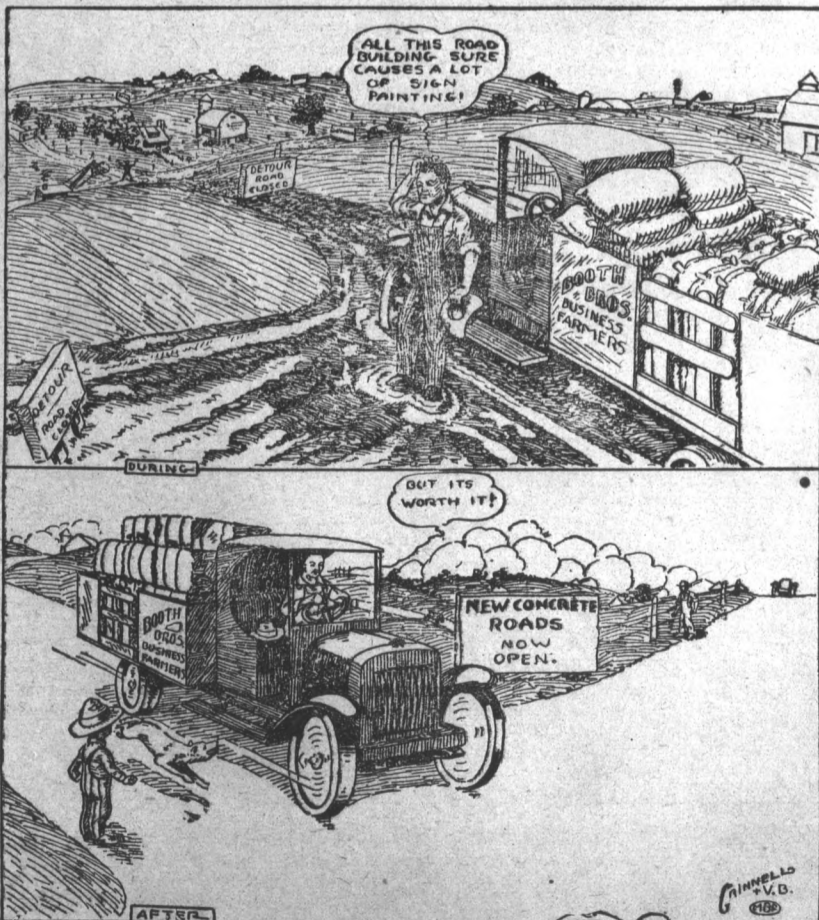
Garage Rent

Garage rent is an item of expense which is often not incurred directly by the rural operator. Where the operator finds it necessary to rent garage space it is, of course, easy to calculate the cost. It is not so easy to make such an estimate, however, where no actual cash outlay is incurred. Where the operator is using garage facilities of his own, which might be valuable for other purposes, the rental value of these facilities should be entered on the books. Where no attempt is made to house the truck when not in use, the operator may save on garage cost only to lose a still greater amount due to increased depreciation.

Taxes and the cost of a license and insurance vary greatly in different states. The prospective owner of a motor truck should look into the matter in advance and be in a position to meet these liabilities as they come due. Insurance of various kinds must be considered. Theft, accident and fire insurance should be taken out on the motor truck itself. Reliable operators now find it desirable to take out insurance covering the load which is being carried.

The item of overhead expenses includes office rent, office equipment, clerical and other salaries, advertising, etc. They are often of minor importance to the farmer operator, but constitute a considerable expense for the larger operator who finds it necessary to maintain a business headquarters.

The above enumeration of operating costs may serve to call to the attention of some beginners in the field of motor truck transportation the need for carefully considering the business elements in advance of actual operation. The most common error of the beginner is to underestimate some of the cost items. Many beginners either underestimate or fail to estimate at all such an important item as depreciation. Such operators have been known to conduct their business for several months under the assumption that they were making money, only to find that their apparent net profit was being absorbed by the lessening value of their rolling stock. Other operators have been inclined to accept cost figures determined under widely different conditions, or under conditions which were not all comparable to those in the operator's own territory. Costs depend entirely on local conditions.



LOTS OF GOOD ROADS are coming our way now and it means lots of detours. All these signs, painted up with "Detour" and ordering you to drive around the long way, may make you peeved. But bear up a bit. The golden days of good roads and no detours are well on the way in Michigan.

Hail Insurance Protects Crops of North Dakota

Cheap and Safe Guaranty Against Damage is Provided by the State for Farmers

SENATE BILL No. 47 which creates a state hail insurance department to indemnify owners of growing agricultural crops against damage by hail, is another measure which was pledged by the Non-Partisan League program. The law was declared an emergency and \$50,000 appropriated to carry out its provisions. Hereafter the department will be conducted at cost. This act concerns practically every farmer in the state and no bill passed by the legislature was given more careful consideration. Yet it is admitted by all who had part in the passage of this measure that experience may show the necessity of changes. When the legislature meets again it will give careful consideration to suggestions made by the farmers from all parts of the state with a view of improving the law if possible.

The law provides that a tax of three cents per acre shall be imposed on all tillable land in the state. All tillable land must pay this three cents per acre whether or not it is under cultivation.

The law will operate about in this manner: In the spring the farmer will make a return to the auditor as to the number of acres he expects to have in crop, but on June 15 if he wishes to withdraw any of the land in crop from under the operation of the act he may do so by making an affidavit to the hail insurance commissioner and the county auditor. By June 15, his planting will have been done and it will be possible for him to determine the condition of his crops in the various fields and decide whether he wants any particular piece of land to come under the Hail Insurance Act. If he withdraws all his land he is thru with the Hail Insurance Act, excepting that he must pay the three cents per acre. Make no mistake about that. Every acre of tillable land must pay three cents per acre whether or not its owner withdraws it from any further operation of the act. But if the owner elects to come under the act, then October 10th, after all the hail losses thruout the state are adjusted, the total loss is spread pro rata over the number of acres under the act and every man must pay his share accordingly. The loss cannot exceed 50 cents an acre.

For instance, suppose the hail losses to be \$5,000,000 in any one year. It is estimated that there are about 30,000,000 tillable acres in the state. The 3 cents an acre tax would thus raise \$900,000, leaving the land of those electing to take advantage of the state insurance. If there were 15,000,000 acres thus coming under the Act the amount of the assessment would be 27.13 cents per acre, with the addition of three cents per acre. In effect, the bill creates a farmers' state-wide mutual hail insurance, excepting that it is not compulsory. In case of total loss by hail, the maximum insurance will be seven dollars per acre. This law will mean a saving to the farmer of this state of several million dollars every year.

At the present time there are some sixteen to twenty-six private hail insurance companies doing business in the state and on the average each year they take from the farmers of this state from \$1,000,000 to \$2,000,000 more in premiums than they pay back in losses. Furthermore, it is estimated that the actual damage done by hail averages between five and six millions dollars annually, whereas the losses paid by the insurance companies do not average more than two and one-half or three million dollars annually, so that there is a further economic waste to the farmers in this manner.

The state can provide hail insurance more cheaply than private companies, for each of the twenty-six commissions to its agents in the field, while the state only has one office and does a large amount of its business thru the county officials. The state will do business at cost and this will effect a further saving, for each of the twenty-six companies expect and naturally get a fair profit.

NORTH DAKOTA HAS WISE GRADING LAW

An article on Dakota's grading is quoted: "Under the Grain Grading Act, all elevators in North Dakota are licensed and cannot practise discrimination, so that the state elevators will practically set the pace for the old-line companies and, in self-defense, these private institutions will be compelled to treat the farmers just as fairly as the state-owned elevators.

"But this will not be the greatest saving brought about by the terminal elevator and flour mill association, for when this system is in operation it is intended to establish an entirely new method of grading North Dakota grain that will make the farmers of this state independent of the Federal and Minnesota grades, both of which are unfair in what they under-value North Dakota wheat.

"The new North Dakota grain grades will be determined by the milling value of the wheat. In other words, if a mill test shows that No. 1 Northern and grain now given an inferior grade make flour of practically the same standard and amount the new grades will be fixed to show the true comparison of value and prices will adjust themselves to correspond. This will mean that the farmers of this state will receive on the average sev-

This is the fourth of a series of articles on North Dakota's new laws, about which so much has been falsely said and written.

eral cents more a bushel for wheat, for it is notorious that there is not nearly so much difference in the value of flour made from wheat of different grades as there is in the price paid for the grain itself.

"For instance, in 1916, when the Minneapolis millers graded most of the North Dakota wheat crop Feed D, there was a difference of 40, 50, 60, 70 80 cents and in some cases \$1 a bushel between the price paid for Feed D and No. 1 Northern, yet experiments conducted by Dr. E. F. Ladd in his mill at the Agricultural college proved that Feed D wheat made flour of practically the same value as wheat of the highest grades. Scientific experiments demonstrated there was but very little difference in the food value of a barrel of flour made from Feed D and No. 1 Northern wheat, yet the farmer received from \$1.80 to \$4.50 less for enough wheat of the lower grade to make a barrel of flour. The millers absorbed the difference

and thereby literally swindled the farmers of this state out of millions of dollars in a single year.

Grain Cannot be Undergraded

"The establishment of the milling value as the standard of grain grading will do to the wheat business what the establishment of the Babcock butter fat test did for the dairying business—make it impossible to pay the farmer less than the fair and scientifically determined value of his grain.

"The terminal elevator and flour mill association also has the power to market the products of the state flour mills and this means that if necessary it may lease, buy or build a structure in St. Paul, Minneapolis, Chicago, New York or any other city of the United States, establish a bakery, ship state-made flour to that bakery make it into bread and sell this bread direct to the ultimate consumer.

"It is not likely the state will use this power, but it is given this authority to protect it against any attempted boycott of state-made products by outside wholesalers or retailers."

Is this \$4,000,000 an Acre 'Farm' Single Tax Argument?

THE RECENT SALE by Vincent Astor of the 41,575 square feet of ground on Broadway, between Forty-third and Forty-fifth streets, New York, to a moving picture syndicate for a price of between five and six million dollars, is of especial significance to the working farmers of America. This is the plot where General Israel Putnam and General George Washington are said to have met for a conference on the eve of the battle of Harlem. It is the purpose of this communication to bring this matter to your attention and suggest the importance of your emphasizing its relation to the present day problems of the farmers of your community.

When Col. John Jacob Astor lost his life in the Titanic disaster, he left to his son, Vincent, by his first wife, along with other large wealth, a piece of New York real estate, 200 feet on Broadway by 207 feet on Forty-third and Forty-fourth streets, improved with buildings and bringing an annual income of \$320,000. This property had been in the Astor family for three generations and was probably a part of the old Long Acre farm. During all the years since the original Astor immigrated to America, and with keen "foresight" managed to secure a large part of Manhattan Island, this property has been growing in value with the growth and development of the city. When the bare ground sold the other day for about \$3,500,000, the people of New York made young Vincent Astor, who has never known what it is to work for his bread, a present of that princely sum.

The bare land value—site value or unimproved value, as it is called—of our best farms will not exceed \$50 an acre, and the average price of unimproved farm land in the United States, is much less than \$50 an acre. (Mr. James R. Brown, a tax expert of New York, states that the land value

of the average \$10,000 farm in New York state does not exceed \$500.) But taking the high average of \$50 an acre for the unimproved farm land value, we have a basis of comparison with this New York city block of less than one acre.

Here is a "farm" of less than an acre, 41,575 square feet, selling at \$84 per square foot, or about \$4,000,000 per acre. Do you know of any highly improved farms worth anything like this figure? If this were translated into actual farms at \$50 an acre there would be 800 of them, 100 acres in size. It has been said that there is a conflict between the interests of the farmer and the city dweller. From these figures it would seem that there is some justification for the charge, but the conflict is between the holders of the big land values who are able to cut down the purchasing power of the city worker by high rents based on speculative land values, and the working farmer who has produce to sell and finds his market restricted by the above named factors. The worker in the city and the working farmer in the country have a common enemy.

A study of realty values in the vicinity of the Astor property shows a tremendous climbing of values since 1905. The *New York Times* site (building not included) is estimated as being worth \$250,000 more than it was fourteen years ago. The Knickerbocker hotel site is worth \$1,450,000 more than it was in 1905. And so the story goes, with increases in the value of the ground alone of from 100 to 150 per cent. All of which means that the men who happen to be the owners of these sites are enabled to make large profits without labor on their part and with very small payments to society in the form of taxes for the great advantages they enjoy.—Carl Brunnin.

Michigan's Output of Sweet Clover has Increased Greatly

DUE TO the shortage of red clover and to an increasing knowledge of the value of sweet clover, hundreds of Michigan farmers have during the last two years sown sweet clover seed for the first time.

Some are intending to pasture this crop, but thru the northern part of the lower peninsula, where the greatest increase in acreage has been made, the majority wish during the second year of the sweet clover to cut a crop for hay and a crop for seed. Given a good stand, two additional points should be carefully considered for successful attainment of this object. These are the time of the first cutting and the length of the stubble that should be left.

Most growers agree that the best time to cut for hay is before the appearance of any blossom buds. With a healthy, vigorous stand the best time is usually when the sweet clover is about twenty-four to thirty inches high. Now if this crop is cut as one would cut common clover or alfalfa the second crop will likely be seriously injured and possibly ruined. The second crop of sweet clover does not spring from the branches as is the case with alfalfa, but is produced from new branches obtained thru development of branches from axils of leaf buds on the lower part of the old stalk. So it is absolutely essential for the production of a second crop to cut the first one high enough so sufficient buds will be left to produce a good second crop. Instances have been observed in this state where the first cutting was made the same as with clover and second crop was produced but under these conditions this second crop was practically never as good as could have been secured by higher clipping, and more often instances have been observed where practically all the plants died after the first cutting was made in this way. The length of the stubble that should be left

varies with the rapidity and manner of growth of the plants but usually the stubble should be left eight to twelve inches high. A special sole for the shoe which will hold the bar of the mower higher should be used and either a larger wheel should be used on the outer end of the bar or the upright to which the wheel is attached should be lengthened. Some good information on this matter is given in U. S. Department of Agriculture Farmers' Bulletin number 820.

In regard to the time of cutting, sweet clover must be cut early for hay if the best results are to be obtained. If the chop is allowed to blossom before cutting the stems will be quite woody and unpalatable and furthermore late cutting impairs the chances for a good second crop.

Sweet clover at best is not as easy to handle as many other forage crops and beside the above points some others, which we will not take time to discuss, should be considered before starting growing the crop too extensively. Some of these are time and method of seeding, necessity for curing hay in cocks, time of cutting and method of handling the seed crop. A good discussion of most of these points is given in Sweet Clover Circular Number 23, Michigan Experiment Station and in U. S. Department of Agriculture Farmers' Bulletin Numbers 820 and 836 on Sweet Clover.

