

MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

VOL. CLVII, No. 4
Whole Number 4158

DETROIT, MICH., SATURDAY, JULY 23, 1921

ONE YEAR \$1.00
FIVE YEARS \$3.00

The Rural Church as a Social Center

Rendering Timely Service Puts New Life in Old Institutions

By Earle W. Gage

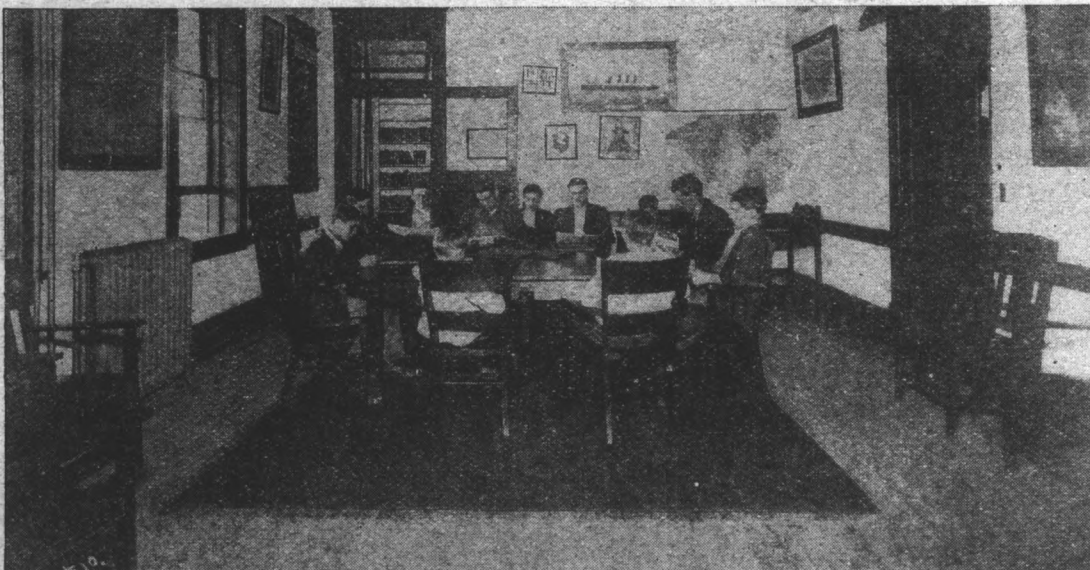
LAKEVILLE, OHIO, is a little village having the distinction of being the first in the country to erect a social center as a memorial to its service men. The minister, Charles M. McConnell, has put in five years in this community, and has developed what is one of the outstanding community centers in the entire country. The church is the social center of the neighborhood, and the pastor himself a leader in the sports of the boys and young men of his parish.

He has made himself and his church a vital factor in the life of the entire community. He found a man killed at a grade crossing. As there was no one else to do it, he aroused the commu-

as in hundreds of others, in the past generation, because the churches have adopted a program of standing by the farmer in bringing his economic conditions to a basis of comparative equality with other groups; it has a program of making living conditions in the country for both leaders and people satisfactory; it has a program of renewing again community loyalty and the development of the community spirit; it has enforced a program of absolute respect for interdenominational relationships and interests in a true Christianity, so

hands and power of a weak, narrow band of men and women. The leaders first must have the vision; they must be willing, nay eager, to put into practical effect the same modern program as has demonstrated its success in other modern fields. When the right kind of leader is on the job results are not slow in coming. When E. C. Reineke first took charge of the church at Byron, Minnesota, he found that the attendance at Sunday school had dwindled to seventy-five pupils. The men were so scarce as to be conspicuous, four to eight representing the male portion of his Sunday morning congregation. The situation was discouraging enough, but he went to work to find a cure. First, he remodeled his church and worked out a program for the community. New attendance at Sunday school has grown to more than two hundred, and fifty men may be depended upon for Sunday service. The community spirit started in the church spread over the entire countryside. Schools have been consolidated, electric lights installed in the village, and gravel roads put down.

There are several ways of getting next to the heart, not only of the people, but also of their problems. J. H. Singleton, of Dewey, Illinois, prepared himself for the rural ministry via a course of agriculture in the University of Illinois. Boys'



nity until the dangerous grade was protected. He found orchards being spoiled by the onslaught of a deadly insect. He got the farmers together, sent for the State Board of Agriculture expert, and saved the day for the orchards.

In other words, Pastor McConnell became the community leader in ministering the community needs, social needs of the young people, spiritual life of all, until today with its community house, motion-picture, directed games, the entire community has found a social and civic center in its churches, which has begun to burn new fires of spiritual life. It is an interesting fact that an abandoned house of another denomination was hauled twenty-two miles through the country in order to complete this Lakeville plant.

In the old New York town where I was reared, it was customary for the inhabitants of town and country to carry on a sectarian battle; those of one denomination would walk on one side of the street—those of the other on the opposite side. The glares of hate and envy that pierced the atmosphere between, as the opposing "saints of the Lord" glared at one another, would crush the greatest church denomination! And these two opposing forces wondered the while, why revivals and proclamations to the Creator went unanswered in their annual endeavors to bring the community to its knees. Can we expect or hope that those outside of the church will come into organizations of hate; or, that those who live in peaceful relations with their fellow men, will wish to become partners of an organization of envy and strife?

All this has changed in this Ohio community,



that the church need not be handicapped in rendering the service it should because of childish sectarian struggles.

The present plan proposes to make a beginning of the great task of replacing the church as one of the vital factors in the life of every community, and of assisting in the equipment of the church, so that it may render the service modern life demands of it. This plan is being perfected in the firm belief that American life without virile religious agency will be fundamentally weak and unsound, and that the safety of the progress of mankind depends upon the conservation of Christian Democracy by a competent religious organization. Not all country churches have caught the big ideal as yet, but demonstrations in social service about them will sooner or later prove living seed on fertile soil.

The great need today in our rural communities is for better leadership. We can not hope to have our country church advance as it should so long as its program and management is placed in the

and Girls' Clubs are specialties of his pastoral work. That his agricultural knowledge has been put to good account is demonstrated by the fact that he is now the county agricultural leader. This is an example of how a program of a modern rural minister is appreciated by the people and how the rural minister is appreciated and how the rural population may be vitally connected with the largest movements in local and national life.

A church that is "gluing and clamping, instead of splitting," is a little church in Iowa. It had declined until it could not pay only \$300 a year for a part of a man's time. Some good women conceived the idea of making it a social center. A right-minded rural preacher was found, and in less than two years it had found its place in the community and was paying the minister \$1,200 for all his time.

Another minister believed that no rural church could really prosper that did not make itself a community center. He captured the heart and the imagination (Continued on page 83).



Published Weekly Established 1843 Copyright 1921

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TERMS OF SUBSCRIPTION
One Year, 52 issues \$1.00
Three Years, 156 issues \$2.00
Five Years, 260 issues \$3.00
All sent postpaid
Canadian subscription 50c a year extra for postage

RATES OF ADVERTISING
55 cents per line agate type measurement, or \$7.70 per inch (14 agate lines) per insertion. No advertisement inserted for less than \$1.65 each insertion. No objectionable advertisements inserted at any time.

Member Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as Second Class Matter at the Post Office at Detroit, Michigan, Under the Act of March 3, 1879

VOLUME CLVII. NUMBER FOUR

DETROIT, JULY 23, 1921

CURRENT COMMENT

General Crop Conditions

UNDER present conditions seasonable crop information is of the greatest interest to both farmers and men engaged in that the season's crop will constitute the most important addition to the new wealth of the country for the current year.

As a means of getting up-to-date information with regard to crop conditions throughout the country at a period midway between the monthly government crop report, the Chicago office of the Standard Farm Papers, of which the Michigan Farmer is one, asked the presidents of the leading railways of the country and the editors of the Standard Farm Papers, to give a summary of crop conditions in their territory. The information thus received was released on Friday, July 15. In a general way the crop information contained in this exhaustive report substantiates the figures given in the July government report which was published in our issue of July 2. These individual reports show that everywhere corn is exceptionally good, and that small grains, particularly wheat and rye, will yield well, thus insuring the country with plenty of food with sufficient surplus to supply probable export demand. These reports show more or less spotted local conditions throughout the country with regard to moisture.

While staple crops, particularly cereals, promise an abundant yield throughout the country, the yield of perishable crops, such as fruit and potatoes, will be more or less spotted. These reports show that a normal acreage of potatoes was planted through the heavy producing sections of the country, but there is quite general complaint of a poor stand owing to weak seed or extremely hot weather just following the date of planting the late crop. This condition is quite general throughout the potato producing sections of other states as well as Michigan. Experience in former years when similar conditions prevailed, however, indicates that the plants in the poor stand of potatoes are likely to make better individual yield than where a full stand is present, and with a large acreage of late potatoes planted, a general poor stand will not be an unmixed evil as it is likely to obviate over-production of this perishable crop without reducing the total yield

to a point which will not meet the domestic demand for consumption.

One noticeable feature of these reports is the general statement that production costs are everywhere considerably below those of last year, showing substantial progress toward readjustment of the farm labor situation.

Live stock producers, who have been perhaps the hardest hit by the readjustment process, seem confident as indicated by these reports that the worst is over in their line of production and that the markets are likely to strengthen in the future to a degree which will warrant the conversion of the abundance of surplus feed which will be available on the farms of the country into live stock and live stock products as the best means of marketing it.

Altogether this crop report is most encouraging both from the standpoint of the farmers of the country and from the outlook for an improvement in general business conditions due to a substantial improvement in the economic prospects of American farmers.

Producers Will Sell Live Stock

THE Live Stock Marketing Committee of Fifteen held a session in Chicago last week for the discussion of plans for the formation of a cooperative live stock commission company. No definite plan was adopted at this meeting, but it is understood that the plans under discussion provide for the formation of a producer-owned and operated live stock commission company with branches at the leading markets, with the usual provision for profit sharing through patronage dividends. It is also stated on apparently good authority that the plan will provide for the handling of stockers and feeders, possibly through a subsidiary company, with provision for profit sharing by both buyers and sellers of this class of stock.

Another meeting of the committee has been announced for August 10, at which time it is probable that a definite plan will be announced. One of the important problems under consideration by this committee is that of orderly marketing. A sub-committee has made a careful investigation of the movements of live stock, particularly hogs, at the leading markets and of price levels in relation to seasonal receipts, in an effort to show the effect of seasonal and daily variations in receipts upon market prices. It is understood that this committee hopes to present a plan to lessen the variation in receipts, particularly the daily variation, as a means of preventing market gluts and the radical fluctuation in prices which accompany them. Studies of this kind are particularly constructive in character, and if feasible plans can be developed from them for the better stabilization of the market from day to day, most beneficial results will be realized.