Sweet clover is a crop that should and will be grown more extensively in this state. It is an excellent pasture crop, and will produce satisfactory yields of hay and seed under poor conditions of fertility that will not give as good results with an legume. It is an excellent preparatory crop of alfalfa. While grown with paying results on many soils of high fertility, its place of special value is on run down or somewhat infertile soil.—J. W. Nicolson, Extension Specialist, M. A. C.

Power Farming is Revolutionizing Agriculture

Farmer Tells of his Experiences with Tractors Giving Figures to Show Economy

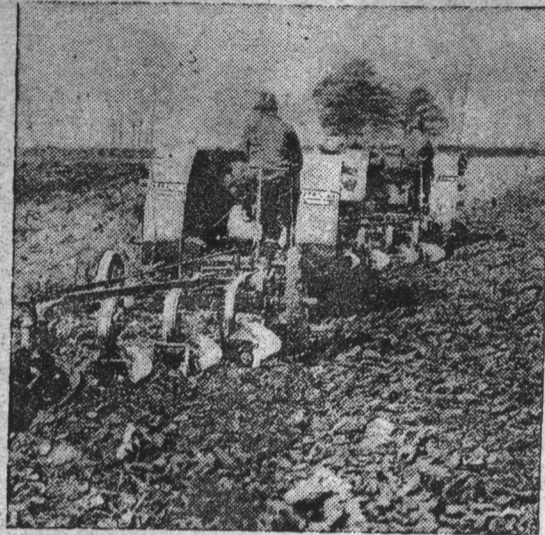
HERE HAS BEEN a decided tendency in many states for the young man who grows up on the farm to go to the larger city in search of what he considers greater opportunities. Something must be done to supplant this outgoing supply of farm labor. It is true that there are always men coming from the city to the farm, but at best this labor cannot be depended on; first, because as a rule these men are not industrious and second because the supply of man power wanes according to wage and industrial conditions in the city. Power machinery will take the place of this ever increasing stream of young men flowing from the farm to the city, and, at the same time, permit more intensive farming.

Revolution of Farm Methods

Power machinery is just beginning to come into its own. It is going to revolutionize American agriculture, just as power revolutionized American manufacture.

It now takes over one-third of the population to feed the nation. There may be a day coming when it will be possible for one-fourth or even one-fifth of the population to take care of the food production of the nation, and the country will not be any the less prosperous.

Whenever I hear a sociologist or a reformer prate about our rural population leaving the farm and picture the United States on the way to the fate of the Roman Empire, which had to import its entire subsistence, because all the farm folks flocked to the cities to get their share of free corn, wine and circuses, a circumstance which lay at the bottom of the political events that caused its downfall, I want to suggest that they turn their eyes more closely on American history, especially on American industrial history. They will find that they have overlooked two important facts; that though the farming population has decreased, the



TRACTORS CUT EXPENSE BY HALF

area of land under cultivation has considerably increased, and, that we produce more in proportion to persons engaged in agriculture than any nation on earth.

They may discover that our enormous industrial prosperity is largely due to the fact that comparatively so few of our people are needed on the farms that vast numbers are released to carry on manufacture, which is, all said and done, the mainstay of our great wealth. The agency that released them is power machinery. A small tractor of the type illustrated can easily take the place of from one to fifteen men, as England discovered dur-

ing the past four years of the great world war.

Tractor Great Aid to English

It would have taken half a century possibly, to implant the lessons of labor economy the world has learned from this war. With nearly four-fifths of her able bodied men either actively engaged in the war or in industries necessary to the prosecution of the war, England raised more food than she ever had before. Women did the work, it is true, but women would not have been able to do it if they had not called the tractor to their aid. If a land army of inexperienced girls headed by a few agricultural experts can raise larger crops, than three or four times the number of men, by the use of the tractor and advanced methods, would it not be wise for the American farmer to profit by the experience of a nation, and apply to his own domain advanced methods and tractors?

There is a man in North Dakota who believes in "power farming" so thoroughly that he has on the heading of his stationery "Power Farming Exclusively." His views and figures on the subject are well worth while.

"Yes, I have farmed for seven years, using only tractors for power. There have been no horses on the place except at threshing times, when my neighbors helped in hauling bundles to the machine and in taking the grain away. The figures given below are correct, and indicate the nature and extent of the farming operation I carried out in 1918, with the cost indicated of doing the work with a tractor. My tractor is of the size known as 16-30, and it handles four plows with the greatest ease.

"This does not include depreciation. This item I should not put at more than six per cent for the whole outfit is practically in as good order as when I bought it; in fact, I sold one binder last

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State Farmers Organize Successfully to Reduce Expenses and Troubles of Threshing

WITH A RECORD-BREAKING grain crop about to be harvested, I wish to call attention to the experience of one community in doing its own threshing. There were several reasons why the farmers of this neighborhood wanted to have a thresher of their own:

1. To get their grain threshed for less money.
2. To have thresher come when they wanted it.
3. There were several tractors owned nearby and they furnished operating power.
4. Practically the entire community was raising pure varieties of wheat, rye and oats. They wanted to keep these pure.
5. There would be less danger of distribution of harmful weed seed.

How the Farmers Got Together

The situation was brought to a head by the high prices announced by the local threshermen for the season. The owner of a new tractor said that he would take the job of threshing if a machine was purchased, so we decided to try it out. A telephone call was sent out to the farmers surrounding our little three corners; and one hot evening in August, we met on the lawn of the district schoolhouse. A motion was carried that an association be formed for the purchase and operation of a grain thresher.

Ten shares of stock, at \$10 per share, were signed for by sixteen farmers. The usual officers and a board of directors were elected to look after the business of the organization.

The tractor owner was hired to furnish the power for operating the thresher, to furnish the lubricating oil for his engine and to look after the running of the separator, for \$12 per day. It was decided that each member should pay for the kerosene used in threshing his grain. The association agreed to thresh for no one outside of the membership. The price of threshing for the season was set at 4c for oats, 5c for wheat and 6c for rye.

The arrival of the separator a few days later was made the excuse for a half holiday and celebration. Early in the morning the sixteen members arrived at the freight station with ropes, jacks and a light truck, happy as a group of boys about to uncrate a new bicycle. They soon had the machine neatly unloaded and coupled to the tractor.

With a big American flag floating over the separator and the automobiles of the party following, the procession filed up thru the main street of the town.

Profit Sharing is Employed

A week later the contract was signed for the purchase of a small 20x36 thresher. The price of eight shares of stock (\$80) was paid in by each member to cover this expense.

Organize a Threshing Association

BECAUSE THE price of coal, labor and repairs went up, the threshers last year advanced their charges, and because of this advance the farmers everywhere kicked, and kicked vigorously. A part of the increase was justifiable. Threshers simply couldn't do business on the old scale.

But there is considerable question as to whether they were entitled to as high prices as their county and state associations determined upon. Most of the farmers think they were taking advantage of high costs and high prices for farm products to profiteer, and we think they are right.

Anyway, it's the old story of the organized forces pitted against unorganized forces. The former is in a position to exact what they please; the latter are powerless to protect themselves. Now in some sections of the state the farmers have organized associations, purchased threshing machinery and are doing their own work at one-half to two-thirds the customary charge. Moreover, they're doing better work and with less friction.

The accompanying story, written by the secretary-treasurer of the Greenville Co-Operative Threshing Ass'n., is typical of a score of similar associations within this state. With scarcely an exception all are successful. If you are having trouble with the thresher men of your county, get your neighbors together and organize an association. We'll supply a sample copy of by-laws to anyone interested.

Everyone was forced to know that a group of farmers was really operating.

The first year of the experiment was a great success. 10,624 bushels of grain were threshed in eleven days for the sixteen members. And the housewives approved. No big threshing crews for breakfast, dinner and supper. The noon day meal was decided to be the only one necessary for these men, the others were had at home.

At the fall meeting \$20 were paid back to each member as his share in the profits. Many other communities should try this and with so much grain to be threshed why is not this a good year to start?

Ashley M. Berridge, author of the above, is secretary-treasurer of the Farmers' Threshing Association of Greenville, Mich.

Buckwheat is Worth Two Dollars

Buckwheat is worth close on to \$2 a bushel at this moment, and last winter buckwheat flour cost us 10c a lb. when we bought it at the mill.

It would not be a bad idea to sow a little buckwheat on that ground which was too wet when it was time to put in the oats or corn. Perhaps we ought to plow up a piece of that back field where the grass is so thin. This will be a good time to do it and plenty of time for the buckwheat.

Fifty or a hundred bushels of buckwheat will come in mighty handy next fall; some for flour, some for the chickens and some to sell at a good price too.

It will pay to put on about 200 pounds of fertilizer when you sow that buckwheat, hustle it along, ripen it uniformly and insure a good crop. Use a fertilizer analyzing 2 per cent of ammonia, 12 per cent of phosphoric acid and 2 per cent of potash. This fertilizer will make the buckwheat "stand up" and will produce the best kind of a drop.

Buckwheat unlike other grains never straightens up after it once falls. Potash makes the stalks strong.

Three varieties of buckwheat are commonly grown—Japanese, Silver Hull and Common Grey, the first two being the most generally used. Japanese has a dark colored seed, while the Silver Hull has a smaller seed, glossy or silvery in appearance. These two varieties are of about equal value, when yields are considered.

Buckwheat is usually seeded at the rate of three to five pecks per acre. If a drill is used and the seed is of good vitality, as little as three pecks may be sufficient if the soil is fertile. It is best to use a grain drill, but good results can be secured by broadcasting the seed and harrowing it in.—J. W. Henceroth.



THESE GREENVILLE FARMERS MADE CO-OPERATIVE THRESHING PAY

"for all the farmers of Michigan"

MICHIGAN BUSINESS FARMING

(Consolidated Feb. 1, 1919, with The Gleaner)

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Michigan Crop Reports

EVERY YEAR the Department of Agriculture tips the farmers' hands off to the consuming public. If crops are good and an abundant yield in prospect, the department heralds the glad tidings from one end of the country to another and prepares the public for the advent of low prices which always follow in the wake of over-production. Of course the department is likewise the harbinger of crop failures and under-production, but for some reason or other, the "great, fair-minded" press of the country which so gladly and purposefully pointed out in elaborate detail the connection between over-production and low prices, quite frequently overlooks the connection between under-production and high prices. That is why despite the widespread publicity to the department's reports the farmer gets cussed when crops are short and prices high.

There's a difference of opinion about the value of the crop reports issued by the department. Were all these reports accurate and available only to the farmers they would be of considerable help to them. But when they are inaccurate and the common property of all, their publication is a positive detriment to the entire agricultural industry.

We have never placed much faith in the accuracy of the crop reports issued by the department, for we have frequently observed that the reports for Michigan did not harmonize with the actual situation covered by the reports. And if Michigan reports were wrong how could anyone expect that the reports for other states would be right. The latest reports issued by the department are so contrary to what resident farmers know to be the facts as to call forth the comment of all interested in the state's farming business.

Wild rumors have been afloat from time to time that the crop reporting service of the government was at the mercy of certain interests which for mercenary reasons desired the reports to be misleading and exaggerating. And the Spillman disclosures have given much credence to these rumors. We brand them as absurd. While not entirely familiar with the department's source of information, we know that many actual farmers are supplying at least a part of it. The only satisfactory explanation of the discrepancy between the department's reports and the actual conditions is that the department is in touch with only a few localized communities and endeavors to apply the facts pertaining to those communities to the entire state. Michigan, with her myriads of lakes, her high altitudes and low levels, has all kinds of weather conditions and it is an unusual season that a territory here and there does not get hit by frost or drought. But the state as a whole boasts of favorable weather and crop-growing conditions which are not surpassed east of the Rocky Mountains. So when the department of agriculture announces that Michigan crop

prospects are not "up to snuff," we know that someone is sleeping at the switch.

Work for the Grand Jury

IT HAS BEEN suggested by the state press that the reason why Governor Sleeper did not call a grand jury to investigate Jackson prison conditions was because he feared the interests of certain individuals with friendly political leanings might be injured. Were he to comment at all upon the relations existing between Gov. Sleeper and those for whom it is charged he entertains friendly feelings we would say that they were decidedly antagonistic, and therefore could not possibly be the reason why the governor has deferred calling the grand jury.

Perhaps a grand jury would have been called many months ago except for the fear that the grand jury might not confine itself to Jackson prison affairs. A grand jury has wide jurisdiction. It scrutinizes every situation against which there is a breath of suspicion. Once in session it has an annoying faculty for probing into affairs, looking behind curtains, peerign into legislative chambers,

We must impress upon our readers that we often disagree with the theories presented in their letters to us. There is always danger, in this free and open forum, that the opinions of a reader may be taken as the opinions of the paper when as a matter of fact they may be exactly the opposite. The page which we have labeled, "What the Neighbors Say," belongs to our readers. We invite them to use it. But this page upon which these words are printed belongs to the editor who studies the topics and the problems of the day and endeavors to discuss them impartially.

Many farm papers deny their readers the privilege which we have granted. They prefer to force their readers to accept their own opinions and give them no chance to take issue. But this is not fair. We let no one dictate our conscience or editorial policy. Naturally we don't expect our readers to let us dictate to them. If we cannot agree let us take issue in a friendly, dignified manner, remembering always that we are all committed to the same cause and must think and work in harmony so far as possible.

Farmers Overwhelmingly Favor League

ACCORDING TO a poll taken by the American League to Enforce Peace, the American farmers are overwhelmingly in favor of ratification of the League of Nations covenant in its present form. The League cites over a hundred of the leading farm journals of the country, among which are listed Country Gentleman, Successful Farming, Michigan Business Farming, etc., to show that the farmers are satisfied with the covenant and will resent any efforts on the part of its opponents to defeat its adoption by the United States senate. The result of the poll was absolutely non-partisan, the major part of the farm journals reporting being known to have strong Republican proclivities.

Since the first opposition to the League covenant was voiced by Senator Dodge, both Republicans and Democrats have been making desperate efforts to make the covenant a political issue in 1920. Both parties have been guilty of un-American and unpatriotic tactics of deceit, prejudice and partisanship to befog the big, important issue involved in a maze of inconsequential discussions. Men who before the close of the war talked like zealots of a world made safe for democracy and a league of nations that would put an end to war forever, now unblushingly parade under the banner of nationalism and scoff at the idea of a world democracy.

We are in for a shameful period of intrigue and deception. It is far beyond the comprehension of the average man to understand the tremendous world forces that are at work to put at naught all that was accomplished by the Great War. Commercial interests of vast magnitude and power desiring to exploit the natural resources of other and smaller countries are opposed to the fathering of these countries by nations which will have irrevocably committed themselves to the principle that "right is might." If the great nations of the earth ratify the League covenant they must protect the little nations from exploitation and that would be bad for the big commercial interests. Hence, they will stop at nothing to deceive the American people and corrupt the public men to prevent the ratification of the covenant.

Graduation Days

GRADUATIONS from schools and colleges have been occurring in many parts of the state during the last few weeks and many are happening this week and next. Michigan has one of the finest school systems in the world from its state university and agricultural college down to the small rural schools. The percentage of folks who can read and write is now said to be much higher on Michigan farms than in the cities. To the June graduates who are going to make farming their profession, we wish to offer our congratulations. Big business and political advances for agriculture are at hand, and to graduates lie open opportunities for highest service.

The Peace Terms

By C. Shirley Dillenback.

THEY MOSTLY talk about the Germans and tell how they shall pay their debts; and of their land likewise determines what shall remain from Keil to Metz.

A simple thing these rules to follow and win a name of high renown, and 'til they drag out of the wallow on them the League of Nations frown.

"Mine Gott," cries out the frantic Prussians, "Is this a treat you're handing out?" "It's something like you gave the Russians," comes back the answer with a shout.

They further state the former kaiser shall migrate from his Holland home until the allies make him wise concerning sacred rights of home.

Two hundred thousand in the army, where once ten million proudly stood with dreams of Belgium and Killarney and Holland too, he understood. Who knows but maybe France and England were destined to feel the fist and maybe Italy and Finland would too be added to the list?

Poor Kaiser William's dream is shattered in bits it lies about his feet, the while he strays in garments tattered and says, "Such justice can't be beat." He mutters in a foreign lingo, concerning all the Huns must do and in his fury says "By jingo, I've done what Bismarck said I'd do." He takes a swipe at France and England, and Belgium, too, he thus berates, but right down meanness pure and simple, he credits to United States.

invading private rooms where secret lobbyists are at work, and mysterious suit-cases are filled,—and opened.

Yes, there's work for the grand jury. Let it be called without delay.

Editorials by Our Readers

"THERE WAS a man in our town who was so wondrous wise, that he had no use for the opinion of others. He quarreled with his wife and his neighbors and quit his farm paper because they did not agree with his views. We speak from experience. And yet we hate to admit that there are some readers of M. B. F. so narrow-minded that they would not let us think differently than they. Oh, yes, we expect to be differed with. We have never had the notion that we could satisfy everybody. We think none the less of our subscribers who do not agree with us and tell us so. We like to hear their side of the story, and we respect their judgment. And we do not criticize our critics nearly as harshly as our critics criticize us.

It is because we believe in open discussion that we give over a considerable part of our paper to enable our readers to present their opinions. Adverse criticism of our policies or arguments contrary to our own opinions are as freely welcomed and published at those which are favorable. We don't like brickbats; bouquets are more fragrant. But we prefer a brick-bat to a stab in the back. So let 'em come.



JUST BETWEEN OURSELVES

Jackson Prison, the Old Bone of Contention

THE FARMERS of the state are not going to get unduly excited over the very latest pow-wow stirred up over that old bone of contention—the Jackson state prison. They have watched the little game as it has been played since this state institution first attempted to enter into competition with the combinations and have noted that with clock-like regularity these spasms occur biennially—set in motion alternately by the combinations and pea-nut politicians.

The professional politicians were quiet, and the combinations quite satisfied so long as the thousand human beings confined in the old hulk of a prison were placed upon the auction block, and their labor sold to the highest bidder. Like chattel slaves they worked day after day and year after year for mere pittance that went to the state, and with no hope of reward for themselves. The contractors gathered in the shekles; the state paid the cost of maintenance; while the poor unfortunates left the prison gates at the end of their term, determined, hardened humans, hopeless and homeless.

Then the awakened conscience of the people caused the legislature to pass a law doing away with the contract system, and preventing the further sale of prison labor; the turning over of these fallen brothers to the mercy of the heartless task masters, whose only ambition was to get all they could out of the prisoners. From time to time they were driven, like cattle from their pens, to the workshop where they toiled during the long day, to the hour when they were huddled together, and driven back to their dingy cells for the night. They toiled under the bosses' lash, hired by contractors, to exact the pound of flesh.

Then came the period of transition. As the contracts expired and work ceased, Jackson prison became an idle house. Caged human beings, confined in their narrow cells during the night, saw no hope with the coming dawn. The long hours of the day must be spent in idleness in their cells, except for a brief period when they were permitted to exercise in the corridors of the prison.

From Pillar to Post For a Product

Hope of the hopeless. Then followed the effort to establish industries on state account; to establish some sort of manufacturing which would give employment to the prisoners. As wards of the state, their earning to be used to support them, any profits made to be divided between the prisoners and the state. Here was an opportunity for service; a chance to redeem the poor unfortunates and return them as useful citizens to society; a chance, if you please, to build men, as well as a state institution which would be self-sustaining. And men were found who were willing to make the sacrifice and attempt the job.

What kind of manufacturing business shall the prison engage in? No matter which way the warden and board of control turned, they either found the way blocked or stirred up wrath of certain combinations. A canning plant was suggested, and immediately the organized canners' combination of the nation, jumped with both feet upon Jackson prison. Do you remember the "scandal and the investigation" when the daily press announced that the cannery was unsanitary; that diseased men handled the fruit; and don't you remember that the warden was obliged to throw open the doors of the cannery and invite the public in to see conditions with their own eyes and give the lie to the trust propaganda?

And then the thought came to the warden that brick and tile could be manufactured by the prison; surely this line would not interfere with regular trade. Do you remember that union labor refused to lay "prison made brick;" that the tile combination and the brick makers of the Detroit district raised a howl and another investigation followed? And next an attempt was made to manufacture tomb stones—markers for the dead—and the monument dealers and manufacturers cried "robbers," and again an investigation.

Michigan had no binder twine manufacturing plant; so here was an industry that would interfere with no established institution. The organized farmers of Michigan fought the good fight and won, and under the Warner administration a binder twine plant was established in connection with the prison. The powerful binder twine combination armed to the teeth, entered the fray. The first year eight hundred tons of twine were manufactured, and when the cost was determined, the dealers of Michigan were asked through their organization to distribute the twine. How well the writer remembers that morning at the prison when the fate of this new industry hung in the balance.

President Glasgow, of the Dealers' association and five members of the committee were present. Hon. Fred M. Warner, then governor, stated the cost of prison twine, and asked the dealers if they would handle the prison twine. The committee retired for consultation, and upon their return, stated "that they could not answer the question until the binder twine trust made its price." Here, a state institution, with twine manufactured and on hand; ready to be sold at cost plus a reasonable profit for the state—held for the action of the price-fixing guillotine of the powerful binder twine trust—another head for the basket.

No state institution could compete with the combination; for the price was set in different states to meet local competition—if the trust lost money by naming a low price to Michigan farmers the farmers of Iowa and Kansas would pay enough more to make the difference. The writer waited; anxiously waited for the dealers to answer the appeals of the governor and prison board for help; but they shook their heads, and the first output of the prison factory if sold at all must be sold at a loss; and then would come the cry: "Close the doors of the binder twine factory, it's a losing venture."

The writer assumed the responsibility; appealed to the farmers of the state,

and that year and the next, yes and the next, the farmers purchased the twine without one cent of cost to the state. And from that day until this the twine has been distributed to all farmers, through all farm organizations and through the eight thousand school district directors of the state—on absolutely equal terms and at a cost of less than two and one-quarter per cent for central distribution and two per cent for local distributors.

These transactions have reached millions of dollars and the state has never lost one dollar in poor collections from the farmers. The farmers of Michigan have so perfected their distributing organization that they have practically handled the out-put of the prison at cost. From the day that the loyal farmers trudged through the snow more than a decade ago, to get signatures to petitions asking the legislature to establish the plant at the prison and thus perform a double service: "Give employment to the idle prisoners and free the farmers from the grasp of the binder twine combination;" to this very day they have been loyal.

They have uncomplainingly paid the price which would give the state a profit and asked no questions. They have secured orders and made collections for a mere pittance. No factory on earth ever distributed its products at so low a cost—and yet the combinations, with the aid of the pea-nut politicians, have caused so much trouble and annoyance, placed so many obstacles before the board of control, and the wardens, that it is now quite impossible to get men who are willing to tackle the job. The board of control made up of good clean citizens, who work without pay; and wardens who are willing to move their families into the old hulk of a prison and bury themselves with ten hundred prisoners within the prison walls—to receive for their conscientious efforts, naught but criticism and to have their honesty and integrity attacked by a band of as bold pirates as ever scuttled a ship.

It has been ever thus, so that none need feel discouraged. The steps to every reform lead through tortuous passages; through annoying thickets and over precipitous cliffs. For one who will stand by with a word of cheer and encouragement and bid you press on, there are nine to criticize, condemn and throw up their hands. The Jackson State Prison furnishes an apt illustration of what is bound to occur when the citizens of a state attempt to do something for themselves and by themselves for the common good. Long term contracts were made for prison labor at certain Michigan prisons; some are yet in existence after ten years.

Contractors have grown rich through the very sweat and blood of the poor unfortunates, whose brain and brawn were knocked off to them through a bid made while the defenseless prisoners stood trembling upon the auction block. But Mr. Taxpayer, have you ever heard of an investigation in connection with this iniquitous system? No, these contractors, after having exacted the very pound of flesh from the prisoners, as nominated in the bond, are now classed as representative citizens, and with their money-bags in view command respect; while honest, conscientious citizens, members of the Jackson Prison Board and Wardens, are made the targets for cruel criticism and unwarranted and uncalled for attacks.

Jackson Wardens Should Not Be Blamed

No doubt mistakes have been made in conducting the affairs at the Jackson prison. This can be said of any business or of any state institution; but the citizens of Michigan know that both the board of control and the wardens have been honest, earnest, upright men, who, having lived their lives and gained their reputations in Michigan, would sacrifice their very lives rather than be a party to any wrongdoing in connection with a state institution. He is indeed blind, who cannot see in this wholesale attempt to blacken character of good citizens and destroy the usefulness of a state institution; both the cunning of the pea-nut politician, and the snarl and growl of the combination, which tiger-like, has been poised ready to spring since the first state operated industry was instituted.

"God must have loved common people because he made so many of them," said honest "Abe" Lincoln, as he placed his destiny in their hands. Let the investigation go on; let the combination and the pea-nut politicians go to the bottom of the whole matter—God knows if the state has been robbed, the people want to know about it. Figures will not lie, but liars will figure; and when the investigation is over, it will be found that if mistakes have been made they are but such as are wont to occur in building a business under such handicaps. The reports sent out through press show the cunning of the ward-healer in every line, and the slimy trail of the combination manipulators in every paragraph.

Finally the common people of this commonwealth must and will be the court of last resort. "Slugs crawl and crawl over our cabbage, like the slanderer over a good name." "You may kill them, it is true, but there remains the slime," says Jerriod, and while in the end it will be proven that those attacked are guilty of no wrong doing, the slime left by the combination slugs remain. Is it any wonder that it is most difficult to get good men and true to accept state positions where reforms for the common good are necessary? Is it any wonder that Warden Hulbert, having just entered the service at Jackson prison exclaimed: "Is this what a warden receives for the sacrifices he must make in caring for and living in a prison with the ten hundred poor, friendless fallen men left in his charge?"

"Politics in practice too often mean all for party, nothing for the people; all for policy, nothing for principle; all for office, nothing for honor; all for power, nothing for progress."

Evan Slocum

PROPOSED ROUTE CHANGE

Resolution as offered:

WHEREAS: a change in the Mackinaw Trail from its present proposed route to run east from the Wexford county line south of Walton Junction, about four miles, to come in line with the Kalkaska county road and connect with said Mackinaw Trail at the town hall in Springfield township would furnish a market road for a large community now compelled to draw large amounts of farm products over long hauls of bad roads; also furnishing six miles of old established mail route and being on one of the school routes of the county, and

WHEREAS: The change will avoid a very dangerous railroad crossing at Walton and will not hurt the farmers west and north of Fife Lake who are already supplied with good roads and a short haul to market.

Therefore, We the Kalkaska Arbor,

WHAT THE NEIGHBORS SAY

of the Ancient Order of Gleaners of Fife Lake do heartily endorse this change.

Be it further resolved that this endorsement be sent in to the MICHIGAN BUSINESS FARMING for publication.

I hereby certify on my honor that the above letter and resolution were read at a regular meeting of Kalkaska Arbor held on the evening of May 24, 1919 and adopted without a single negative vote—*Alzora A. Haskin, Kalkaska County.*

CATS AND DOGS

In a recent issue R. P. Swisher urges a low tax on castrated and spayed dogs and high tax on others as

cure for the stray dog nuisance. Castration is a simple, quick and safe operation, but spaying is cruel and unnecessary. Instead of excessive taxation, simply prohibit the running at large of uncastrated males. This should apply to cats as well as dogs. Unspayed females are much the nicer pets and more efficient in business. Keep the uncastrated male at home, where he belongs, and our cat and dog population will soon assume reasonable proportions.—*Stacy Brown, Ionia County.*

IN DEFENSE OF FORD

In May, 1913, at Ishpeming, the immortal Roosevelt fought for his moral life against "friends" who tried

to destroy him by false accusations.

In May, 1919, at Mt. Clemens, "his moral equal is fighting for his moral life," against "friends" who fain would destroy him, with charges of anarchism. Anarchism, forsooth! This coincidence is remarkable inasmuch as we remember the Hand of God in history.

Theodore Roosevelt and Henry Ford, the world's greatest social reformers. And so dissimilar, you say? Yes, dissimilar! To accuse Henry Ford of anarchism is a paradox without parallel, unless the sneering retort of Lawyer Stevens on that Ford's wage of six dollars was made in pure affectation—can compare.—*George J. Barrie, Huron County.*

Inclosed you will find one dollar, for which please extend my subscription to M. B. F., which I say is the first and best farm paper in the United States.—*William F. Bredou, Huron county.*



THE FARM HOME

A Department for the Woman and Children of the Farm



Edited by MABEL CLARE LADD.

HOW ABOUT A PROBATION FARM?

THE OTHER DAY a letter came to my desk from a woman in the country, asking if I could get any information for her relative to her brother, who had been arrested in Detroit. He was only a young man; just out of a school and working for the first time, and had fallen in with some bad men who had used this young man as their foil, and of course the law had caught him.

I had our attorney make inquiry into the case, and found it was as she said; the young man had committed the crime, and was the only one whom the evidence showed to be at fault. Undoubtedly this young man should be made to understand the harm in such wrong-doing, but what punishment will be meted out to him? We are doing what we can to help him as he has expressed a desire to have a chance to make good, but in the meantime the question comes up of other boys like him and the injustice of our system of punishment.