Dividing the Dollar

"grist" of produce flowing from producers to consumers through the Detroit market. The members of this organization are largely of the class of produce merchants or commission men who buy from the carlot dealers and sell to retailers. They discovered that some of the more enterprising retailers were buying their supplies direct from the carlot dealers. This, of course, was bad for business and the big idea was developed to compel the carlot dealers to stop selling direct to the retailers under penalty of boycott. Our information indicates that the early development of this idea seemed

promising, in that when the carlot dealers were asked to agree not to sell to the retailers, all but two out of something more than fifteen of this class of dealers agreed to the proposition. It is said that instead of posting an unfair list, a blackboard was maintained on which the names of the "fair" dealers were posted, and that the names of the two firms who would not accede to the wholesalers' demands, namely, Edward Read & Son and Thierwechter Bros., did not appear on this list.

In the meantime the retailers complained to the local authorities and a grand jury investigation is being conducted by Justice Gordon, the result of which will be watched with interest by the consumers of Detroit, as well as the farmers who ship produce to this market. In the meantime, the dealers who were boycotted by the wholesalers report a most satisfactory business. It would appear that the net result of this big idea may be that the wholesalers' organization which sponsored it has taken a long step toward aiding producers and consumers to eliminate unnecessary middlemen who do not perform a service commensurate with the charge which they exact from the public. From this point of view their idea was a good one. The producers and consumers of the produce which they do not handle have need of that portion of the latter's dollar which they planned to take by means of this big idea.

Taking in a Partner

NOW that the consumption of agricultural products in this country has pretty well caught up with production, and strong rivalry is promised in the manufacturing field when other countries which are fitted only for manufacturing, get into stride, the chances for strong energetic young people to not only find pleasure in farm work but to find also the safest and surest source of income in the years ahead are greatly increased.

For this reason wise parents are more and more anxious that they interest the boys and girls in farm work. Juvenile agricultural clubs are doing much to stimulate the interest of the members in special lines of farming and too much importance cannot be given to these organizations in measuring the influences responsible for the renewal of community interest in the business of farming. Another means for creating in the boys and girls a real desire to remain on the farm is to make them partners in the farming business. Too often the younger generation is given a lot of hard work to do on the farm and little opportunity to share in the benefits. The partnership idea will help them to understand that their labor is of value and essential to the income of the business. The boy or girl will also come to understand his or her real interest in the property owned by the family. With such an understanding it will be difficult indeed to tempt them to the uncertainties of city life.

News of the Week

Wednesday, July 13.

THE Irish republican leader, D. E. Valera, goes to London to confer with government on Irish question. Harry G. Hawker, first aviator to attempt to cross the Atlantic, was killed when his plane descended in flames near London. The United States army will sell 250,000 surplus army shoes. Pageant depicting scenes from the legends of Pilgrim fathers were held in Boston Harbor at celebration of the tercentenary of the landing of the Pilgrims. It is reported that American citizens in the Philippines strongly favor the immediate appointment of General Wood as governor-general of the Philippine Islands. The Southern building of Washington

has been purchased by tenants who will run it cooperatively. Money is being loaned on the London market at four per cent. Labor troubles cause fighting in Tampico oil fields. Mexican troops have been sent to control the situation.

Thursday, July 14.

ACCORDING to a dispatch from Warsaw, Poland is nearing bankruptcy. A banking pool is formed in Chicago to handle live stock loans. The Oxford-Cambridge athletic team arrives from England to compete with American Eastern colleges. Despite the signing of the Irish armistice four persons were killed in Belfast riots. A public matrimonial agency has started in Vienna, Austria, for the purpose of bringing together fond hearts who, due to depressing economic conditions, might not otherwise find one another. A negro in Charleston, S. C., was hurled twenty feet through the air by a lightning bolt, landing on his head. He was uninjured. Greeks advance fifteen miles in their offensive against the Turkish nationalists. New United States wool tariff causes 750,000 pounds of western Canadian wool to be sent to Great Britain instead of the United States.

Friday, July 15.

FRENCH senate ratifies the Trianon treaty declaring peace between allied nations and Hungary. Two former German warships, the Ostfriesland and the Frankfurt, will be used by American battleships for target practice. Three hundred city of Chicago electricians strike for one dollar a day increase in wages. The Sharon Steel Company, an independent steel company, announces reduction of common labor wages to thirty cents per hour. Editors of country give President Harding a cabinet chair made from timbers of British revolutionary ship, Revenge, which was captured by the colonists. Henry Ford makes offer to government for a large nitrate plant at Muscle Shoals. Babe Ruth hits his thirty-third home run for the season. Mexican senate refuses a vote of thanks to United States Senator LaFollette for opposing military operations against Mexico. American Ambassador Harvey created a furore at an exclusive golf club in England by playing in his shirt sleeves. Despite terrific heat all Britishers wore the conventional sport jackets.

Saturday, July 16.

SECRETARY of the Treasury Mellon has exclusive evidence that Great Britain sought cancellation of foreign debts to the United States during Wilson administration. France celebrated Bastille Day, Thursday, the anniversary of the fall of the ancient prison which symbolized oppression and brought about the French Revolution. Japan accepts Harding's invitation to discuss disarmament, but does not accept the invitation to discuss eastern problems. Canadian Pacific Railway will furnish smoking compartments for women on all sleeping cars. The prosecuting attorney in Detroit is investigating the activities of the Wholesale Produce Dealers' Association. Dr. W. B. Smith, of Northwestern University's school of speech, believes six-months-old babies should speak plainly.

Sunday, July 17.

IT is reported that Henry Ford may purchase the Toledo-Fort Wayne Division of the Wabash Railroad. The deal for this was said to hinge on the outcome of the United States nitrate plant negotiations. German officers, who sank Canadian hospital ship during the war, are sentenced to four years in prison by German judge. A strong movement to allow the United States to maintain the initiative in world disarmament developed Saturday when the disarmament commission of the League of Nations met in Paris. Harden, prominent German editor, wants Silesia free. He says neither Germany nor Poland should get land. Polish leaders in Detroit say that one-fifth of the Detroit population is Polish. A state game preserve is planned for Gladwin county. United States makes first payment to Great Britain on war debt of four billion and a half dollars.

Monday, July 18.

HAIL to the depth of four inches falls in the streets of Merrill, Michigan. Mrs. Elizabeth Amacher, aged eighty-three, is one of the best amateur swimmers along the Chicago beaches. Captain Donald McMillan leaves Maine port for Arctic exploration trip. Admiral W. S. Sims is vindicated and commended by the senate committee which investigated the Sims-Daniels controversy. Japan is still undecided as to full acceptance of President Harding's invitation to a conference for disarmament.

Fertilizing Light Soils for Fall Grains

What Michigan Farmers Have Learned About the Needs of Wheat and Rye on These Soils.

By M. M. McCool

MR. S. A. FOSTER, near Okemos, is one of the most enthusiastic lime, acid phosphate and green manure users on light soil in the state of Michigan. Several years ago he put on several soil fertility tests cooperatively with the soils section of the Michigan Agricultural Experiment Station. In these were used marl, acid phosphate, raw rock phosphate, barnyard manure reinforced with phosphate and crop residues. As a result of these tests he states that he is able to grow clover on land that for many years previously refused to produce it and also excellent crops of alfalfa, rye and potatoes. He adds marl, acid phosphate and turns under sweet clover to build up and maintain the fertility of his land. In a later issue his unusual and somewhat original methods of farming will be outlined in this paper.

The rather light soil of John Wheating, near Imlay City, responds vigorously to lime and manure, reinforced with acid phosphate, and where manure is not added, nitrate of soda, acid phosphate and lime are profitable, as shown by marked increase in yields of wheat as well as corn.

On land owned by B. C. Gilbert, of Cheboygan; Paul Snell, of Clarion; Charles Kinser, of Levering, acid phosphate and nitrate of soda give a marked increase in the yields of rye. I could cite several other instances in different parts of the state where light soils have responded very satisfactorily to the use of lime, acid phosphate and nitrate of soda, that is where manure is not used and where legumes are not grown regularly on them.

There are a number of good reasons for vigorous response on the light loams to these various substances. As has been called to the attention of the

farmers of Michigan in our publications from the experiment station, we have collected a large number of samples of soil representing large or predominating soil classes or kinds in the state, and analyzed them for the amount of plant food elements that they carry. These light groups of soils especially those that have been under cultivation a number of years as a general proposition are deficient in humus and consequently nitrogen, and usually contain less than one thousand pounds per acre of phosphorus and as shown by a previous article on lime, many of them are in need of this material.

The information that we have been able to obtain by this method and also by numerous tests or demonstrations carried on cooperatively by county agents in their respective counties on privately owned farms, as well as in some instances on county farms, has enabled us to make rather definite statements or recommendations with respect to their fertilization. We should call the attention of the reader to the fact, however, that there is still much to be learned concerning the most profitable methods of increasing yields of crops on the soils of Michigan. In other words, I desire to state that the soil problems of Michigan have not all been solved and it is reasonable to assume that so long as we have agriculture we will have soil problems. In the light of our present information, however, we are justified in calling the farmer's attention to certain things.

Where legumes such as clovers, soybeans or alfalfa are not grown regularly or at rather short intervals, fer-

tilizers carrying a high percentage of nitrogen and phosphoric acid are giving results where seedings do not follow. We believe a mixture carrying two per cent of ammonia and twelve per cent of phosphoric acid at the rate of two hundred and fifty or more pounds per acre is very promising for wheat and rye and this should be added by means of the fertilizer attachment on grain drill at seeding time.

In addition from seventy-five to one hundred pounds of nitrate of soda should be added early in the spring, or at the time growth begins. This may be spread broadcast by hand. The user's attention should be called to the somewhat lumpy condition of the nitrate of soda in some instances and where such happens it should be pulverized somewhat before it is spread. The reason for delaying the application of nitrate of soda until spring is that nitrates are removed or washed from the soil by rainfall when it passes through. Thus it is advisable to apply this material when the plant or crop is ready to make use of it. Where we have applied nitrate of soda in the fall the results have not been so satisfactory as they have been when it was applied in the spring. Out of twenty-four trials from the use of nitrate of soda on fall-seeded grains, that is where applied in the spring to light soils, as spoken of above, with no exception very profitable results were obtained.

Where stable manure is available the land may be dressed with it in the late fall, winter or very early spring and thus do away with spring application of nitrate of soda unless the soil is in very poor condition or manure is

applied in rather large quantities. In addition to stable manure, however, it certainly is a profitable procedure to apply from two hundred to three hundred pounds of sixteen per cent acid phosphate with the fertilizer attachment when fall grains are seeded.

Potash Aids in Establishing Seeding.

It has been reported by the famous Rothamsted Experiment Station of England, as well as by certain others in this country, that the legumes respond more vigorously to applications of potash to the soil than do the small grains or cereals. Our investigations in numerous instances in southwestern Michigan show similar results. In fact, in several instances this season the use of one hundred pounds of potash along with the acid phosphate and nitrate of soda has saved the seedings of clovers. On these projects the clovers were seeded early in the spring on the fall-sown grain. Moreover, the indications are that this material may be used profitably in the establishment of alfalfa unless stable manure is applied in adequate quantities.

Until we have obtained further information from its use it appears that six to ten per cent of potash should be included in the mixture at time of seeding the fall grains, that is, where a seeding of clover or sweet clover is to follow. This, then, would result in an application of mixed goods carrying a small percentage of nitrogen and a rather high percentage of both phosphoric acid and potash. If one mixes the fertilizer at home, about thirty pounds of nitrate of soda, two hundred and fifty pounds of acid phosphate and from fifty to one hundred pounds of muriate of potash should go on each acre in the fall and in addition fifty more pounds of nitrate of soda should be applied in the spring.

Is it Time to Buy Coal Now?

THROUGH the public press, coal consumers during the last three months have been requested, implored, besieged, perhaps beguiled, to buy coal immediately on the ground that unless they do, another coal famine similar to that of last summer and fall, will occur. Thus far the consumer has not responded as he considers the price too high and believes that it will be no higher later on. Are the people "wobbling right" on the matter or are the operators, jobbers and dealers correct in their view?

Normally it is advisable to buy coal early, in April even, as prices tend to advance during the summer enough to offset the interest on the investment in coal. These old-time rules of seasonal changes, however, have not been working well in the last few months, with the exception of these commodities which are thoroughly deflated.

Coal prices are still high, nearly one hundred per cent higher at wholesale than in 1914 so that its price outlook is not so certain as it would be if coal prices were down to rock bottom.

Some of the reasons given why coal will advance this fall are:

1. Demand will increase beginning in August when consumers wish to lay in their winter supply.

2. Prices are low now because of the dull demand. They will be certain to advance when demand increases.

3. Railroads will be unable to carry coal as rapidly as consumers will demand it partly because of the large percentage of bad order cars. Coal is a bulky material. Every fifth car and every third ton which the railroads haul is coal. There is said to be a shortage of 40,000 coal cars capable of carrying 100,000,000 tons of coal a year.

4. The cost to the consumer cannot be reduced further at present because mine prices are already below the cost of production and miners' wages are fixed by an agreement, to which the government was a party, which runs until next April. Furthermore, the miners are one of the most thoroughly organized of the industrial groups. Jobbers' handling charges are small, around fifteen cents per ton as a rule. Freight will not be reduced soon, as railroads will scarcely make the government's guarantee on income, even with the twelve per cent wage cut. Many dealers have reduced their handling charges to a minimum in order to start consumers to buying and if they have not reduced them already, they are not likely to when the autumn demand appears.

5. About twenty per cent of British mines have been damaged during the

mine strike as a result of failure to keep pumps at work and it will be some time before they can be made to produce again so that the export demand may be larger than usual.

6. Production of bituminous coal during the first half of 1921 is at the rate of about 385,000,000 tons a year, although average annual production in the preceding five years has been about 530,000,000 tons.

On the other hand, some very good reasons can be given why coal will not advance. Some of them are:

1. Dealers have large supplies of coal purchased at high prices which they are anxious to have taken off their hands even at price concessions.

2. We can get along with less coal than we have been using. Industries are stagnant so that their coal requirements are greatly reduced. In 1917

(Continued on page 72).



The George B. Horton Farm at Fruit Ridge, near Adrian, will be the starting point of the Michigan Farmers' Auto Tour. The tourists will gather there Sunday, August 7, and on Monday they will take part in a big Grange and Farm Bureau Celebration. At the farm one of the chief subjects will be Farm Forestry, the Horton Farm forest being one of the best in the country. Contests and entertainment will make these two days busy ones.

ACTIVITIES OF FARM BUREAUS

Latest News From Local, State and National Organizations

BIG CROPS NEED OUTLETS.

MR. E. M. POLLARD, of Nebraska, speaking for the National Farmers' Union, said the prospects throughout the middle west are for the largest corn crop ever grown, with over a billion bushels of old corn to carry over. There is also a good wheat crop in prospect. With these large crops in sight, unless something is done the financial condition of the farmers will become worse than at present. They need two things: Money to tide them over and an outlet for their surplus products. He recommended that the limit on farm land bank loans be raised to \$25,000.

WOOL POOL NEARING END.

THE farm bureau wool department is nearly through with the 1920 pool. About 250,000 pounds remain to be sold. It will be cleaned out at an early date, according to the department. Practically no wool of the 3,500,000 pounds pooled could be sold until February, 1921, because of the mills shutting down. Since then wool has been sold at the rate of more than a carload a day for nearly six months. The magnitude of the pool and the bookkeeping task of closing it up is almost beyond comprehension, says the wool department. A. E. Illeden, chairman of the State Farm Bureau wool committee, and a member of the State Farm Bureau executive committee, is assisting the department to close out the 1920 pool at the earliest possible moment.

With the 1921 pool moving toward the third million, wool department

headquarters at Lansing is a busy place. Due to the development of a special system of wool pool bookkeeping last spring, the 1921 pool is in closing-out shape every day, according to the department.

Due to the harvest season, there has been a temporary lull in wool pooling work, says the farm bureau. Where farmers have time for a grading day, graders are on hand. Otherwise, several of the teams are being operated on a day to day basis. Resumption of full speed operations is expected by August 1. Grading dates for the week of July 25 are:

Monday.—Rogers City, Croswell, Kalamazoo county.

Tuesday.—Onaway, North Branch, Kalamazoo county.

Wednesday.—Cheboygan and Lapeer.

Thursday.—Gaylord and Imlay City.

Friday.—Lewiston.

ECONOMY IN MARKETING.

WOOL growers are beginning to realize the importance of economy of distribution of their product as well as economy in production," says C. J. Fawcett, director of wool marketing for the American Farm Bureau Federation, in commenting on the tremendous strides forward within the past month by eighteen farm bureau states having wool pools.

"Farmers the nation over are finding that it is cheaper to collect and concentrate wool through their own organizations and sell it to mills direct through growers' sales agencies," says Mr. Fawcett. "One great step has been taken in way of economy of dis-

tribution. We are beginning to realize that if our methods of marketing agricultural products are to be improved, it must be by the efforts of our own hands.

"The direct-from-grower-to-consumer method of marketing, if followed consistently through a period of years, will demonstrate that the grower is entitled to, and may retain, a larger portion of the consumer's dollar without materially advancing the retail price of finished products. Such a method is surely based upon sound principles and should meet with the approval of all."

ASKS TWO-CENT TARIFF ON BEANS.

ATWO-CENT tariff on beans is necessary if the American grower is to be protected against Japanese competition, says the State Farm Bureau, whose state executive committee on July 12 addressed a letter to the Hon. Joseph Fordney, chairman of the house ways and means committee, and to Michigan senators and congressmen asking them to seek retention of the two cents per pound emergency tariff ruling on beans instead of the one and a quarter cents per pound as proposed by the permanent tariff schedule.

Lower labor costs and a lower standard of living would enable Japan to do great damage to the American bean market under a one and a quarter cent tariff, said the farm bureau in the letter. The two-cents tariff, in the opinion of the farm bureau, is equitable and will afford the American farmer sufficient protection. The letter sent the Michigan congressmen stated that

it was in behalf of 100,000 Michigan farmers, many of whom are heavily interested in beans.

Michigan is the leading bean state of the nation, producing 4,250,000 bushels in 1921 as against 3,868,000 bushels in California, which ranked second.

WOULD HAMPER COOPERATIVE MARKETING.

AN attempt to strangle farmers' cooperative grain marketing associations by shutting off their right to maintain private wires and to enjoy leased wire market information and quotation service is now on foot in congress, says the State Farm Bureau, whose executive committee on July 12 addressed a letter to the Michigan delegation in congress, asking them to prevent enactment of a senate amendment to the Capper-Tincher grain bill which would permit only grain dealers in the great contract markets, such as Chicago, Toledo, Baltimore, Minneapolis, and such cities, to maintain private and leased wire market news service.

The farm bureau declares the amendment is a direct attack on the farmers' cooperative grain marketing organizations, aiming to render them impotent by taking away legitimate leased wire marketing information and quotations for which they are willing to pay.

Michigan virgin wool cloth is best by test. A woolen mill in Indiana finds that Michigan virgin wool cloth stands a pull of eighty-five pounds; shoddy fifteen pounds. "Al-wool"—part shoddy—is little better.

LATE AGRICULTURAL NEWS

FARMERS' CLUBS SHOULD AFFILIATE WITH STATE ASS'N.

MRS. I. R. JOHNSON, of Rushton, Michigan, secretary-treasurer of the State Association of Farmers' Clubs, would be glad to correspond with any clubs not yet affiliated with the state association, or with any person who would like to know how to organize a club in their community.

ANNUAL FARMERS' DAY AT M. A. C.

AGRICULTURAL leaders and heads of departments at M. A. C. are putting the finishing touches on the program for the Fourth Annual Summer's Day, to be held at the college on Friday, July 29. Live stock in the M. A. C. barns is being spruced up for the occasion and indications are that the 142 acres of experimental crop areas—largest ever planted in Michigan—will look their best.

Visitors who journey to M. A. C. for the day will see their big state farm at the height of the growing season. Farmers are expected to take advantage of the lull in the grain harvest for a little motor trip to East Lansing. Besides the educational value of inspecting the projects of the college farm, they will be able to view the campus, which in midsummer is one of the greatest beauty spots in the state.

According to plans now being laid, a sufficient number of guides will be provided so that visitors will have no trouble in finding their way to the

various barns and crop plots. Those with automobiles may drive directly to whatever part of the farm they wish to see. The basket lunch on the campus at noon is expected to give a family touch to the affair.

THE NORTHEASTERN MICHIGAN AUTOMOBILE TOUR.