There are a few of us today, of either sex, who at some time in our lives have not made mistakes—mistakes which we would not wish the spotlight thrown on and the whole world to know of. Those of us who have made mistakes have either found out the folly of such wrong-doing ourselves or at an early age have been taught that the straight way was the better way, by our parents, so that since we have done our best to live clean, upright lives. Commander Evangeline Booth, of the Salvation Army, thinks that it is the "aim and will of Providence that none of us should be so good as to be spoiled by self-righteousness."

There are a few worldly-wise men and women who, while breaking every moral law known, still manage to keep "within the law" as it is written on the statute books and so society allows them to be free, while a youth, making his first mistake, is found guilty and sentenced to the penitentiary. And how shall we judge this young man who, perhaps, has not had the best of home environment; who has had to get out and shift for himself and has gone to a distant city and there fallen in with a tough element who make him think that in order to have a good time he must go with them and do as they do, and, fearful of their laughs and jeers, he goes on and on until finally he finds that he has broken the law and been arrested. Then he is tried, convicted and sentenced to the state penitentiary to live side by side with the most hardened criminals.

We have an Industrial home in the state where unruly boys up to eighteen years of age can be sent and where they are taught a useful trade as well as being obliged to spend a certain number of hours each day in study so that when they are again free to go out into the world, they are fitted to make an hon-

est living. But what of the boy who has finished school—the boy from eighteen to twenty-one; that time in a boy's life when, if he is at all inclined to go wrong, he is easiest led? Because he has made a mistake—and perhaps it may be a pretty bad one—must he be consigned to a penitentiary there to take a post-graduate course in criminology? Just at present, in our fair state, there is no other

*IT ISN'T in the things you own
Which you must keep and use alone;
It isn't in the goats you claim,
Nor is it in a selfish fame;
It can't be found upon a shelf,
You cannot seek for joy itself
And separate it from the things
Which life to every mortal brings.*

*No man can properly express
Just what is human happiness.
Had you the wealth of every mine
And every gift and talent fine
Of all the sages wise and gray
You could not give one single day
Alone to seek for happiness
With any hope of real success.*

*Who longs for happiness must learn
That it is something he must earn
Not by a selfish-seeking way
But by his toil from day to day.
It comes from duty bravely done,
From struggles hard and carrying on,
From standing firm and being true,
It comes from everything we do.*

*No man can happy be, unless
He helps another in distress,
There is no single road to bliss,
Who seeks for it, the way will miss,
Who makes his happiness his goal
Will always have a troubled soul,
Who would be happy first must plan
To bear the burdens of a man.
(Copyright, 1919, by EDGAR A. GUEST.)*

place for a boy of this age, and yet this system is admitted to be unsuitable and unadapted to the needs of these boys.

You have read of the wonderful work done with the boys in the juvenile court of Colorado, by Judge Lindsey. He loves boys and believes that nine-tenths of them can be reclaimed if the right methods are adopted. He talks

with the boys he tries, and if there is the least promise he gives them a chance. They are sent away on probation, and very few of them fail to report at the intervals named by him, and a very large percentage never have occasion to be arrested again.

There are plenty of good, clean, fair-minded men in our state who, like Judge Lindsay, have faith in boys and are willing to back such a movement, could public opinion be so shaped that it would demand such a system in this state. And we women can help to shape public opinion by advancing our ideas along this line to our families and acquaintances. One of the best authorities in the state on matters of this kind recently said:

"What is needed is a probation farm which will furnish healthy environment, remove the temptation of the city, give them right employment during half of the year and good schooling the remainder. Such a farm could easily be made self-supporting, and in intensive farming the boys could learn one of the best trades on earth."

Instance after instance can be cited where great men of today as youths were considered by their teachers and parents as "bad boys," but some one saw in them the pent-up energy, seeking an outlet, and directed their efforts along useful lines; made them use their brains and hands at the same time until they were so busy that they found no time to be mischievous, and have since proven to the world that all they needed was a start in the right direction.

And we women can help—we have a right to demand legislation along this line. It is a matter of history that Ex-Empress Eugenie was the first woman in any country to reform the houses of correction for children, instituting corrective farms instead. Not only did she correct the methods of children's reform, but all other prison reforms in France were due to her untiring efforts against politicians.

SUMMER PORCH NEEDLEWORK

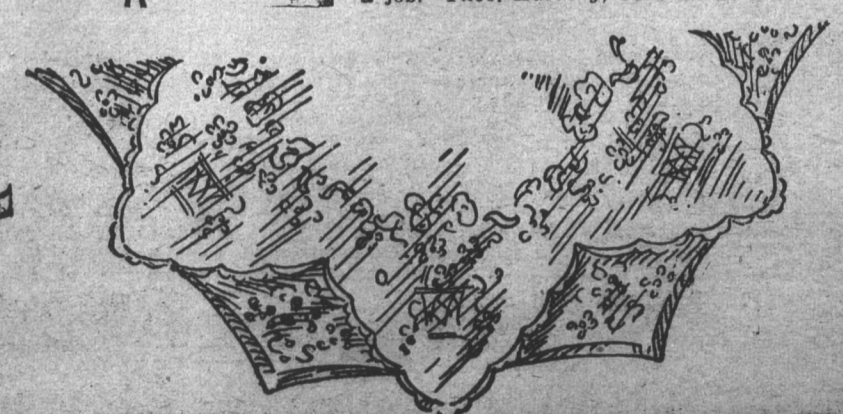
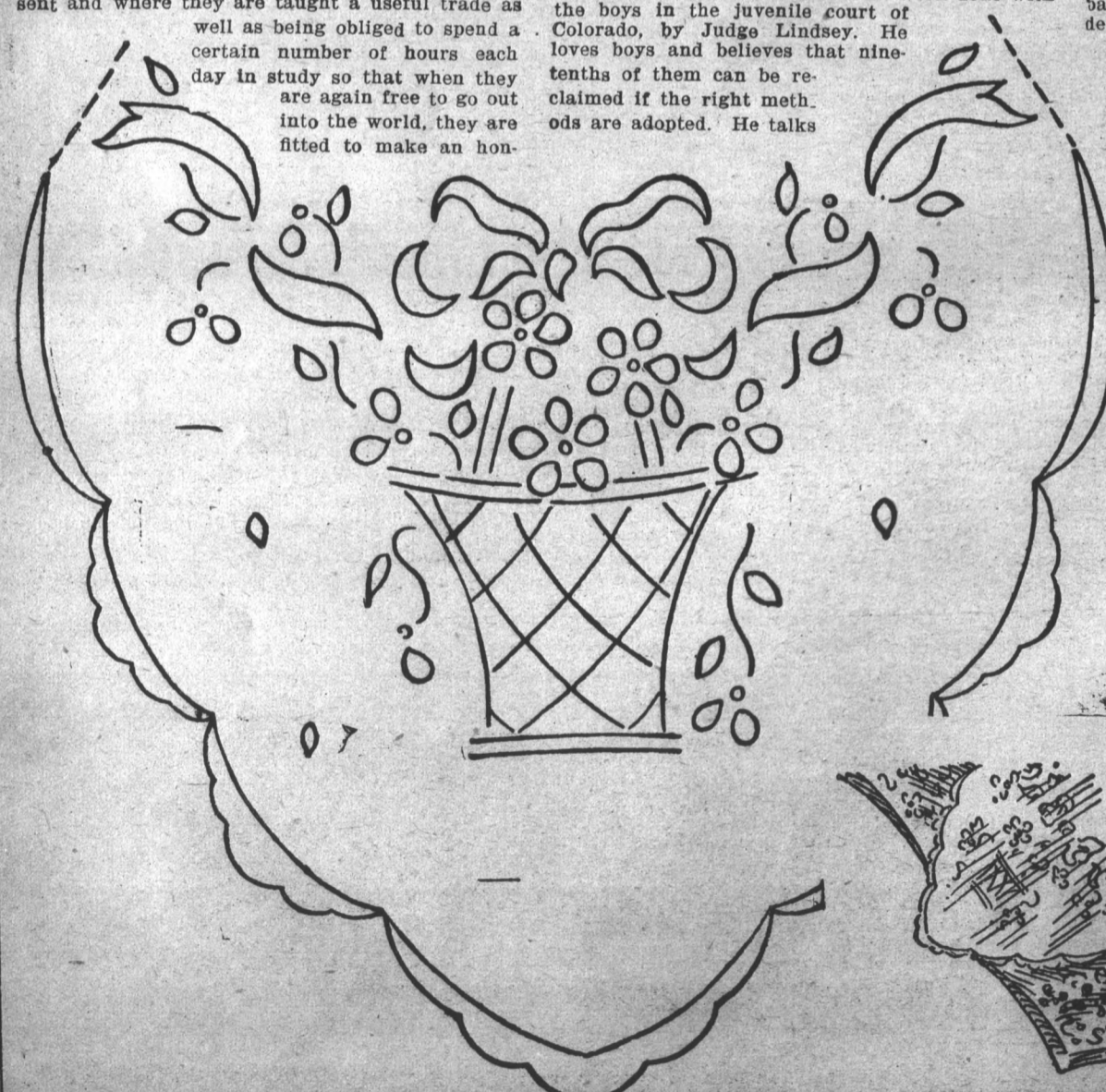
CENTERPIECES for the table have a habit of wearing out, and none of us have been doing any fancy work for the past two years, so it will be a relief once more to pick up a piece of embroidery as we drop down on the porch for a breath of air and a little rest.

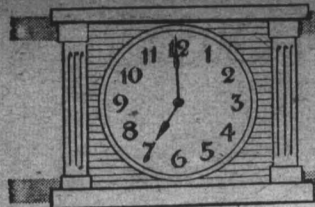
Among the attractive embroidery designs are the ever popular flower baskets. This piece is especially charming with filet insets, which will be shown on this page. The flowers are eyelets, ribbon and leaves, satin stitch; and the stems and basket in outline. The scallops are heavily padded and buttonholed.

PAINTING THE HOUSE

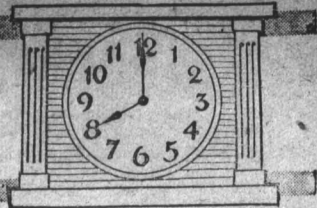
ONE OF the first things to be done after the carpenters have finished their work on the new house is to get it properly painted, otherwise the lumber will shrink and as soon as that happens the rain and moisture will enter the wood and decay will set in. And again, painting adds to the appearance of the new home. I have had people ask me what color was best to use in painting a house when they didn't tell me the design of the house, the material of which it was built nor the surroundings. In our country we use white lead principally for a base, but this will not do on the coast or anywhere along salt water as the salt in the atmosphere will corrode the base. In its stead for the outside work we use zinc, but this will not do for the interior work. So in considering the kind of paint or the color to be used, the locality and surroundings as well as the material from which the house is constructed must all be considered.

I have been one of ye olden timers, have had to drop old ideas and take up the new ones and if you have problems along the line of decorating either the interior or exterior of your home, I shall be glad to help you out through the columns of the M. B. F. I have nothing to sell and am not looking for a job.—Thos. Harding, Care M. B. F.





The Children's Hour



(Send letters for this Dept. direct to "Laddie," care Mich. Business Farming, Mt. Clemens, Mich.)

DEAR CHILDREN—Very interesting letters are coming in from all my little nieces and nephews, telling me of their plans when school is finished. There will be several prizes, the first prize story I am publishing this week. Now, remember children, in writing these letters, make them true; don't copy what some one else wrote, just because that took a prize, but just tell me in your own words what you are planning to do when you grow up, and how you are planning to fit yourself for your work.

Summer is, after all, the loveliest time of all the year, for it is then that we can have picnics, can fly kites, go swimming and have the whole out-of-doors for our playground, so let's just be happy, like the birds and the bees, and you know the best way to be happy is to be kind to everyone; help your parents so they won't have all the work to do, as you know they like to play occasionally too, and you will find that if you are cheerful and do your part, you will always have the best kind of times.

Next week, we will be getting ready for the Fourth of July, which is, next to Christmas, about the best holiday we have.—Affectionately your, *Laddie*.

FIRST PRIZE

Dear Laddie—We enjoyed your letter in last week's M. B. F. very much and look forward to each issue of your interesting paper. I am 11 years old and passed into the 8th grade in school. Have one brother, George, 6 years old in the second. After finishing my school course I hope to take a business course, and am helping mother raise chickens and receive a share of the money which I invest in War Savings Stamps, which, when they mature, will pay for my course. I live on a farm and enjoy its flowers and birds; also I belong to the Liberty Bell Bird Club and am secretary of the War Savings society of our school. Hoping you will publish this letter which is my third attempt. I am sincerely yours—Grace Davidson, Fenton, Mich. R. 2.

Dear Laddie—That was a very nice story of "Stumble and Tumble." I am always glad when the M. B. F. comes, for there are many nice stories in it. My teacher is Mrs. Adela Lince. She has a child of her own going to school. I get very lonely for my cousins have moved away. I am in the 4th grade and am 8 years old. My father taught me at home. He taught my oldest brother, Paul, too. I think the picture of the man is Roosevelt but I didn't know before that he was a trapper. I love to read. Reading is easy for me. All the girls in the 4th grade can read better than the boys.—Phebe Evangeline Duplap, Lupton, Mich.

Dear Laddie—I think the man in the M. B. F., is John McCormack, the noted singer.—Elizabeth L. Marvin, Holton, Michigan.

Dear Laddie—This is the first time I have ever written to you. I like to read the letters of the boys and girls. I am 12 years old and in the 8th grade. I have one sister and two pet cats, Buster and June. My school is out now and I am having vacation. I live on a hundred-acre farm. Well, I will close, hoping to see my letter in print.—Rosella Curtis, Shepherd, Mich.

Dear Laddie—I am a little girl 11 years old and will be in the 6th grade when school starts in September. There are five in our family: Father, mother, brother, a sister and myself. My sister is 17 years old in June and my brother 19 years old in November. We live on a 30-acre farm, and have three horses and two colts. I have a pet dog named Towser and I have a pet cat. My grandfather takes the M. B. F. and I read the letters from the boys and girls.—Merien Wiley, Adrian, Mich.

Dear Laddie—I have never written to you before, so would like to join your club. I am 11 years old and will be in the 6th grade. I live on a 121-acre farm. We have six horses and four cows. I will close.—Catherine Howell, Wanatah, Ind.

Dear Laddie—I have written to you before but did not see it published. We have three cows four calves and three horses. For pets I have a dog named Shep and a cat and four kittens, which I have not named. I am 12 years old and am in the 7th grade. I have three brothers and one sister. My sister is working out; she is 16 years old. My father takes the M. B. F. and likes it very much. My letter is getting long so will close.—Thelma Barton, Wheeler, Mich.