THE trip planned for the second annual northeastern Michigan automobile tour, which leaves Bay City on August 8, will take the tourists through practically all of the state parks recently established in that part of Michigan. Those wishing to participate in the tour should make application as soon as possible with the Northeastern Michigan Development Bureau, Bay City, Michigan. While it is planned that those making the trip are to carry their own equipment, still, if it is desired, the management of the tour will make reservations either at the hotels or at private residences for those who prefer not to camp out, or for those who desire to camp but have no tents. Equipment can, however, be rented from the Development Bureau at a nominal sum. In writing advise the number who are going and whether you desire reservations to be made or not.

NEW GOVERNMENT TRUCK REPORT.

THE United States Department of Agriculture has investigated motor trucks on corn belt farms, and finds that out of eight hundred and thirty-

one farmers who own trucks, fifty-seven per cent of them have the one-ton size.

Two thousand seven hundred seventy-seven miles per year is the average mileage covered, and the cost per mile was between sixteen and seventeen cents.

One-half of the truck owners also have used tractors.

It is interesting to note that seventy-eight per cent of these farmers say their trucks reduce the expense for hired help, and on those farms where there is a reduction, the operators estimate that it amounts to \$209 per year on the average.

TO INCREASE POSTAGE RATES.

REPORTS from Washington indicate that the senate finance committee is considering increasing the rates on postal cards from one to two cents, and on letters from two to three cents to offset the proposed repeal of the excess profits and other existing taxes. The rate of two cents for postal cards and three cents for letters, in effect during the war, yielded approximately \$150,000,000 additional revenue annually, it is said.

IS IT TIME TO BUY COAL?

(Continued from page 71).

they consumed 176,365,000 tons of bituminous coal out of a total production of 551,190,000 tons. Railroads used 156,141,000 tons in 1917 and they are using less coal this year, if the number of cars hauled is a criterion. The

price is too high and the public will remain on a buyers' strike until it becomes more reasonable. This is especially true because of the large amount of unemployment. Farmers will make use of other fuel whenever possible.

3. Export trade is a minor factor and usually takes only three to five per cent of our total production.

4. Mine capacity has been greatly enlarged in the last few years as a result of the high prices. Although average annual production of bituminous coal in the past five years has been about 530,000,000 tons, in the five pre-war years 1910-1914 it averaged only 435,000,000 tons. The number of coal mines increased from 5,776 in 1913 to over 11,000 in 1920. The industry may have been over-developed during the war boom. In that case a moderate increase in production during the next six months might suffice for our needs.

5. Notwithstanding their agreements, miners may decide to accept wage cuts in order to help in reducing prices so that consumers will buy and enable the mines to operate.

It is difficult to balance up these two sets of factors. There does not seem to be much cause for apprehension of a runaway market unless the railroads fall down on the job, but on the other hand, it does not seem likely that prices will go much lower in the fall months than the level reached in July. Prices are now weak and still trending downward. There may be a moderate advance beginning in August but the question is as to the level from which the advance will start.



Root Rot of Sugar Beets

By G. H. Coons

THE sugar beet is a remarkable plant in the wide range of soil conditions to which it adapts itself. Given its best chance, let us say on a sandy or clay loam, and with proper rotation, plant diseases are of secondary importance with this crop. In this regard it is like corn, which, while attacked by a few parasitic fungi for the most part gives the farmer who uses good seed and plants the corn in a proper rotation, no concern from the score of parasitic attack.

But field observations in Michigan, and the abundance of letters which are now coming to the station, indicate that many farmers are experiencing trouble with sugar beets and they are puzzled over the dying of beets in this spot and that in the field. They are perplexed at the variation in stand which occur, and they are fearful of a repetition of the "cracked beet" condition which occurs periodically in their fields.

The condition, "Black Root" or "Root Rot" in beets is not a simple one. It is a condition brought about by a number of parasitic fungi and perhaps by some bacteria, and it varies in its manifestations because of the variation in soil temperature, soil moisture, soil nutrients, etc.

What is Meant by Parasite?

The parasitic fungi which attack the sugar beet are thread-like forms, too small to be readily seen with the unaided eye. Occasionally with some forms they can be made out as a thin cobwebby growth covering the affected plants. Everyone is familiar with the web-like masses found on leaf mold in the woods. Here we are seeing fungus threads clumped together in quantity sufficient to make them evident. The concept I wish to bring to the reader is that the soil, defying observation without the microscope, is shot through and through with fungi—molds—most of them harmless to crops, some of them pernicious. These mold forms live in the soil—in every soil—carry on their life processes and complete their life cycles. They produce their seeds ("spores"), which are minute bodies capable of being blown about or washed from place to place.

These fungi or molds are anywhere but not everywhere. Some when once introduced can persist in the soil; others are introduced yearly with the seed. For the most part they are beneficial, assisting the soil bacteria in the great leveling and transforming processes. There are some, however, which not only attack the dead stuffs of the soil, but also attack the living plants. These are the parasites which cause loss to the farmer. To the farmer they are the weeds, which instead of robbing the soil of moisture and nutrients, use the plants as the soil and steal their living from the very plants the farmers wish to conserve.

The Cause of "Damping-off."

When the sugar beet seed is planted the first danger which it confronts is "damping-off." The name well fits the disease, referring as it does to the water relation which induces it. The actual cause of the damping-off is a parasitic fungus of some sort (there are several which produce it) but the predisposing factor is the soil moisture.

One of the common causes of damping-off is the fungus *Phoma betae*. This fungus is carried to the field on the seed and if the beet is checked at all in its growth, if the tissues do not harden rapidly, the root rots and the beet topples over.

Common, also, in producing damp-

ing-off is the fungus *Rhizoctonia*, well known to farmers because of its bad effects on potatoes, and what is said here about beets can almost be applied to any crop, except the cereals, since the *Rhizoctonia* fungus attacks so many of them and with almost the same train of symptoms.

Wet Season Favors Trouble.

The wet conditions induce a succulence in the young seedling and bring about conditions in the soil which break down the normal resistance of the beet so that these parasites get the upper hand. The blackening is a secondary effect, a reaction of the killed host cells to the air, doubtless. Anything which kills the root will lead to the secondary blackening.

When sugar beet seed is planted and farmers use plenty of seed to insure a stand, they are crowding the plants and inducing competition which leads to rank growth, rather than sturdy growth. The importance of prompt spacing and thinning is, of course, manifest.

If the seed is planted at the right time, the beets establish themselves and make a sturdy growth. If extremely wet condition comes on, then "damping-off" is serious.

Good Drainage Important.

Several considerations influence the amount of loss by damping-off. If the seed is free from the fungus *Phoma betae* one great source of loss is eliminated. It is the writer's opinion that a great stride in improving beet growing was made when America began to produce her own seed. American conditions during the growing season are less favorable to the development of the fungus, *Phoma betae*, than are the European conditions. But a large part of the damping-off comes from fungi native to our soils. Since the excessive wetness of the soil brings about the condition, those lands so situated as to handle the water suffice least. The nature of the subsoil determines this. Most soil devoted to sugar beets in Michigan needs tile drainage. The prompt removal of excess water and the balancing effect in the moisture relations which tile bring about make this almost an essential to successful culture in some localities.

Cultivate After Rains.

The effect of heavy rains and excess of moisture is to form a crust on the soil. This must be broken up as soon as the rows can be followed if damping-off is to be avoided. Just what influence stirring the soil has on the damping-off fungus is not known, but the aeration and the balancing of the moisture relation seem to plan an important role in the saving of the stand.

Here may be mentioned the beneficial effects of fertilizer in bringing about a good stand of healthy beets. It is the common practice among growers to put fertilizer in the row with the seeds. The writer has seen a number of fields where the effect of this fertilizer was plain, not alone in the size of the plants, but in the vigor and freedom from damping-off. The fertilizer is not a cure, but stimulating as it does the formation of sturdy plants because of the food materials so readily available, the beets more successfully pass this great danger period.

Next Comes Root Rots.

After the beets pass the "damping-off" stage, other troubles confront them. These are in the nature of "black root" at the tip, and crown rot. These troubles are, for the most part, "hangovers" from the seedling stage. They represent attacks temporarily re-

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Name of Tractor	Summer	Winter
Sandusky	Heavy En-ar-co	Heavy En-ar-co
Bates Steel Mule	Extra Heavy En-ar-co	Heavy En-ar-co
Liberty	Extra Heavy En-ar-co	Heavy En-ar-co
Twin City	Extra Heavy En-ar-co	Heavy En-ar-co
International	Heavy En-ar-co	Heavy En-ar-co
Mogul	Heavy En-ar-co	Heavy En-ar-co
Titan	Heavy En-ar-co	Heavy En-ar-co
Moline Universal	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Avery 5-10	Heavy En-ar-co	Heavy En-ar-co
Avery Motor Cultivator	Heavy En-ar-co	Heavy En-ar-co
Avery 8-16 and larger	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Eagle	Extra Heavy En-ar-co	Heavy En-ar-co
Allis-Chalmers 18-30	Extra Heavy En-ar-co	Heavy En-ar-co
Big Pull	Heavy En-ar-co	Heavy En-ar-co
Parrett Model H	Extra Heavy En-ar-co	Heavy En-ar-co
Fox	Heavy En-ar-co	Heavy En-ar-co
Turner Simplicity	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Kardell Utility	Heavy En-ar-co	Heavy En-ar-co
E-B	Heavy En-ar-co	Medium En-ar-co
Wellington	Heavy En-ar-co	Heavy En-ar-co
Hart-Parr	Extra Heavy En-ar-co	Heavy En-ar-co
Wallis	Heavy En-ar-co	Medium En-ar-co
J. T.	Extra Heavy En-ar-co	Heavy En-ar-co
Rumely Oil Pull	Heavy En-ar-co	Heavy En-ar-co
Russell	Heavy En-ar-co	Medium En-ar-co
Toro	Heavy En-ar-co	Heavy En-ar-co
Victory	Medium En-ar-co	Medium En-ar-co
Shelby	Extra Heavy En-ar-co	Heavy En-ar-co
Cletrac(Spring) Med. En-ar-co	Extra Heavy En-ar-co	Light En-ar-co

These Motor Manufacturers Approve En-ar-co Motor Oil

Name of Tractor Motor	Summer	Winter
Waukesha (Gasoline)	Medium En-ar-co	Medium En-ar-co
Waukesha (Kerosene)	Heavy En-ar-co	Heavy En-ar-co
Erd	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Le Roi	Heavy En-ar-co	Heavy En-ar-co
Beaver	Heavy En-ar-co	Heavy En-ar-co
BULLDOG	Extra Heavy En-ar-co	Heavy En-ar-co
Hinkley	Heavy & Extra Heavy En-ar-co	Medium En-ar-co

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Light—Medium—Heavy—Extra Heavy	
Wood Barrels.....	\$.80 per gal.
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10 gal. Cans.....	.95 "
5 gal. Cans.....	1.00 "
1 gal. Cans.....	1.15 "

covered from, which start again when the beet is put under slow-growing conditions.

The black root caused by *Phoma betae* may be present in unnoticeable form, ready to start when the beet root has a set-back. The scars of *Rhizoctonia* attack are common on beets, apparently healed over, but these scars restricting the growth locally bring about the "cracked beet" condition in which the top is cleft and the rotting of the crown follows. The factors essential for this latter condition seem to be the primary attack on the beet causing the scar, and then a sudden surge of growth such as takes place when a dry spell is broken and abundant water supplies are available. The cracking is merely a mechanical breaking of the bonds which hold the tissues from expansion.

Other fungi, such as the common damping-off fungus (*Pythium debaryanum*) attack the beet and this form either kills the beet outright or attacks the tap root and leads to death later on, or at least to sprangly beets of small size and low quality.

But, through it all, the water relation is paramount in deciding whether

the fungus or the beet gets the mastery.

One other factor needs to be noticed. Those farmers who follow beets with beets have the most trouble. The second year they usually find the root rots and the leaf spots present in intensified form. To follow beets with beets is taking a risk which makes the operation pure speculation. Fields may become foul with disease germs, just as they become foul with weed seeds.

Since *Rhizoctonia* is so important as a fungus causing damage to so many crops, a little may be said about the place of beets in the rotation. In short, may not the preceding crops influence the succeeding ones if the various crops are subject to the same disease. Years ago it was demonstrated that when beets followed potatoes, or vice-versa, scabbiness followed. We are just beginning to realize that this relation holds for beets and the *Rhizoctonia* or Black Scurf fungus. Now practically all the crops, except the cereals, are subject to *Rhizoctonia* attack. It is an established practice in certain beet regions to follow corn with beets. There must be a reason for this, and the effect of a crop like corn in starv-

ing out *Rhizoctonia* and thus leading to a more safe soil for beet planting must be considered as one factor in leading farmers to this particular rotation. It would certainly seem to be preferable to following sod with beets or following some legume. This is a matter open to study by the farmer himself and consideration of the fields in his neighborhood over a series of years will let him determine the wise course to follow.

We may now summarize the points of this article. The sugar beet seed may carry disease, but no method of treatment is practical. The disease may come from a soil source. The utilization of poorly drained soil, the lack of prompt and frequent cultivations may favor the fungous enemies. Lack of food materials to start a vigorous growth may favor the parasites, as does also over-crowding of the plants, such as comes from late spacing and thinning.

The first thing a farmer must do is to drain, and with valuable beet land open ditches are not economical so he must tile drain. This is imperative with soil which has a dry subsoil and the accompanying hardpan. He should

plow deeply. Cultivation must be started early to break up the clods.

A rotation, wisely chosen, in line with the best practice in his district, should be used. A sugar beet is subject to the diseases which come from the debris of a preceding crop.

During the summer, the farmer's ideal should be to secure a steady, even growth. The only way he can secure this, given well drained land, is by frequent cultivation, long continued. In general, authorities state, cultivation stops too soon.

With the present crop, the giving of the sugar beets the best of care, along with the conservation of the soil moisture and the establishment of proper aeration, are the practical measures by which the farmer may bring through a planting which even now looks to be in bad shape.

But with another year, the beet grower must realize that the sugar beet can't do everything and can not win against too heavy odds. Make the ground fit for the beet and the opening sentence of this article will hold true. Then sugar beet growing for the farmer who practices modern culture will be as safe as corn growing.

Mid-Summer Poultry Reminders

It is about time to isolate or kill the roosters and produce infertile eggs.

Then the eggs will suffer less injury when laid in a hot poultry house. If any stolen nests are found many of the eggs can be tested out and possibly used for baking. Fertile eggs in hot weather will increase the chances of spoiled eggs. The hen with a stolen nest may bring off chicks when they are neither desired nor profitable to raise.

Many city buyers have still neglected to put down eggs in waterglass for winter use. If you have fresh infertile eggs for sale you can explain their merits and often sell orders of fifteen or twenty dozen for waterglass preservation. Such eggs should be worth at least five cents per dozen more than the grocer will pay for the general run of eggs. Just say, "We are getting so much for eggs," and state your price. You will not be considered a profiteer for asking a fair price for fresh, graded and infertile eggs.

Growing stock need the early morning hours on the range. Then it is cool and many bugs will be resting and easily caught. Later in the day the birds are driven to the shade. The

chicks are also very thirsty when leaving the colony house after a hot night. If the poultry are not to be freed soon after sunrise it pays to place a pail of water in the house the night before so they can have an early morning drink. Water is very necessary to poultry growth and a large flock consumes more than might be expected.

It is too early to cull the farm flock intelligently. Some hens may show definite signs that they should be marketed but if too many of the hens are sold in July it may mean the selling of some hens that are valuable as layers and breeders. Some time in August is usually early enough for the farmer to begin a thorough culling of the flock. Of course, the experts seem to make a few errors at this season of the year, but there is a great variation in the skill of different breeders when it comes to culling a flock.

Every poultryman who has not witnessed a culling demonstration should take advantage of such an opportunity when it is offered. We can study pictures of good hens and read about the points of difference between culls and good layers. But nothing equals the

chance of handling the birds under the instruction of a skilled man. The mind instantly photographs things that are worth remembering and the touching of the birds registers information that is not soon forgotten.

The selling of eight weeks' old stock is rapidly increasing, but seems very largely confined to Leghorns. Many buyers like to obtain new stock without the worries of incubation and brooding. At eight weeks of age the birds need no brooder and with good care they are bound to live and grow. It seems as if breeders with plenty of equipment might make a little more money by raising stock for this trade. It may prove a good income producer between the sales of hatching eggs and more mature breeding stock.

Poultry manure is very rich to be applied directly to garden plants and may do them injury. A light dressing of poultry manure is very good for a lawn. When dry it is quite free from odor and it soon works down around the roots of the grass where it stimulates the growth of grass plants but does not give the lawn the appearance of being strewn with manure.

One of the greatest advantages of

the light breeds is the fact that they do not often become broody. The owner of a large flock of the heavy breeds may be breaking up as many as fifty hens at a time and have to remove thirty or forty from the nests in one night. It takes time and the hens must be penned up the first night on the nest or they are more difficult to break up. The work is simplified by having a broody coop in each laying-house and making the rounds of the nests right after supper on every summer night.

Broilers are a sideline crop and often the sooner they are marketed the better the price, the smaller the feed bills and the better the range for the remaining pullets. It pays to make arrangements with local dealers in advance of the time the birds will be ready. Producers near small towns usually have to ship their broiler stock to cities. A fat juicy broiler is a wonderful delicacy that is not yet appreciated by many city buyers. Unless a farmer has a lot of broilers I am inclined to think it pays to enjoy a good portion of them at home. They surely taste better than corn beef, and other high-priced canned meats.

OUR SERVICE DEPARTMENT

TRESPASSING ANIMALS.

What right have we when B always lets their pigs run on our farm, regardless of the damage they do?—H.

H. can sue for the damages resulting from the trespass, or take the pigs up as strays and have them put in the pound or advertised under the statute. J. R. R.

DAMAGE FROM DRAINS.

The county drain commission put sixty-four rods of two-foot tile, and sixty-four rods of open ditch across my farm. Every time it rains it floods me. He will not repair it. What can I do about it?—M. A. B.

If the complaint is that the town by the construction of the ditch threw water on the plaintiff's land that did not go there before, he has a right of action for the injury. If his complaint is merely that the ditch is not large enough to take care of the water he is

no worse off than if there were no ditch at all; and his only remedy is to circulate a petition to increase the capacity of the drain.—J. R. R.

CLOSING DITCH.

We have a ditch from five to six feet at top, running between our land and the neighbor along the line on our side, which we both had to use before, but now there is a big county drain put in last fall at the lower end of our own and his land, cutting off all the water on our side, but now only his water runs into the small ditch and all the way through our farm is the big drain. Now, if I closed this ditch, as I don't need it any more, could he come on me for damages, for he would have to make his own ditch directly into the county drain which is only a short distance. Would it be different if he or the one before him helped to make this ditch years ago? I would like to close up this ditch for it is nothing but a damage to me now. H. J. M.

If the ditch had not been in use for

more than fifteen years there might be some doubt on the point in the absence of any writings fixing the rights of the parties; but a use for that time under a claim of right would establish an easement, regardless of how it originated, in the absence of proof that it was under a lease or license.—J. R.

TITLE TO SHEEP ON SHARES.

A leases to B for a term of years a flock of sheep. Each claims the other should pay the tax on the sheep in the absence of agreement thereto. Who is the owner of the sheep for purposes of taxation.—E. D. W.

The duty to pay the taxes is on the party owning the sheep; and that depends on the contract. A contract of sale of sheep to be paid for at a later date, not in money but in sheep, would be perfectly valid; but not very desirable to the seller, because of the difficulty in making certain the character of the sheep to be received in pay-

ment. If it is a lease title remains in the lessor.—J. R. R.

COW DRYING UP.

One of my cows is not due to be fresh for three months, but is drying up. I feed plenty of fodder and for grain I take about four sacks of corn and two sacks of oats and have them ground at a time. Sometimes I think I am feeding too much corn. But this grain feed makes the other three cows give more milk, so I can't understand why this cow dries up. G. W. M.

It is hardly proper for me to express an opinion in a case like this where I cannot have the privilege of making a personal examination. It certainly is strange that the cow is drying up when she usually has been so persistent a milker. It is barely possible that she will freshen before you think. Your ration is somewhat deficient in protein and I would recommend that you add to this two pounds of oil meal per day for each cow.—L.

HARDINESS OF YOUNG TREES.

OWING to tendency of young trees to grow late in the fall there is great danger from winter injury. If the trees enter the winter with well ripened, mature wood they can withstand a much greater degree of cold without injury than when the branches are in a green, sappy condition, caused by a late growth.

By planting cover crops in the orchard late in the summer or early in the fall, it is possible to stop growth in the early fall, which will permit the wood to become thoroughly ripened and mature. In the east such cover crops may be planted so as to live through the winter, and possibly be turned under in the spring and used as green manure. These crops utilize in their growth a large amount of soil water up to the first frost, and tend to dry the soil. This reacts on the trees, checking growth and inducing early ripening of the wood.

The ideal cover crop starts promptly into growth as soon as planted, thus insuring an even stand to check out weeds. It will therefore insure a heavy ground cover for the winter, acting as a protection to the roots, serving as a protection against thawing and freezing.—E. W. GAGE.