Dear Laddie—This is the first time I have written to you. I am 8 years old and in the 5th grade. I have four sisters. We take the M. B. F. and like it

very much. I like to read the boys' and girls' letters in the paper. I belong to the Red Cross. I live on a 50-acre farm. We have three horses, five cows and 12 little calves. Well, my letter is getting pretty long so I will close, hoping to see my letter in print.—Melva Rendel, Britton, Mich.

Dear Laddie: This is the first time I have written to you. I am 11 years old and in the 5th grade. My school let out May 23rd, and I was glad. I have four brothers and eight pets, two cats, a dog and four doves and a calf which our father gave us, and he gave us an acre of land. I like the Doo Dads.—Harold Russell, Attica, Michigan

Dear Laddie: I love to read the letters and look at the Doo Dads. I think they are very funny. Wish they would be in the paper every week. I am 10 years old and in the 5th grade. Our school let out Friday, May 23. Our teacher's name is Mr. Ledore Angers and I like him. I have one uncle in Russia and I have two sol-

dier uncles, but they are home again. I am sending a story as follows:

The Little Worker

Once there was a little girl who was very poor. Her mother was very sick and there was not a crust of bread in the house, so she went to a store and asked if she could do any work. They told her she could sweep the store and they would give her a dollar a week. She worked for two weeks and gave the money to her mother. Her mother said she should go and work until she would get a lot of money, and she worked there and they lives very happy all their lives.—Frances Bock, Pinconning, Michigan.

Dear Laddie—I have been reading the letters of the children's hour and the Doo Dads. I am a girl 10 years old and am in the 5th grade. I live on a farm of 60 acres. I have two sisters and three brothers. We have three horses, seven cows and three calves. I hope to see my letter in print. My father takes the M. B. F. and I like it. I have had the flu.—Bessie Osborn, Samaria, Mich.

Dear Laddie: This is the first time I have written to the M. B. F. I am eight years old and in the 4th grade. I have two sisters and one brother. My father takes the M. B. F. and likes it very much. I like to read the Doo Dads very well. We live on a 211-acre farm. We have 17 cows. I have two grandmas and two grandpas. One grandma lives in the same yard. My oldest sister will graduate from Carson City high school in June. I received a nice present from my cousin in Detroit yesterday; it was a nice baby doll.—Emma Bell, Carson City, Mich.

Dear Laddie—The picture in the next to the last paper I think was John McCormack. He is a great singer. I guess all the men so far only the man whose name was Burroughs. That week I was sick so I couldn't find out who he was. I suppose I will stay at home this vacation.—Fern Dennis, Greenville, Mich.

Dear Laddie: I think that the name of this man is John McCormack, the Irish lad who ran away to be a minstrel and grew up to be a world-famed singer. I guess this is all for this time.—Arlene Schutt, Rives Junction, Mich.



Just You Ride More Than Half a Million Motorists Now Praise It In An Essex

No other proof is needed to win you to it. Thousands have placed their orders upon the demonstration revealed in a short ride. Its performance is so convincing that one is not left with indecision as to its value.

Consider What Thousands Say

On every hand you hear praise for the Essex. Its newness created an interest that sent hundreds of thousands to Essex stores to see it. On the first day more than 5,000 rode and were won by its performance.

Every day of the past four months has seen a swelling tide of admiration until now all are saying the finest things for it.

What Is It That They Admire?

Is it performance or appearance—low cost or economy of operation?

One speaks of one quality, another of some other feature.

That is accounted for by the experience those persons have had with other cars.

The man who has owned a good light weight car recognizes in the Essex a wider power range. He sees a complete car. It has features he had never hoped to obtain in any car selling within his price range.

The man experienced with fine cars sees in the Essex an equal quality to that with which he is accustomed but at an immense saving in operating and maintenance cost.

It Has Appealed To All Motorists

Interest in the Essex has come from all classes of motorists.

That proves the fulfilment of the aim of its builders. They intended it should be the car that would embody all the advantages of the two accepted types of cars.

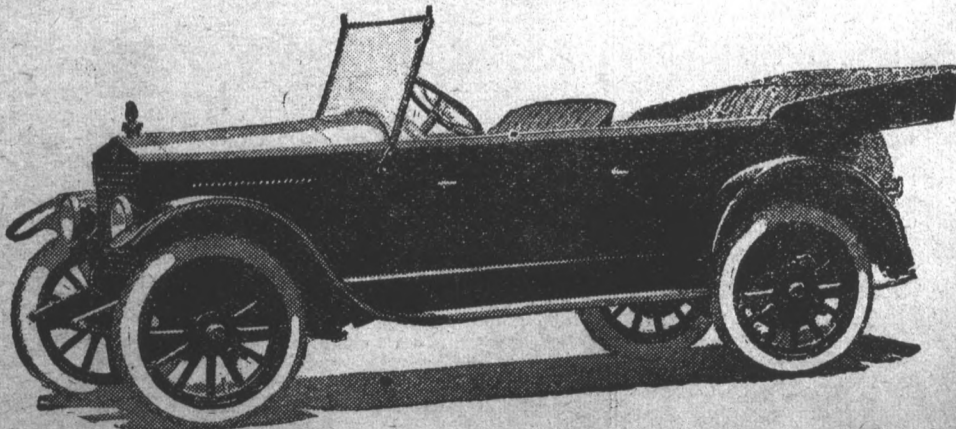
It should have lightness as well as durability—performance as well as low first cost—easy riding qualities as well as economy of operation.

They did not sacrifice the advantages of either—they combined them.

That is what all have recognized.

It is what we want you to know and thus our statement "Just you ride in an Essex."

\$1395
Detroit





MARKET FLASHES



BUSINESS AND TRADE CONDITIONS

Neither labor controversies nor foreign political uncertainties have caused deviations from the forward trend of business and conservative elements in the situation, which have underpinned no essential weakening, fore-shadow sustained expansion.

Where seasonal influences, such as preparations for midyear inventorying, impose restraint on operations, the markets are now quieter, but nothing suggests lasting abatement of activities and many more points of gain than of loss are still apparent. The commercial recovery, in fact, has recently been more rapid and far reaching than seems to be generally realized.

WHEAT

GRADE	Detroit	Chicago	N. Y.
No. 2 Red	2.45		2.60
No. 3 Red			
No. 2 White	2.48		
No. 2 Mixed	2.43		

Wheat has been dull and easy most of the past week. Prices slumped a few cents in the Detroit market, but New York quotations show no change.

Shortage of labor in wheat states may have a slight effect on prices. Following is an example of labor shortages:

Clarence Ousley, assistant secretary of agriculture, reports to the department from Kansas City that Kansas needs 100,000 laborers to help harvest the record wheat crop. Whether Kansas will save her 200,000,000 bushels—about one-fourth of the country's winter wheat crop—depends on her ability to get adequate labor within the next few days.

CORN

GRADE	Detroit	Chicago	N. Y.
No. 2 Yellow	1.82		1.95 1/2
No. 3 Yellow	1.82	1.76 3/4	
No. 4 Yellow	1.80		

Nervousness over the crop outlook has led to active trading in corn and prices touched the topmost level yet this season by the first of this week.

Notwithstanding that weather conditions were better, misgivings in regard to the progress of the new crop seemed to have attained greater force. The fact that receipts were diminishing drew attention more sharply than ever to the reduced acreage, the delayed start and the smallness of the carry-over.

Besides, there was a further advance in the hog market and this was deemed especially significant by many, although feeding of corn at present is not extensive. After the market had risen to about eight cents above the low point of several days ago, profit taking sales took on large proportions and there were reports that rural offerings had increased.

OATS

GRADE	Detroit	Chicago	N. Y.
Standard	.72 3/4	.71	.81
No. 3 White	.71 1/4	.70	
No. 4 White	.70 1/4		

Oats are reported to be late and in need of fine weather for best results. But there has not been much damage and the crops look good, so the price has fallen somewhat, though it rose when corn bumped its record height last week-end.

RYE & BARLEY

Barley has been in excellent demand in the Chicago market and prices raised slightly. Rye is report-



Corn rises to highest prices of the season. Oats also reach record level. Old potatoes easy and abundant.

Milk and Cream as Defined by Government

WASHINGTON, D. C.—Definitions and standards for milk and cream adopted by the Joint Committee on Definitions and Standards and approved by both the Association of American Dairy, Food and Drug Officials and the Association of Official Agricultural Chemists, to be used as a guide for the enforcement of the Food and Drug Act, have been published by the United States Department of Agriculture in a circular, "Food Inspection Decision 178."

Milk is defined as the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum free.

Pasteurized milk is milk that has been subjected to a temperature not lower than 145 degrees Fahrenheit for not less than thirty minutes. Unless it is bottled hot, it is promptly cooled to 50 degrees Fahrenheit or lower.

Skimmed milk is milk from which substantially all of the milk fat has been removed.

Buttermilk is the product that remains when fat is removed from milk

or cream, sweet or sour, in the process of churning. It contains not less than eight and five-tenths per cent of milk solids, not fat.

Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force. It is fresh and clean. It contains not less than eighteen per cent of milk fat and not more than two-tenths per cent of acid-reacting substances calculated in terms of lactic acid.

Whipping cream is cream which contains not less than thirty per cent of milk fat.

Homogenized milk or homogenized cream is milk or cream that has been mechanically treated in such a manner as to alter its physical properties with particular reference to the condition and appearance of the fat globules.

The composition of the milk produced by different breeds of dairy cows varies so greatly, say the food officials, that it is not practicable to fix a standard which is applicable in all localities in the United States and its territories. It is therefore, left to the state and municipal authorities to adopt such standards as their local production conditions may warrant.

ed to be in fine shape from most of the leading states handling that crop. In Michigan especially the stand seems to be splendid. Minnesota furnishes a pessimistic rye report.

Detroit quotations are:

Rye, cash No. 2, \$1.48.

Barley, Cash No. 3, \$2.30 @ \$2.40 per cwt.

BEANS

Foreign countries continue to lift bans on agricultural imports, and prospects of heavy sales of American beans to Europe continue strong. Inasmuch as Americans are not such great bean eaters, and since Europeans have become such confirmed users, the foreign bean market looks

fine. It looks as though good prices are assured especially in view of small holdings and because farmers are planning to reduce acreage of beans somewhat.

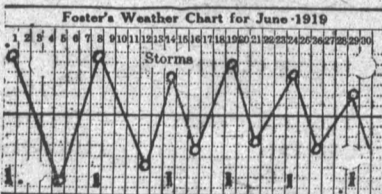
POTATOES

Markets	Choice R'd white-sk'd	R'd White Bulk
Detroit	2.40 cwt.	2.33 cwt.
Chicago	2.05 cwt.	2.00 cwt.

The potato market has been rather dull lately, Detroit reporting slow movement with prices around \$1.20 per bushel. Some choice stock went as high as \$1.40, while some sorry stuff went at \$1.10. There are still heavy holdings expected to be unloaded soon.

THE WEATHER FOR THE WEEK

As Forecasted by W. T. Foster for MICHIGAN BUSINESS FARMING



WASHINGTON, D. C., June 21, 1919.—Last bulletin gave forecasts of warm wave to cross continent June 26 to 30, storm wave 27 to July 1, cool wave 28 to July 2.

Next warm wave will reach Vancouver about July 2 and temperatures will rise on all the Pacific slope. It will cross crest of Rockies by close of July 3, plains sections 4, meridian 90, great lakes, middle Gulf states and Ohio Tennessee valleys 5, eastern sections 6, reaching Newfoundland about July 8. Storm wave will follow about one day behind warm wave and cool wave about one day behind storm wave.

These two disturbances cover a cropweather period from June 26 to July 9, one of the most important of the season. Indications are somewhat favorable to hail during the eastward drift of the last of these storms. Hail is caused by

upper air tornadoes that do not always come down to the surface. Like tornadoes I am not yet able to locate hail storms, but if hail or tornadoes or both result from these storms I expect them not far from meridian 90 and north of latitude 37 during the week centering on July 7.

Heavy rains are expected in the cotton states during the week centering on July 5; less rains between latitudes 37 and 45 and still less north of 45. With the exception of hail in a few small localities and too much rain in some of the cotton states, this will be a good cropweather week for crops that are still growing. Fair cropweather is expected in Canada.

But some damage may be expected to crops that are being harvested east of Rockies and not far from latitudes 37 to 40. This will be the most dangerous week to winter wheat that is being harvested. Not much rain west of Rockies crest. On Pacific slope where sufficient moisture has heretofore fallen this week, July 2 to 8, will be favorable to crops.

W. T. Foster

HAY

Markets	Light Mix.	St'd. Tim.	Timothy
Detroit	38.50	39.00	37.50
Chicago	36.00	37.00	35.00
Pitts	42.00	42.50	40.00
N. Y.	46.00	47.00	45.00

Markets	Light Mix.	Clov. Mix.	Clover
Detroit	37.50	38.00	35.00
Chicago	35.00	36.00	34.00
Pitts	40.00	41.00	37.00
N. Y.	45.00	46.00	42.00

HAY TRADE CONDITIONS

The hay markets are steady but the previous strength seems to be exhausted. Receipts continue light, however, and there is not much likelihood of a sharp break in values before the new crop is marketable, but the prospect of a record crop has created an easier feeling. Pasturage conditions are indicated at 97.4 against a 10-year June average of 89.3, which accounts for the slow trading on the part of feeders.

BUTTER

New York Butter Letter

New York, June 14.—In previous years, June has been the one month during the year when there has been a minimum of price fluctuation. This year seems to be an exception to the general rule. The reason for this is that the production of butter is far greater this year than that of any other season in the history of the creamery industry. At the present time, receipts show an increase of 25 per cent each week. On the other hand, demand seems to work irregularly. While at times buyers are very active, at other times they seem to entirely cease working. The law of supply and demand always governs quotations. With a greatly increased supply and with an intermittent demand, it is only natural that there should be great accumulations at times. The way the market is working this year would lead would lead one to believe that we will see price fluctuation thruout the season. Receivers are very nervous and as soon as they see butter accumulating in their stores they become more so and begin shading prices. The result is that there is a sharp decline in price and when the quotation becomes low enough buyers become active and the price goes up again. Many creameries undoubtedly feel that they are not getting the advantage of the rises in price which occur, but the fact is, when the price advances, buying suddenly ceases and butter starts accumulating again. The result of such procedure is that the majority of the butter is sold at present when the quotation is low. It is indeed a trying situation, in some respects, but it is hoped that as soon as shipping space becomes available on ocean going vessels, the fluctuation will cease. However, it is problematical as to what will happen during the next few weeks. Many predict that the export trade which is bound to come later will work to stabilize the market and keep prices at a high level.