BORDEAUX MIXTURE.

I would like information and instructions for making a home-made Bordeaux mixture.

Ottawa Co.

J. L. H.

The standard Bordeaux mixture which is commonly used on grapes, potatoes and other plants for the control of fungus diseases, is made of four pounds of copper sulphate, four pounds of stone lime and fifty gallons of water.

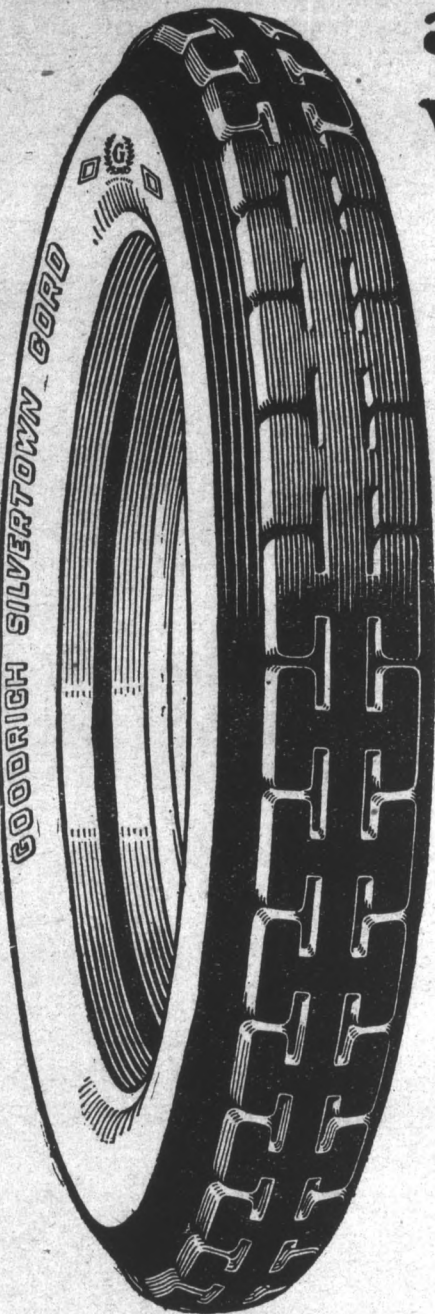
In making small quantities the lime should be slaked with hot water and diluted to about twenty gallons. The copper sulphate should be dissolved in hot water and also diluted to twenty gallons. These two dilutions should be poured together into a separate container and enough water added to make up the fifty gallons.

In making larger quantities fifty pounds of copper sulphate may be put in a burlap sack and suspended in twenty-five gallons of water. When this is all dissolved it will make two pounds of copper sulphate to one pound of the solution. Therefore if you wish to make a fifty-gallon batch of Bordeaux, two gallons of the solution will give you enough copper sulphate for that batch. There is one precaution necessary in making this stock solution, and that is the copper sulphate should not come in contact with iron, nails, hooks, etc., as its chemical action will ruin them. In handling copper sulphate in this concentrated form use a wooden pail instead of galvanized one.

Lime may also be made in stock quantities. Fifty pounds or more may be slaked in a tub or other receptacle. Agitate well when slaking to prevent burning and to make lime firm and smooth after it has been slaked. This should be kept covered with water to prevent drying out. To get a fairly accurate measure of the quantity of lime to use, slake four pounds in a pail and mark on the pail the height to which the lime comes. This pail will then be a measure for your lime. It is better to use too much lime than not enough.

The great precaution necessary for making good Bordeaux is to have both the lime and copper sulphate diluted before mixing. If either of them are in concentrated form and mixed, the Bordeaux mixture will be coarse and will settle quickly. Poorly made Bordeaux will curdle somewhat like sour milk. As the Bordeaux is a mechanical mixture and not a chemical one it is very essential that it be kept thoroughly agitated while spraying.

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Silvertown Cord

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Each tire is specially designed for the service it must deliver. Goodrich Fabrics, in the popular sizes, have established themselves as unusual values from the standpoint of real economy. Silvertown Cords in their class have always held first place in the esteem of motorists, not only because of their symmetrical perfection of finish, but furthermore, by reason of their long life, complete dependability and satisfactory performance.

Your dealer will supply you at these fair prices:

SILVERTOWN CORDS

SIZE	Anti-Skid Safety Tread	TUBES
30x3½	\$24.50	\$2.55
32x3½	32.90	2.90
32x4	41.85	3.55
33x4	43.10	3.70
32x4½	47.30	4.50
33x4½	48.40	4.65
34x4½	49.65	4.75
33x5	58.90	5.55
35x5	61.90	5.80

FABRIC TIRES

Smooth	30x3	\$12.00	Safety	32x3½	\$20.25
Safety	30x3	13.45	Safety	32x4	26.90
Safety	30x3½	16.00	Safety	33x4	28.30

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Dept. 1 Lincoln, Illinois

Please Mention The Michigan Farmer When Writing to Advertisers

News From Cloverland

By L. A. Chase

ADVOCATES DAIRYING AND CROP ROTATION.

MR. E. G. QUAMME, president of Federal Land Bank of St. Paul, who recently toured Chippewa county, pointed out, what others have also observed that, while Chippewa is a very fine agricultural county, it should go more heavily into crop rotation and dairying. It has hitherto relied chiefly on its wonderful hay crop for its cash, but this has proven detrimental to the soil. The drainage of the Hendri swamp area of this county will uncover some 50,000 good agricultural acres, says the Soo Times, whereupon the land will be put to agricultural uses by its owners, chiefly residing in Chicago, it is said.

A COMMERCIAL POULTRY FARM.

A LARGE poultry farm is to be established near Houghton, according to the Daily Mining Gazette. It will specialize in winter egg production, and the houses will be equipped with spring water, electric lights, self-feeders for mash, etc. A regular schedule of egg shipments is to be maintained so as to bring eggs on the market quickly after laying. The poultry itself will also be carefully prepared for the market. They will be milk-fed and crate-fed.

WOOL GRADERS START IN CLOVERLAND.

GRADING crews of the State Farm Bureau wool pool will invade the upper peninsula on July 25, according to an announcement from the state office. It is possible that pooling operations in the southern peninsula will be practically at an end by mid-August if the present rate of pooling is continued, says the farm bureau wool department.

FARM BUREAU PICNIC.

THE Houghton County Farm Bureau had a round-up and picnic near Chassell, June 26, at which four hundred persons were present, reports the Houghton Gazette. There were addresses in Finnish and English, and music by the Finnish Glee Club.

NEW CLOVERLAND PAMPHLET.

THE Upper Peninsula Development Bureau has published a new pamphlet, called "Cloverland," which is a description of the agriculture of the upper peninsula. The text is written by Mr. L. M. Geismar, formerly director of the State Experiment Station at Chatham, Alger county, and now agricultural agent of Houghton county, who is exceptionally well qualified to do this piece of work. The reader may feel assured that he is getting facts rather than propaganda in this booklet. It is tastefully printed and contains many illustrations. It is being distributed free from the office of the Upper Peninsula Development Bureau at Marquette.

CLOVERLAND AUTO TOURS.

JUNE 21 was visiting day in Gogebic county, when some forty automobiles conveyed about two hundred and fifty persons to nine farms of the county, it is reported, for the purpose of inspecting them, particularly with reference to building and equipment for the caring for live stock. Mr. Weston, who accompanied this party, reports much interest in the use of explosives for land-clearing in Gogebic county, where Agent C. E. Gunderson has al-

ready secured some 140,000 pounds for his farmers. It is hoped that experiments now being made with reference to picric acid will prove successful and that this explosive will also be distributed at low cost.

CLOVERLAND GRANGE RALLIES.

THE Escanaba Journal announces a series of rallies in behalf of the Grange, to be held in various localities throughout the upper peninsula, next month. They will be given under the auspices of the National and State Grange, which will furnish speakers. The schedule includes meetings at Marquette, Manistique, Sault Ste. Marie, Powers, Crystal Falls and L'Anse.

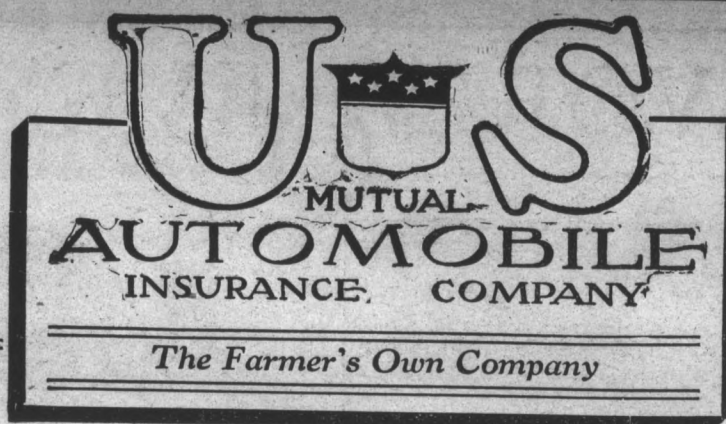
MILK PRODUCERS' NEW BUILDING.

THE new building of the Delta County Milk Producers' Association at Escanaba, has been renovated and machinery installed, and it was expected that operations there would commence about July 15. This is a cooperative enterprise of Delta county farmers. The building is described in the Escanaba Journal, is one hundred and forty feet by one hundred feet in size. The association is said to be incorporated for \$30,000, of which about \$18,000 of stock is stated to have been subscribed. The stock sells at \$10 per share and each farmer is required to take as many shares of stock as he owns cows. The upper peninsula office of the Michigan State Farm Bureau is due to open here August 1, with E. G. Amos in charge.

SEES BRIGHT FUTURE FOR CLOVERLAND.

MR. E. G. QUAMME, president of Federal Land Bank of St. Paul, in whose territory the upper peninsula is, writes to Mr. J. A. Doelle, of the Upper Peninsula Development Bureau, after visiting recently fourteen counties of the upper peninsula: "The Upper peninsula seems to offer endless resources and industrial possibilities. I never saw anything like it. If they should succeed in discovering oil there also, it would become a veritable El Dorado for business enterprise." Mr. Quamme traversed the peninsula with a view to gaining as much first-hand information about it as possible. He wanted to know the various types of soils and how the soil areas lay. He wanted to know what the farmer here has accomplished, he says, and the future possibilities for agriculture. The Federal Land Bank wants to extend its services wherever that is possible as determined by the character of the farmers and farms to be served. "We want to encourage the development of farming in sections where the soil is good and where the farmers will succeed," he writes. "I feel now that we are in a much better position to pass on loans and to grant loans in a way that will be fair to the farmers and the bank." In another letter published in a recent issue of the Soo Times, Mr. Quamme assures the farmers of that portion of the state of the Federal Land Bank's readiness to assist them on the basis of the rich agricultural development which he discovered in that territory.

MR. JULE DUCA, of Nathan, Menominee county, has written to Mr. J. A. Doelle, of the Upper Peninsula Development Bureau, expressing a preference for Winter Wheat No. 408, for this latitude, based upon ten very successful years' experience with it. He prefers it to the Red Rock.



You May Be the Most Careful Driver in the World

but you *never know* what the other fellow is going to do. Hardly a day passes but what some careless driver has damaged another car by either collision or forcing the careful driver into a ditch. Just as long as there are motor cars there will be accidents and these accidents will increase in proportion to increased automobile ownership.

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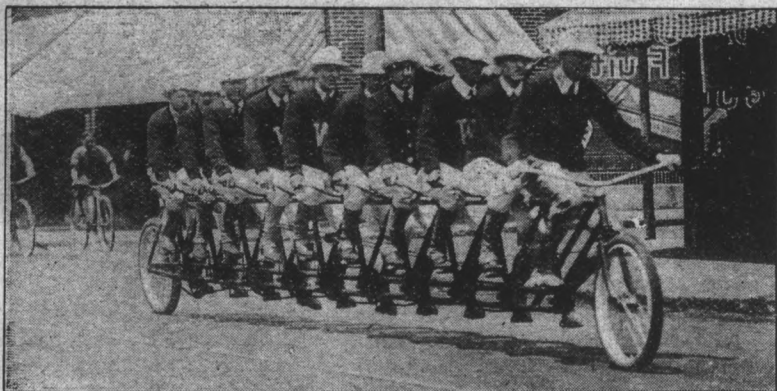
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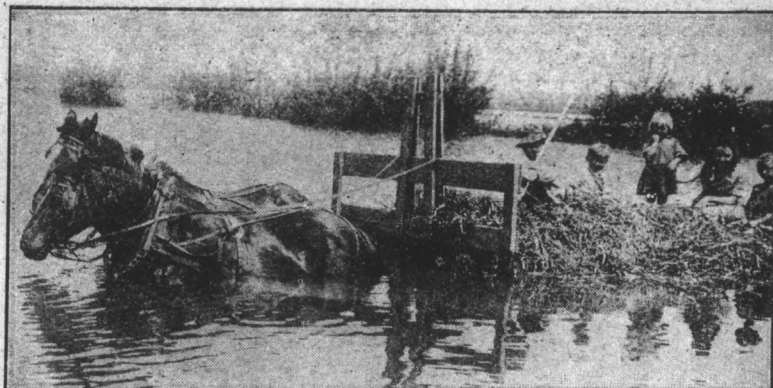
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WORLD EVENTS IN PICTURES



A ten-man tandem bicycle that can go sixty miles per hour. The slowest speed is fifteen miles per hour.



Feeding stock during floods is a strenuous task, as this farmer in the State of Washington has found.



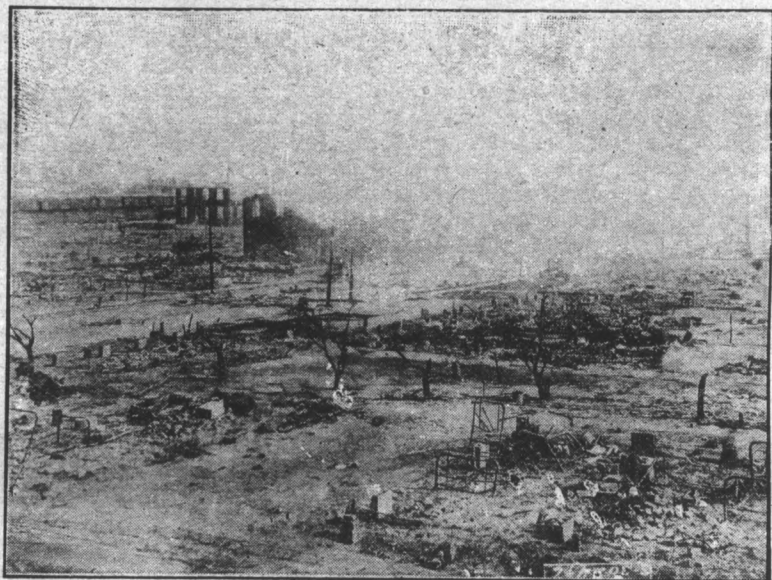
This amphibious gun-mount tractor can travel under water as well as on dry land.



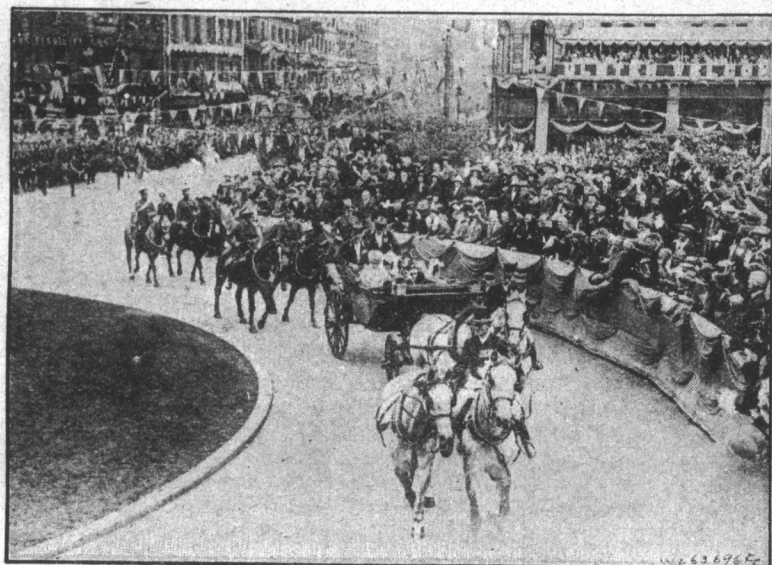
Lorain Ericson, age thirty months, flies 3,000 miles in airship.



These young ladies are making a "life mask" dress form for home sewing.



What is left of the negro section in Tulsa, Okla., after the race riots in which thirty people were killed.



King George and Queen Mary receive royal welcome on their visit to Belfast, Ireland.



The cadets of Westpoint are trained to fire big guns.



Expert swimmers, all under fourteen years of age, arrive in New York from Panama to give exhibitions in this country.



Gregg, inventor of shorthand, establishes courses in Europe.

THE CLAN CALL

By HAPSBURG LIEBE Copyright 1920, Doubleday, Page & Co.

It was a little after the middle of a bright afternoon. He found her sitting on an iron settee in a secluded corner of the lawn, where cape jessamines and lilac bushes grew in orderly array. She wore a light wrap, and there was an easy-to-read book in her hands; but she wasn't trying to read then.

He bared his head, greeted her pleasantly, and asked permission to sit down beside her. She looked up at him. He was immaculately dressed.

"Of course," she granted with a smile that was very winsome. "I hope you're over the cold you had last week, Jimmy."

"I never felt better," he assured her, dropping at her side. He stated his mission briefly, for Mrs. Dale might appear at any minute.

"I came, Elizabeth, to ask you to marry me."

She sat as still as though she had not heard. He went on hastily.

"I confess that I'm a little ashamed of trying to take you from Carlyle Dale for he was always very nice to me. But I may be forgiven for that, I think, because I care for you a great deal. Anyway—'All is fair in love and war'—you know."

His voice was hardly businesslike, but it lacked original fire. Elizabeth Littleford closed the book in her lap, and lifted her clear brown eyes to his eager face.

"No," she disagreed, "all ain't—isn't fair in love and war. That's one o' the silliest sayin's I've ever heard. As for the other—I like you, Jimmy, but not in the way you want me to. It's Bill Dale that I like—in that way, Jimmy."

Fayne looked disappointed. He was silent.

"You're a good boy, Jimmy," she went on, "and I hate to make you feel the least bit bad. It makes me—oh, Jimmy, it makes me blue. I wish you hadn't asked me. But I want you to know that I feel proud o' the honor, Jimmy. You'd better go, maybe, because it wasn't easy for me to turn you down. I'm sure you'll find some better girl than me—than I—for a wife."

"There is no better girl than you, Elizabeth. I'm going to wait—and hope."

He took up one of her hands and kissed it, rose and went toward the street. Before he had been gone a minute, she rose, her face a little pale, and stared after him, sorely tempted—for Fayne's money could bring her people out of their ignorance.

Well, if she didn't marry Bill Dale—and she feared that she wouldn't—she would marry Jimmy Fayne, if he

still wanted her—if he would agree to help her people. After all, it wasn't so much to give. What was one poor little, unhappy human life?

It was late, that night, when Elizabeth Littleford went to sleep. And when at last she slept, she dreamed of walking through a fragrant green meadow with Bill Dale. There was the low humming of wild bees about the purple crowns of the ironweed and the scarlet bloom of the clover; there was the mating call of the partridge, and the lovelorn coo of a dove.

CHAPTER XVIII. Tried.

TWO days before Bill Dale was tried in court at Cartersville, the new Elizabeth Littleford alighted from an afternoon train at the Halfway Switch. She was dressed in a smart and neatly-fitting suit of dark blue, with lacey white at her throat and at her wrists; she wore a hat of dark blue relieved by a touch of white. In one of her strong and well-shaped gloved hands she carried a travelling-bag of black leather.

A big and sunburned young man in boots and corduroys hastened to her. He raised his broad-rimmed hat, smiled, took the bag, and pressed her hand as though he were glad to see her.

"Bill Dale!" she cried joyously above the roar of the passing train. "Bill Dale, it's you!"

"Sure, it's me!" laughed Dale. He waited for the train to pass them; then he turned to her again. "How good you look! I can hardly believe it's you."

"But it is," she smiled. "Tell me: what do you think the outcome o' your trial is going to be?"

Dale noted that her English had improved, and it was gratifying to him. As for the trial—

"I don't know," he said, thoughtfully caressing his tanned chin with finger and thumb. "But Major Bradley thinks I'll come clear. He believes that somebody that was hidden on the mountain-side above us shot Ball to save me. By Heck hinted that he knew that this was the case; and he intimated that I would stand a better chance of acquittal than anybody else would stand, and that if I received a sentence the right man would come forward with a confession. I have an idea that By Heck himself killed Adam Ball—that is, if I didn't do it."

"And Cale Moreland—wasn't it fine for him to do what he done for you, Bill Dale? It's somethin' like Damon and Pythias, ain't—isn't it? Your mother told me the story of Damon and Pythias, and I read it, too. How are

you gettin' along with the mine?"