The same conditions that prevailed last week seem to have been present throughout the greater part of this week. On last week Saturday the quotation on extras advanced one-half cent, making the price for that day 54 1/4 @ 54 1/2 c. On Monday there was an excess of receipts and scarcity of buyers and the price declined 1 1/4 c. On Tuesday there was a further decline of 1/4 c and on Wednesday the quotation went to 51 3/4 c. During the first three days of the week there was practically no buying and the situation seemed almost hopeless. On Thursday, however, because of a speculative demand the market became

suddenly firm, although no change in quotation was made on that day. On Friday, the speculative demand continued and there was some export buying, one thousand tubs having been purchased for shipment next week. As usual, when speculative and export buying begins, the local buyers become active and the result has been a recovery of 1 1/4 c in the price of butter. One noticeable feature at the present time is the large quantity of butter that is sold under the call on the Exchange. On Friday 1800 tubs of butter changed hands in that way. The trading in general was very active and at the close Friday the market was very firm with established quotations as follows: Extras, 53c; higher scoring than extras, 53 1/4 @ 54c; firsts, 51 @ 52 1/2 c; seconds, 48 1/2 @ 50 1/2 c. Unsalted butter is in medium demand and is selling at a differential of about 2 1/2 c over the quotation of corresponding grades of salted butter.

EGGS

Detroit.—Eggs; fresh firsts, 38c; extra firsts in new cases, 39 1/2 c; candied storage packed firsts, in new cases, 42c per doz.

LIVE STOCK

Detroit Live Stock Market

Cattle: Receipts last week, 1,418; market steady; best heavy weight steers, \$13 @ \$13.50; best handy wt. butcher steers, \$11.50 @ \$12; mixed steers and heifers, \$10.50 @ \$11.50; handy light butchers, \$10 @ \$11; light butchers, \$9 @ \$9.50; best cows, \$9.50 @ \$11; butcher cows, \$8 @ \$9; cutters, \$7; canners, \$6 @ \$6.50; best heavy bulls, \$9 @ \$9.50; bologna bulls \$8 @ \$8.50; stock bulls, \$7.50 @ \$8; feeders, \$10 @ \$11; stockers, \$8 @ \$9; milkers and springers, \$65 @ \$125; fancy, \$150. Veal calves: Receipts last week, 1,951; market steady; the best, \$17.50 @ \$18.50; others \$7 @ \$14. Sheep and lambs: Receipts, last week, 873; market dull; best dry fed lambs, \$14.50 @ \$15; fair lambs, \$12 @ \$13; light to common lambs, \$10 @ \$11; spring lambs, \$17 @ \$18; fair to good sheep, \$7 @ \$8; culls and common, \$5 @ \$6. Hogs, Receipts, last week, 6,056; no hogs on sale; prospects higher

Chicago Live Stock Market

Hogs: Receipts, 25,000; late top, \$21.05; bulk, \$20.75 @ \$21; heavy weight, \$20.75 @ \$21; medium wt., \$20.65 @ \$21; light wt., \$20.25 @ \$21.05; lights, \$18.75 @ \$20.75; heavy packing sows, smooth, \$20 @ \$20.50; packing sows, rough, \$19.50 @ \$20; pigs, \$17.50 @ \$18.50. Cattle: Receipts, 2,000; beef steers strong to 15c higher; she stock slow, mostly big quarter lower; calves, 25 to 50 cents higher; bulls and feeders about steady; beef steers, medium and hvy. wt., choice and prime, \$15 @ \$16.50; medium and good, \$12.25 @ \$15; common, \$10.75 @ \$12.35; light, wt., good and choice, \$12.60 @ \$14.75; common, and medium, \$9.75 @ \$12.75; butcher cattle, heifers, 7, 25 @ \$12.25; cows, \$7 @ \$12.50; canners and cutters, \$5.75 @ \$7.25; veal calves, light and handyweight, \$15.75 @ \$17.25; feeder steers, \$9.75 @ \$13; stocker steers, \$8.25 @ \$12.25. Sheep: Receipts, 13,000; lambs uneven; mostly 25c lower; some down 50c; sheep, steady; lambs, 84 lb. down, \$12.50 @ \$15.50; 85 lbs. up, \$12.25 @ \$15.50; culls and common, \$9 @ \$12; springs, \$16 @ \$18.50; yearling wethers, 12.50 @ \$12.75; ewes, medium, good and choice, \$7.50 @ \$9; culls and common, \$3.25 @ \$7.25.

East Buffalo Live Stock Market

Dunning & Stevens report: Receipts of cattle, 10 cars; market is steady. Hogs: Receipts, 10 cars; market higher; heavy and yorkers, \$21.50 @ \$21.75; pigs, \$20 @ \$20.25. Sheep and lambs: Market steady; top lambs, \$16; yearlings, 12 @ \$12.50; wethers, \$10.50 @ \$11; ewes, \$9 @ \$9.50.

PRICES FOR BEEF CATTLE ARE VERY UNCERTAIN

"Good beef cattle will probably sell high next September. The other kind will go down. There is no doubt but what beef cattle will be cheaper." This opinion was expressed by Mr. James of Swift & Co. Yet Mr. James was not sure. He said the whole beef cattle market was uncertain. If export trade with Germany is resumed, beef prices may stay up. If the laboring men are kept employed they will consume large quantities of meat, which will have a steadying effect on the beef market. So many ifs stand in the way of a definite answer.

The feeder who buys stock cattle this spring, runs them on good grass this summer, and sells them next fall, must figure on receiving a lower price for them, in the opinion of Mr. James. The lower grade of cattle will have to compete with the Texas and other western stuff.

The feeders expressed great interest in the future market—the next few months. The discussion was summarized in this statement: "It is very hard to predict the market at any future time. We have had, in the last two months, violent fluctuations from week to week—a very irregular market. After all, the future market for the next four, five or six months depends upon the supply, depends upon the business of the country. If we keep our labor employer and keep high wages we will expect high prices for beef cattle and pork. There is a possibility that at any time we might have increased export trade. It might be possible to get some of our beef into Germany. It might be possible that the packers would get a small government contract."

EXAMINE WHEAT FIELDS FOR HESSIAN FLY

Hessian fly infestation which has occurred from the spring brood of flies, can be most easily determined by examining the wheat fields just previous to harvest. The spring brood of flies lay their eggs after the wheat has begun to joint. These eggs are laid on the new leaves and most of the maggots come to rest at the first, second, or third joints. The injury which results causes the wheat stems to become weak and brittle at those joints. In addition, infested grains are usually smaller and may not have the head filled with grain. Fields infested with Hessian fly always lodge badly just previous to harvest.

By examining fields after the wheat has headed out but before it is cut, fly-infested plants can be found easier than at any other time. Examine first the fallen or lodged plants and the plants with small or unfilled heads. If a large percentage of the wheat is found infested, and the condition is prevalent thruout the neighborhood, the farmers should co-operate to rid the community of this pest.

The wheat joint worm and the wheat joint straw worm also cause blighted and unfilled heads and sometimes, lodging. While examining fields for Hessian fly examine for these insects also. The joint worm usually occurs at the joints, often causing knots, swellings, and twistings to form at the infested points. When the infested section is split with a knife it is found to be brittle and woody in character, and contains 3 or 4 to 20 or more yellowish larvae about one-eighth inch long when full grown. It occurs inside the wheat stem at the joints while the Hessian fly is found outside between the stem and the leaf sheath. This wheat pest is found most commonly in south and southeast Missouri but may occur over the entire state.

The wheat straw worm differs from the wheat joint worm in that it is found in the center of the wheat stalk between the joints, usually only one larva to a stem. The larva forms no gall, nor does it harden the stem within which it develops. The eggs of the second generation are laid about the time the wheat is heading. The larvae from these eggs do not, as a rule, kill the stem, but their effect is to curtail the yield by reducing the weight. Look for blighted or unfilled heads.

Keep the good things coming.—Geo. W. Hillborn, Clare county.

I think that it is the best farm paper that I have ever read for as many farm papers as I have taken.—R. C. Bucholt, Lakeview.



DE LAVAL

"The Distinguished Service" CREAM SEPARATOR

There is service built into every part of a De Laval. Forty years of leadership in cream separator construction have made it the unquestioned leader in close skimming, light running, easy cleaning, and durability.

The De Laval is sold through local agents who are well informed with regard to the machine and the Company's policy. These agents localize the Company's service. They carry repair parts in stock and are trained to give intelligent advice and prompt help, in order to insure complete separator satisfaction and continuity of service.

There is a De Laval agent in every dairy community throughout the world—a constant reminder of the fact that when you buy a De Laval, the Company feels that its obligation to you has just started.

It is because of these facts that the De Laval has been justly called.

"The Distinguished Service Separator."



The DeLaval Separator Co.

165 Broadway 29 E. Madison St.
New York Chicago

50,000 Branches and Local Agencies the World Over

What the Neighbors Say

M. B. F. should be read not only by the farmers, but by every city dweller too. Your "Eat and be Merry, To-morrow you may Hunger," hit the nail square on the head. The farmer has known all this for a long time but the city dweller knoweth nothing. It certainly makes a farmer's wife tired to hear some city lady talk on high cost of living and accusing the farmer of getting so much for his products. Mr. Slocum, circulate your editorials among the "city's select" and you will do double good to the farmer and city dweller.—Isabella County.

I like the M. B. F. very much. It is the only farm paper that I know of that tries to help the farmer any. And the Lord knows they need it.—B. G. Kanouse, Shiawassee county.

I think this is the best weekly paper I ever got.—Frank Rusch, Grand Traverse, Mich.

I believe your paper is all right boys. Go ahead!—Everett C. Parson, St. Clair.

Couldn't a ord to be without the paper. She beats them all.—Frank Hill, Capao.



ALAS

Hair Brush—Ha, ha, look at old Mr. Comb. He's getting so old all of his teeth are coming out.

THE BUSINESS FARMERS' EXCHANGE
CLASSIFIED ADVERTISING

5 CENTS A WORD PER ISSUE. To maintain this low rate, we are compelled to eliminate all book-keeping. Therefore, our terms on classified advertising are cash in full with order. Count as one word each initial and each group of figures, both in the body of the ad and in the address. The rate is 5 cents a word for each issue, regardless of number of times ad runs. There is no discount. Copy must reach us by Wednesday of preceding week. You will help us continue our low rate by making your remittance exactly right.—Address, Michigan Business Farming, Adv. Dep't, Mt. Clemens, Michigan.

NOTE:

An illustration helps greatly to sell farm property. By adding \$10 extra for each insertion of your ad, you can have a photographic reproduction of your house or barns printed at the head of your ad. Be sure to send us a good clear photograph for this purpose.

FARMS AND LAND

362 ACRES, \$8,400; WITH 34 HEAD Holstein Cattle and good farm team, harness, implements and tools, short walk school, handy RR town, milk station, etc. About 200 acres big crop tillage; 75-cow wire-fenced pasture, much wood, timber, fruit; 7-room house, big painted basement barn, running water house, barns. Distant owner's other business requires quick sale, hence low price \$8,400, part cash. Details page 35 Catalog Bargains 19 States, copy free. Strout Farm Agency, 814BE, Ford Bldg., Detroit.

FARMS IN SOUTHEASTERN NORTH Dakota; Stutsman and other counties, many highly improved, in well settled communities, near market, school and church. \$25 to \$50 per acre, 15 per cent cash, balance crop payments or easy terms. Write for big list. John B. Fried Co., owners, Jamestown, N. D.

PAY FOR MY RANCH OR FARM land with clover seed. Money loaned for live stock at 6 per cent, in amounts equal to first payment made upon purchase. Jno. G. Krauth, Millersburg, Michigan.

FOR SALE—160 ACRES 1/2 MILE east and 1/2 mile north of Morley, Mecosta county, Michigan. Nearly all level, gravel loam soil. Nice place for tractor farming. 130 acres under cultivation; 30 acres wood lot and pasture. Nice orchard; good seven-room house, cellar, nice shade. Windmill, water in house; double garage; good barn; silo and other buildings; good fences. Nice location. Buy direct from owner. Price, \$11,000, half cash. For particulars write, Route 2, Box 2, Morley, Michigan.

FOR SALE—A 40-ACRE FARM, 24 miles west of Detroit, 1/2 mile from thru cement road and electric railway, two miles from Ypsilanti; nine-room house with furnace and other conveniences, electricity available; barn and poultry houses for accommodating 1,000 hens. Would sell poultry also if desired; 10-acre wood lot; soil, sandy loam and muck. Box 90, R. 3, Ypsilanti, Mich.

FOR SALE—67.85-ACRE FARM, ON account of poor health, for quick sale including crops; will take \$2,150, \$1,000 down, from one to five years on balance; 35 acres cleared, balance easily cleared. Come and look it over or write. John Rose, Billings, Mich.

FOR SALE OR TRADE—280 ACRES of land in Ogemaw county; mostly river flats, 40 acres improvements, 200 tame pasture, 40 timber; good roads, 1 1/2 miles to general store; frame house, timber for barn; some fencing. H. A. Benjamin, Rose City, Mich.

FARMS FOR SALE—BIG LIST OF farms for sale by the owners, giving name, location of farm, description, price and terms. Strictly mutual and cooperative between the buyer and seller and conducted for our members. GLEANER CLEARING HOUSE ASS'N., Land Dpt., Gleaner Temple, Detroit.

WANTED—5 to 40 ACRES OF HIGH, well-drained, gravel loam, sloping to the south or west, close to shipping point. Not more than 50 miles from Detroit. Will deal with owners only. Address N. Grant Currie, 153 Harrison Ave., Detroit, Michigan.

MISCELLANEOUS

CORN HARVESTER—ONE-MAN, ONE- horse, one-row, self-gathering. Equal to a corn binder. Sold to farmers for twenty-three years. Only \$25, with fodder binder. Free catalogue showing pictures of harvester. PROCESS CORN HARVESTER CO., Salina, Kan.

WE CAN FURNISH RED ROCK Wheat and Rosen Rye in carload lots. Write us for prices. Coopersville Crop Improvement Ass'n, Coopersville, Mich.

FOR SALE—15-30 BATES TRACTOR with four bottom plow. Will consider good car in trade. J. H. Krause, Box 125, Lansing, Mich.

FULFILLING A PLEDGE
Would like to know through your paper if a person signing a pledge like the one enclosed can be made to pay the amount per month as said pledge calls for?—A Subscriber.

MY PLEDGE
In consideration of the benefits to my country and to myself and to help America "Win the War," I promise to pay the sum of \$_____ per month, from May 1, 1918, to January 1, 1920, to the treasurer of Barry County Loyalty League, or to the township collector of said league if there be one, for the support of the war work of the American Red Cross, the Y. M. C. A., and for such other war work as the National War Department and the Michigan War Board may endorse and recommend.

It is agreed that the signing of this pledge and fulfilling the same gives me membership in said league, with all the privileges thereof.

It is further agreed that should calls for war work cease on or before January 1, 1920, and should there be funds in the League Treasury thereafter, after paying all its expenses, that the balance will be distributed among the contributors to the league pro rata, according to what they may have paid in.

It is further agreed that an audit of the league treasurer's books shall be made each year by a disinterested outside auditor, and his report be published.

In order to save time and expense in collecting, I will also endeavor to make payments once each three months in advance.

Signed NAME _____
I am of the opinion that a subscriber to the subscription blank can be made to pay if he is worth it in property.—W. E. Brown, legal editor.

POWER FARMING IS REVOLUTIONIZING FARMING

(Continued from page 5)
summer for just what I paid for it. I realize six per cent is low, but it is my honest estimate. My crops last year amounted to 2,400 bushels of wheat, 1,724 bushels of rye, 910 bushels of barley and 1,100 bushels of oats; in all, 6224 bushels of the principal North Dakota small grain crops."

Seeding and Dragging
Double dragging in one operation 160 acres.

Time, 2 3/4 days, at \$8 per day for fuel and labor \$ 22.00

Seeding and dragging, one operation. Time, 4 1/2 days, at \$8 per day for fuel and labor 36.00

Harvesting
Two eight-foot binders, 40 acres per day. Time for harvesting 220 acres—60 acres seeded for previous year—5 1/2 days at \$14 per day for fuel and labor 77.00

Threshing
25 by 46 thresher. Time 5 1/4 days at \$11.20 per day for fuel and labor 58.80

Fall Plowing
Four bottoms, 7 inches deep. Time, 18 1/3 days at \$1028 per day for fuel and labor 188.47

Total cost for one year \$382.27

"Just to show what an expense horses would have been," continued he, "I will give an estimate of a few items of their cost I could not have done the work with less than six horses and I should have had to feed them the year round, besides having to take care of them in the winter months.

Oats for six horses 12 quart sper day for one year—army ration—about 820 bushels at 60c per bushel—local price \$492.00

Hay, 14 pounds per day—army ration—about 16 tons at \$15 per ton 240.00

Care for five months at \$15 per month 75.00

Total \$807.00
"This shows that, in my case at least the cost of crop production would have been more than doubled if I had used horses; besides, I would have had more difficulty in doing the work, and I would not have had so steady and reliable a source of power.

"In addition to the regular farming work which I carried on I have bought grain for the local elevator, something I know I could not have done had I farmed with horses. I also have an agency for farm and threshing machinery.

"I think you will see which way I like to farm. I cannot imagine myself using horses—tractors for me,



Save Your Grain

Beat It Out Just as You Would with a Pitch-Fork

It is the only way to get perfect separation. It is the way that separation is effected by the

RED RIVER SPECIAL

Other machines depend upon the grain dropping out. You must beat it out, just as the Red River Special does, by throwing it violently against the "Man Behind the Gun," and with the Beating Shakers, which keep tossing and beating the straw until the last kernel is saved.

The Big Cylinder with its greater weight and momentum, and the much larger concave and grate surface accomplish results in separation that the old style machine cannot reach.

The Red River Special saves enough more of the farmer's grain and time to pay his thresh bill.

Make the thresherman bring a Red River Special to do your threshing, or if you have a job large enough, buy a "Junior" Red River Special, hook it up with your gas tractor and do your own threshing. Write for circulars.

Nichols & Shepard Co.
In Continuous Business Since 1848
Builders exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Tractor Engines
Battle Creek Michigan

WRITE GALLOWAY

SPECIAL SALE 12,000—Engines

The low sale price on this Master-piece 7 is a quantity price. You could come here and offer to buy the whole 12,000, yet I could not shade the price one bit, because the price of one is based on the big wholesale quantity of 10,000. Our new Master-piece 7 gives 7 actual horse-power for the price of 6. Portable or stationary. Big bore, long stroke, heavyweight. Every part standardized and interchangeable.

FREE Book and Sale Folder Send postal for them. Find out the special big-quantity, factory-run, low-price on the one six Engine. Over 200,000 satisfied customers. Near-to-you shipping points save you freight. Special sale on Separators and Spreaders, too.
WM. GALLOWAY CO.
Box 365 WATERLOO, IOWA

A Guaranteed Remedy for Contagious Abortion

After treating thousands of cows with **ABORNO** we are ready and willing to guarantee that in at least 90% of the cases where **ABORNO TREATMENT** is used abortion will be prevented.

Write for Our Free Booklet
In this booklet our guarantee is fully explained and many letters from farmers and dairymen are submitted as evidence that **Aborno** will do all we claim.

The **Aborno** treatment consists of two hypodermic injections, given the animal two weeks apart. These injections destroy the germs of contagious abortion, if they are present, and prevent them from gaining a foothold if the animal is not already affected. Treatments easily administered and cannot harm the cow. Cost of treatment is reasonable. Write at once.

ABORNO LABORATORY
Section F. LANCASTER, WIS.

Think very much of the paper. Only one in the interest of the farmer in all Michigan. All others in the interest of money or the ring. Do not wish to miss one issue.—L. D. Foote, Eaton county.

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CLAY, ROBINSON & CO.
LIVE STOCK COMMISSION
Chicago South St. Paul South Omaha Denver Kansas City
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"Keep M. B. F. coming!"

YOU WANT THIS WEEKLY IN YOUR MAIL BOX EVERY SATURDAY, BECAUSE—

- it brings you all the news of Michigan farming; never hiding the plain facts.
- it tells you when and where to get the best prices for what you raise!
- it is a practical paper written by Michigan men close to the sod, who work with their sleeves rolled up!
- it has always and will continue to fight every battle for the interest of the business farmers of our home state, no matter whom else it helps or hurts!

One Subscription price to all! **(ONE YEAR.....\$1) (THREE YEARS...\$2) (FIVE YEARS.....\$3)** No Premiums, No free-list, but worth more than we ask.

MICHIGAN BUSINESS FARMING, Mt. Clemens, Mich.
Dear Friends:—
Keep M. B. F. coming to the address below for _____ years for for which I enclose herewith \$..... in money-order, check or currency.
Name
P. O. R.F.D. No.
County State

If this is a renewal mark an X here () and enclose the yellow address label from the front cover of this issue to avoid duplication.

HELPFUL HINTS

BAD MEDICINE FOR BURROWING ANIMALS

A vast amount of damage is done to crops, especially in certain sections of the country, by ground squirrels, sage rats, rabbits, prairie dogs, skunks, badgers, rats, snakes, coyotes, and other burrowing animals. According to U. S. statistics, the annual loss to the country on grain alone amounts to over \$10,000,000.

There is now on the market what is known as an exterminator cartridge that is sure death to burrowers. It is simply a tube or cylinder one inch in diameter, eight inches long, containing a composition which in burning creates a powerful gas which when confined, as in a burrow in the ground with a limited supply of air, produces a fume deadly to any animal therein.

The composition producing the gas is backed in the cartridge by a charge of slow action powder which drives the fatal gases throughout the passages of the burrows.

The gas from the lighted cartridge burning in the open air, before confining in the holes of the animals, is not injurious nor irritating to the operator.

The principal gas generated is sulphuretted hydrogen, well known to scientists as fatal to animal life. Furthermore, the animals cannot be revived by taking them at once into the fresh air. Death is due to the poisonous action of the gases on the heart.

SPRAY FOR CABBAGE WORMS

Cabbage plants are often seriously injured and the crop entirely destroyed by a number of cabbage worms. Some of these are the common cabbage worm, the cabbage looper, the



A PUZZLE

Musical Bug—
So that's a shoe horn, eh? I wonder how you play it?

cabbage plutella, and cutworms. The adults of these are moths or butterfly flies, which lay their eggs on the cabbage leaves. These eggs hatch in a few days and the young worms feed on the foliage. They grow rapidly and by the time the cabbage is beginning to head they may be very numerous. It is then that they do the most damage by causing imperfect heads or heads which will not keep.

These worms may be killed by spraying the cabbage plants with an arsenical poison. Dissolve four pounds of laundry soap in several gallons of water. Add enough water to make 50 gallons. Then stir in 1 1/2 pounds of powdered arsenate of lead or three pounds of the paste form. The soap is to make the liquid spread better and to make it adhere to the smooth surface of the cabbage leaves.

To make a smaller amount of the spray use 1/2 ounce of the powdered arsenate of lead or one ounce of the paste, an inch cube of soap, and one gallon of water. Spray on the foliage so as to get all parts of the plant protected. Apply as soon as the worms are noticed doing damage or shortly after the plants begin to grow well. Several applications at intervals of ten days or two weeks may be necessary to control the pests.

Dusting may be substituted for spraying if desired. Use one part of the powdered poison to four parts of air-slaked lime or flour. Mix thoroughly and dust on the plants from a porous

USL BATTERY SERVICE STATION
U S LIGHT & HEAT CORPORATION



**Not only a better battery but—
a much better battery-service**

Battery Test by Rule

USL Service-Stations do more than add water and take hydro-meter-readings. All stations have our standard set of rules for checking up each battery-cell and testing the car's electrical system. If anything is wrong USL service men know what it is and where to find it. There is no guess work. Consequently USL men repair many batteries pronounced worthless by others.

8-Months' Repair Guarantee

And USL Service-Stations do more than repair. They guarantee their work on any make of battery for eight months on an adjustment basis. That's the honest way. It gives you what you pay for; you always receive full value.

USL "Dry-Charged"

But if you need a new battery there is a brand new factory-perfect "USL" waiting to fit your car. It comes to the USL Service-Station USL "Dry-Charged." That means it's made ready for you, when you want it. It has not been car-worn or shelf-worn and you will get its full battery-life.

15-Months' Guarantee

When you buy your "USL" you will be protected by a 15-months' adjustment guarantee. Not only does "USL" build a better battery and USL Service-Stations give better battery service but, in addition, both batteries and repairs are guaranteed.

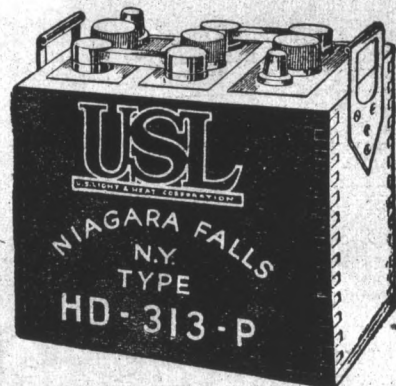
FREE 50-cent Battery-Book that answers every battery-question. It's a book you can't afford to be without if you own or drive an automobile. It's Free at your nearest USL Service Station.

U S Light & Heat Corporation, Niagara Falls, N.Y.

We'll back up our repair work on your battery with our personal 8 months guarantee . . .

For name and address of your nearest USL Service Station write to

United Electric Service Company
Detroit, Mich



bag, or a can with nail holes in the top. Apply thinly while the dew is on the plants.

Since the cabbage head grows from the inside there is absolutely no danger from poisoning by eating the cabbage. If outer leaves are removed (and they always are) spraying is safe up until time to harvest the crop. Spray early in the season and it will not be necessary to spray when the heads are forming.

USE A "T" SQUARE ON THE FARM

"T" squares and drawing boards may be primarily intended for the use of the engineer and the draughtsman, but they play an important part on the farm if properly used.

With some fairly good paper, board square, triangle and a compass, the farmer can plot his new buildings which he is contemplating, can lay off diagrams to scale representing various fields, and can even draw the plans, in rough, at least, for new structures.

With five dollars invested in this sort of an equipment, seemingly hard problems can be worked out in a jiffy. If that old hickory evener that has done service for years finally gives out, a new stick can be drawn to scale, the hole locations found, and the new one cut from the rough, and accurately, whether it be of the same dimensions of the old one or not.

If a new building is planned to set near the hog house, and the height and width and length having been decided upon, separate elevations of the side and end can be drawn in a few minutes. It will be easier then to decide if the size planned is satisfactory.

The saving on the figuring of one lumber bill will buy the outfit, and oftentimes a new idea is hit upon when figuring such a job, that will be a valuable one.

In the absence of something better, a board, a straight strip, with a cleat nailed at cross angles for a "T" square and a small try square will do for instruments.—Subscriber.

Stock Raising in Western Canada
is as profitable as Grain Growing

In Western Canada Grain Growing is a profit maker. Raising Cattle, Sheep and Hogs brings certain success. It's easy to prosper where you can raise 20 to 45 bu. of wheat to the acre and buy on easy terms.

Land at \$15 to \$30 Per Acre
—Good Grazing Land at Much Less.

Railway and Land Co's. are offering unusual inducements to home-seekers to settle in Western Canada and enjoy her prosperity. Loans made for the purchase of stock or other farming requirements can be had at low interest.

The Governments of the Dominion and Provinces of Manitoba, Saskatchewan and Alberta extend every encouragement to the farmer and ranchman.

You can obtain excellent land at low prices on easy terms, and get high prices for your grain, cattle, sheep and hogs—low taxes (none on improvements), good markets and shipping facilities, free schools, churches, splendid climate and sure crops.

For illustrated literature, maps, description of lands for sale in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., apply to Superintendent of Immigration, Ottawa, Canada, or

M. V. McINNESS
178 Jefferson Ave., Detroit, Mich.

Only \$2 DOWN ONE YEAR TO PAY

\$38 Buys the New Butterfly Jr. No. 2 1/2
Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY
Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on and on a plan whereby they save their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.

30 Days' FREE TRIAL

EASY TO CLEAN

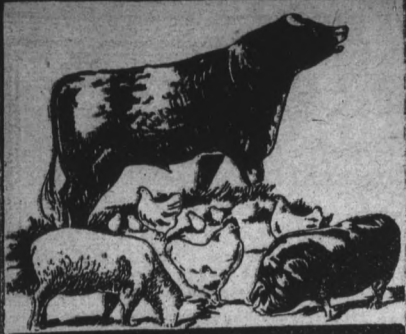
Albaugh-Dover Co., 2260 Marshall St., Chicago

NEW SOUTH WALES INFORMATION BUREAU

Singer Building, 149 Broadway, New York City will be pleased to send Government Bulletins or answer any inquiries regarding opportunities for farming, stock raising, fruit growing, mining and investment in New South Wales.

A U S T R A L I A

When you write any advertiser in our weekly will you mention the fact that you are a reader of Michigan Business Farming? They are friends of our paper, too!



Kreso Dip No. 1

(STANDARDIZED)

Parasiticide. Disinfectant.
USE IT ON ALL LIVESTOCK

To Kill Lice, Mites, Fleas,
and Sheep Ticks.
To Help Heal Cuts, Scratches and
Common Skin Troubles.

USE IT IN ALL BUILDINGS

To Kill Disease Germs and Thus
Prevent Contagious Animal Diseases.

EASY TO USE. EFFICIENT. ECONOMICAL.

FREE BOOKLETS.

We will send you a booklet on the
treatment of mange, eczema or pitch
mange, arthritis, sore mouth, etc.

We will send you a booklet on how
to build a hog wallow, which will keep
hogs clean and healthy.

We will send you a booklet on how
to keep your hogs free from insect
parasites and disease.

Write for them to

Animal Industry Department of

PARKE, DAVIS & CO.

DETROIT, MICH.

Bleaches Celery Better than Boards

This broad band of water-proof
paper, held up by arches, excludes
all light from the stalks and keeps
them clean.

The Areandee Celery Bleacher

is applied to the rows five times
as fast as boards, is a whole lot
cheaper, and will last for several
seasons. One trial will convince
you that this is a trucking necessity
and a time- and money-saver.
Sample and circular mailed to
you free upon request.

The Russelloid Company
Dept. M Harrisburg, Penna.

Rooj Rex

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(Rooj. Rex)

Shoes

For The
Man Who Works

Hirth-Krause Co.
Tanners & Shoe Mfg's
Grand Rapids, Mich.

I enclose one dollar for which send me
the M. B. F. for one year. I like your
paper; it hits the right spot.—Geo. J.
Rick, Tuscola county.

POULTRY EXPORT REPORTS

In response to inquiries which have
come in from all parts of the state re-
garding the proper methods of feeding
young ducks and goslings, Prof. C. H.
Burgess, poultry man at M. A. C., has
given out suggestions for the care and
feeding of young waterfowl. June is
the time of year recommended by lead-
ing poultry men as the best in which
to hatch ducks and goslings, while
Pekin, Rouen, and Muscovy are the
three most popular kinds.

Suggestions for care and feeding of
young waterfowl:

1. Keep them confined with the
mother for at least two weeks.
2. Do not feed until 36 hours old.
3. Feed plenty of chopped young
clover or alfalfa, mixing it with other
feed.
4. Feed often for the first five days.
5. Feed in trough near drinking
fountain.
6. Keep water before them at all
times both day and night.
7. Keep water vessels of a style
that they can drink from but not
swim in.
8. Keep water vessels perfectly
clean.
9. Do not allow too cold water to
be given them.
10. Feed only as much as the ducks
or goslings will eat up in twenty min-
utes.

The following formula is recom-
mended for compounding the food for
ducklings and for goslings: 5 lbs. char-
coal, 40 lbs. wheat bran, 20 lbs. corn
meal, 5 lbs. low grade flour and 12
lbs. meat scrap.

FEEDING THE PREGNANT SOW

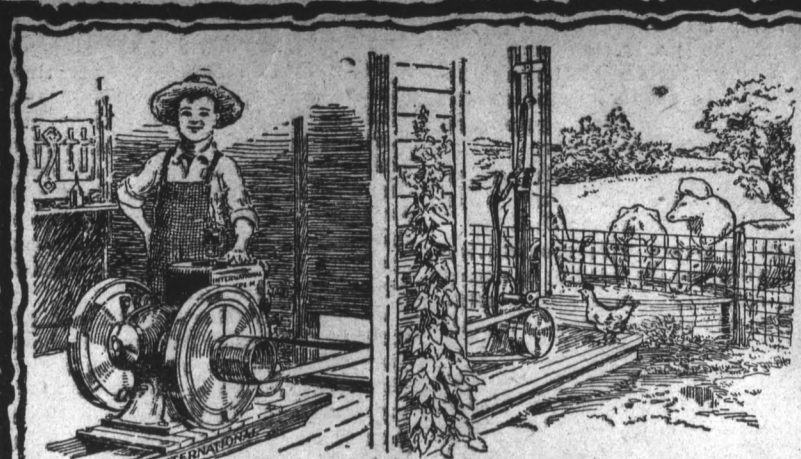
It is entirely too common a practice
in the corn belt to feed brood sows
corn alone. L. A. Weaver, of the Uni-
versity of Missouri College of Agri-
culture, gives several reasons why this
practice should not be followed. Con-
stipation must be guarded against, if
strong litters are to be produced. A
sow should also have some bulk in her
ration and some feed containing more
protein and mineral matter than does
corn. Corn, when fed alone, is too
fattening, and the fat is laid on in-
ternally, which is injurious to the de-
velopment of the pigs in utero. Corn
is all right if fed with judgment. In
the corn belt it naturally makes up a
large part of our swine rations. When
fed to sows, however, corn should be
supplemented with some feeds like
linseed oil meal or tankage, shorts,
and a little bran, since these contain
the protein and mineral matter es-
sential in developing strong pigs. An-
other good feed to use is alfalfa hay
or alfalfa meal. Clover or cowpea hay,
if not too coarse, also supplies bulk
and protein and has the laxative ef-
fect desired. A good ration may be
made up of corn 50%, shorts 25%,
bran 15%, and linseed oil meal 10%
by weight.

HARVESTER COMPANY'S INDUS- TRIAL COUNCIL

Nineteen out of the twenty Inter-
national Harvester Company's plants in
the United States and Canada have
adopted the "Harvester Industrial
Council" plan, submitted by the com-
pany to its employees. An election was
held at all works to decide whether or
not this system of employe represent-
ation should be accepted. The ballot-
ing was secret and all but foremen,
assistant foremen, and others having
power of employment or discharge
were eligible as electors.

All but three of the works decided
in favor of the plan at this election,
these three being the McCormick
works, the McCormick twine mill and
the Tractor works, situated on Chi-
cago's west side. Bulletins were post-
ed at all works announcing the result.
At the works which rejected the plan
the notices stated that no further
action would be taken in the matter
there except upon request of the em-
ployees.

The plan is a progressive develop-
ment of the company's industrial pol-
icy, which has heretofore led to the
inauguration of the weekly pay sys-
tem and the basic eight-hour day, and
still earlier to voluntary adoption of
a workmen's accident compensa-
tion plan antedating American legis-
lation on that subject, as well as the
Harvester pension plan, wholly sup-
ported by the company, under which
23 employees have been retired on
pension; also the Employees' Benefit
Association which has paid out in
ten years more than \$3,000,000 to em-
ployees and their families.



A Wise Investment

EVERY time Bidly cackles you are three
cents ahead. Invest that three cents in
kerosene with which to operate a 1½-H. P.
International kerosene engine and you have
the power of twelve men under your direction
for an hour—all for the price of an egg. To
get useful power at a reasonable cost buy an

International Kerosene Engine

This sturdy, dependable engine will pay for
itself over again during a year. Let it pump
water, saw wood, run the sheller, washing
machine, feed cutter, in fact do all the odd
chores about the farm. Its shoulders are
stronger and broader than yours and it does
not get tired.

All three sizes of International kerosene en-
gines, 1½, 3 and 6-H. P., operate success-
fully and economically on kerosene (coal oil)
or gasoline. This means that the engine is
properly designed, that the mixer, ignition
system, oiling system, air and gas system are
all made right.

See an International dealer. There is one
located near you, or write the address below
and get full information.

International Harvester Company
of America, Inc.

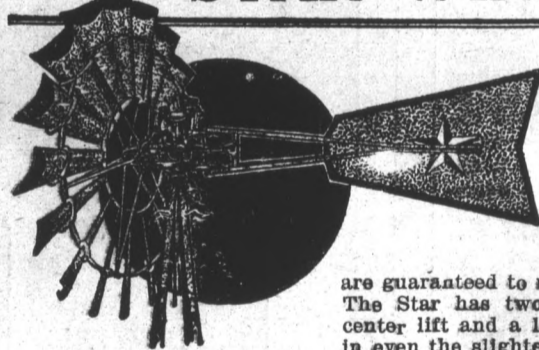


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provide an independent supply of
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With
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The most economical
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with a minimum of time
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Star Windmills are
equipped with the famous
No-Oil-Em bearings which

are guaranteed to run a full year on one oiling.
The Star has two pitmans, two gears, direct
center lift and a long main shaft. It will run
in even the slightest breezes.

Write for catalog No. 95 and complete infor-
mation or see the dealer in your community.

FLINT & WALLING MFG. CO.
Star Windmills Hoosier Pumps
Dept. D, Kendallville, Ind.

NEW GREASE FOUND FOR ALL- ROUND USE

The discovery of a practical all-around
motor grease is announced by Cleveland
chemists of the National Refining Com-
pany, who make the confident claim that
their discovery will fill a long-felt want
in efficiency as well as in comprehensive
usefulness.

Undoubtedly the new grease will be wel-
come to all motorists, whether they drive
automobiles, tractor or truck, because of
its convenience. Its discovery means that
instead of a variety of greases—one for
compression cups, another for differen-
tials, a third for transmission, etc.—the
one will provide perfect lubrication on any
grease point. Chemists say it will not de-
teriorate.

In the oil world the discovery is herald-
ed as epoch-making and especially timely.
The new grease is already on the mar-
ket, being manufactured and sold by the
National Refining Company, and has been
christened "En-ar-co Motor Grease."—Adv.

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W.F. YOUNG, Inc. 169 Temple St., Springfield, Mass.

Jackson County Squash Center

Michigan is one of the principal states in the production of garden seeds, a very considerable acreage being devoted to seed crops of garden beans, sweet corn, radish, squash and other vine seeds, every year.

Jackson county probably grows more squash seed than any other county in any state in the U. S.

Squash is grown with comparatively little work and the returns in money for the seed crop prove highly satisfactory to the grower, in any normal season.

Besides the net returns for seed, the grower can utilize the meat of the fruits for feeding to stock and hogs. Many farmers, who have grown squash for a number of years and are in position to know, claim that the feeding value of the squash equals the money value which they receive for the seed crop.

Mr. Frank Smith of Jackson county has grown squash seed for S. M. Isbell & Company, seedmen, Jackson, Michigan, for several years and considers this a highly profitable crop. In 1918 he harvested at the rate of 224 pounds of seed per acre, besides the feeding value of the fruits which Mr. Smith says equals another \$100 per acre. One crop of this kind more than pays for the land on which the crop was grown. It should be stated here that the past year was not very favorable for squash. In a more normal season the yield of seed is much greater.

When grown on a commercial scale squash is planted as soon as all danger from frost is past in the spring and the ground has become warm. Seed is usually planted 4 to 6 feet, using 4 pounds of seed per acre. Three or four cultivations should be given before the vines grow too long and hinder such work. The fruits are allowed to mature fully and left in the field until danger of a severe frost appears, when the squashes are put under shelter. Seeding the fruits may begin at any time after they are fully ripened and may be prolonged for many weeks, so as to feed the squashes to the stock and take care of washing and drying the seed at the same time.

Methods of Stump Eradication

When I first commenced the removal of stumps from my land a number of years ago I gave most all methods I could learn of a trial using chemicals, acids, burning, stump pullers and blasting and have found the latter method most satisfactory to me for several reasons.

A saturated solution of saltpeter can be used in burning stumps by drilling holes into them and pouring in the solution. After it has penetrated the wood and dried it assists in the burning process but I never thought it did sufficient good to pay for the necessary trouble and expense, while with green stumps I never secured any success to speak of.

A fair-sized hole can be dug under either green or dry stumps, be filled with coals and kept blazing with brush or wood and this will quite generally remove the part of the stump above the ground and parts of the roots. A small hole should be dug on the opposite side to act as a chimney. This method especially with dead stumps gives quite good results in removing the stumps but usually only removes a small portion of the roots and those remaining are a great detriment to machinery for being hidden from view they are hit quite hard at times with occasional breakage of tools. Aside from digging the holes it is necessary to give considerable attention and keep the fire burning. Where blasting is being done too, the shattered stumps can be used nicely for fuel.

Some advance the acid theory, generally sulphuric, but from my experience they are absolutely worthless, expensive and extreme care must be practiced in handling on account of the acids' burning and destructive effect on hands and clothing.

The stump puller does its work

quite well but I find it a great deal of trouble to take out and rig up for small jobs and most of my stump removing is handled at odd times. Again, unless a farmer has a large tract of stumps to remove or does contract work I consider the first expense of the outfit as well as repairs from time to time too costly for the average farmer. If the main roots are chopped sufficiently low when pulling both the stump and the majority of the roots are removed.

At first my blasting did not give me just the results I thought it should, yet I kept on, as others made it do the work, and I soon found out it was my fault and not the fault of the explosive since I was not using it correctly, for either green or dry stumps, large or small can be entirely removed with agricultural explosives if the work is done right.

In using dynamite I have learned several things to keep in mind. The was from too shallow shots and from

underloading. The shot holes should be drilled well under the crown of the stump and the charge of explosive tamped in lightly with a WOODEN tamping rod.

For small, dead stumps up to, say twelve inches, I remove with one charge of twenty per cent dynamite placed in one hole drilled under the crown of the stump and fire with cap and fuse. For the larger dead stumps I usually use a higher grade of explosive while for green stumps either large or small, I use the sixty per cent

As green stumps are very much more tenacious than dead ones only parts of them are apt to be split off and blown out from using a single charge so I drill holes under each of the large lateral roots centering them under the crown of the stump, load, connect together and fire electrically with my blasting machine whereby each of the charges are exploded simultaneously and the explosive exerts a pressure under all portions of

the stump at the same time, and thus the entire stump is removed while the roots are blown out as well, leaving the ground in the best possible shape for being turned from an unproductive into a productive area.

UNLABELED PACKAGES

HOLD BAD GRASS SEED

Grass seed mixtures which contain timothy, rye grass, and other seeds which are undesirable for lawns, are being sold in the state in unlabeled packages, according to Bertha E. Hollister, state seed analyst at East Lansing. Miss Hollister has found that various retail stores other than seed companies are dealing in grass mixtures at this time of year, more for advertising than for profit, and that these stores are often very careless about the quality of seed sold. An electric light agency in Detroit was found to be doing a large business in inferior lawn mixtures.

The remedy for the condition is for prechangers to buy only carefully labeled seeds, put up by reliable companies.



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TEXACO served America well at war. Now it returns to its old job of serving the world at peace. Knowing full well that his task of feeding the world demands increased harvests, the American farmer has turned to the tractor. And of all the products marked by the red Star and green T, there is none, therefore, of which we are more proud than Texaco Tractor Oil. The service this oil offers the farmer is protection and long-life for his tractor. The red Star and green T trademark is assurance that the high quality of the oil can be constantly depended on, that it will have the uniformly heavy body so desirable for tractor lubrication, that it will reduce all friction to a minimum. Fill your oil reservoir with Texaco, and see what new pep your motor shows. In wooden barrels and half barrels, 15, 33, and 54 gallon steel drums, and one and five gallon cans.



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