"First rate," Dale answered, brightening at once. "We're shipping now. Look!"

He turned and pointed down the tracks.

"See that trestlework over the short siding? That's our coal tippie. See that string of little cars on the trestlework? They have just emptied coal into the big steel gondola cars below. And we're getting a smashing price for every ounce of it."

"I see," said the young woman. He went on:

"All of the boys and girls of the Morelands, except the very little ones, are in school at Cartersville, and they are learning fast. When our borrowed capital is paid back, the Moreland families are going to buy farms lying near Cartersville and go to them. A big lowland farm close to good schools and a good little town—well, there are worse places on earth. Pity poor David Moreland can't know about it."

"I'd say!"

She hung her head. She was thinking, as she had so often thought before, of her own benighted people.

"And the Littlefords?" she murmured. It had slipped past her lips. Dale and the Morelands owed the Littlefords nothing.

Dale understood, and he gave her a sympathetic glance.

"A few of the boys and girls of the Littlefords are going to school in Cartersville, perhaps one from each family," he told her. "It is rather expensive, you know, on account of the boarding, and they can't afford to send all their children. We pay them good wages for their work, but it costs a good deal to live. However, I think—ultimately—your people will have their chance for education, too."

"But it won't do much good to educate one out o' each family," said Elizabeth. "They'd come straight back here when they got through with their schoolin', and soon fo'git—I mean forget!—it all. If they make their learnin' pay 'em anything, they'll have to stay where they can use it."

She began to stare absently toward her well-shod feet.

"Are you ready to go?" Dale asked. Elizabeth Littleford raised her head with a slight jerk and said rather awkwardly:

"Has the valley changed much?"

"Not very much," answered Dale. "We've got a commissary building, and an office and supplies building. There's a new log church, where an old minister named Ashby Cross preaches the gospel of straight-walking and human kindness every Sunday. Henderson

Goff isn't here any more, but he sent me his address in case we wanted to sell the mine! The Torreys have gone back to Jerusalem Cove and Hatton's Hell, and the Balls are as quiet as mice. These, I believe, are all the changes worth mentioning."

Together they set out and walked, without saying much, to the crest of David Moreland's Mountain, and there they halted. The autumn sun, a great red ball of fire, was just setting beyond the majestic Big Pine.

Dale pointed to a long, moss-covered slab of brown sandstone.

"Let's sit down there and rest," he suggested. "You're tired, Babe, I know. Don't mind my calling you 'Babe', do you?"

She looked at him as though she were surprised at his asking that. They sat down, and he pointed.

"You'll enjoy that sunset. And the view from here is magnificent. The mountains, as you've already noticed, have on their autumnal attire. The colors are glorious, aren't they?"

"Yes," said Babe, "the colors are glorious."

"Beautiful," he ran on. "I know the trees now, by their colors. That brilliant saffron over there—"

"Saffron—excuse me, Bill, for not havin' any better manners! But what is saffron?"

"Deep yellow, y'know."

"Oh, yaller. No—yellow; yes, you're right. That's hickory, that yal—yellow."

"Yes," and he nodded and smiled. "Brown, reddish brown, golden brown, mottled scarlet: the oaks. That transparent yellow; that's poplar. Deep red means sourwood. And that blazing crimson away down there along the valley rim is sumach. Eh, Babe?"

"Yes."

Bill Dale suddenly leaned toward her and took one of her hands; and he didn't take it as Jimmy Fayne had done—as though he were afraid of it.

"You know I love you, don't you Babe?"

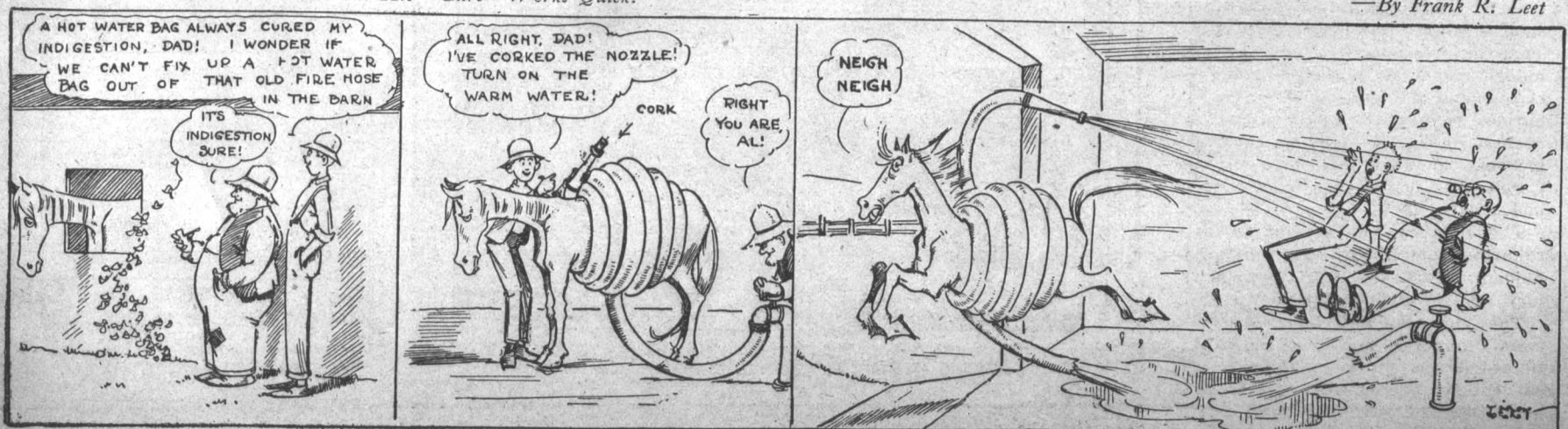
"I've been believin' it," she told him after a moment of painful silence. She was a trifle pale now. "But it—Bill Dale, it somehow don't seem just right for you to love me. Because I'm such a pore little nobody. I'm as ignorant as sin; and I hain't—haven't even got good manners. But—but if you love, if you're sure you do, tell me why!"

There came another minute of painful silence.

"Because" said Dale, speaking slowly, "you have always seemed to be one of my own kind. You seem real, to me. I was so sick of artificialities in women that I loved you the moment

AL ACRES—Al is No Doctor but His "Cure" Works Quick.

—By Frank R. Leet



I saw you. You didn't have your face enamelled, and you didn't pose as a fashion plate, and you didn't mention politics. I know you are primitive, but I am primitive, too. And you weren't calling yourself 'Ma-a-am-mah' to a damned poodle.

"Major Bradley," he went on, "feels sure that I will be acquitted. If it turns out like that, I want you to marry me at once. These months without you have been very lonesome for me. Your education can be finished afterward; I'll teach you myself. Tell me—will you, Babe?"

How boyishly impatient he was. Was he afraid he would lose her by waiting?

"You love me, don't you, Babe?" he pursued.

She faced him with the sudden, queer light of a tragedy in her eyes. But she didn't speak. He pressed her hand until it hurt and demanded:

"You do, don't you, Babe?"

"Yes," she told him, in a voice that he barely heard.

"Then why won't you marry me?"

She didn't answer. She wouldn't answer.

The day of the trial dawned clear, with the snap of autumn in the air. It was not often that Little Cartersville had so many visitors in one day. Since most of these visitors were mountain-folk, the business streets were lined with oxcarts and saddled mules.

The courthouse was filled to its capacity within fifteen minutes after the doors were thrown open. Every man who had a rifle was forced to leave it behind with the sheriff's deputies; a company of the state's militia was there, and each member of it had a hundred rounds of ball cartridges in his belt—the authorities were taking no chances. Either way the trial went there might be a fight—if the accused received sentence, the Morelands and the Littlefords were likely to attempt to set him free; if the accused were acquitted, the Balls and their kinsmen were apt to give trouble.

The Balls and their kinsmen had been drinking a great deal of white liquor that morning.

Amid a breathless hush, the wheels of the law began to move. Caleb Moreland quickly told what he had to say, and backed it up with proof; he brought out a perfect alibi. The judge and the jury frowned and smiled in the same instant. Dale went forward and took his place. He pleaded "Not Guilty." A little later the state introduced its evidence and rested.

The counsel for the defense, patrician and soldier-like, immaculate from his toes to the crown of his head, went eagerly to his feet. He had fully prepared himself, and he delivered his argument with an eloquent and forceful swing. It was plain that the jury was favorably impressed by the words of this man who never accepted a case unless he was absolutely sure that his client was in the right.

Major Bradley hinged his argument on the mysterious third shot. If Dale's bullet had killed Adam Ball, would not Adam Ball have been shot squarely or at least nearly squarely from the front? As it was, the Goliath had been shot straight through the temples! That third shot had been fired by some hidden friend of Dale's the major declared, and it had been done for the purpose of saving Dale's life. Ball had been in the act of playing a cowardly trick; he had killed a man in North Carolina by just such a trick—and he had boasted of it.

The attorney for the state made a rejoinder that almost favored the defendant. Then the court charged the jury, and the twelve good men retired.

The jury was out not more than twenty minutes, but to Elizabeth Littleford it was an age of torture. She sat directly behind Bill Dale, between her father and John Moreland.

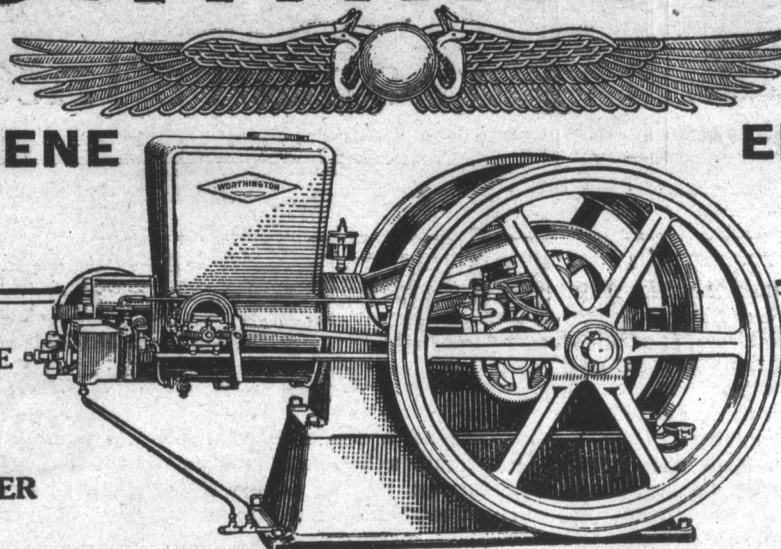
(Continued next week.)

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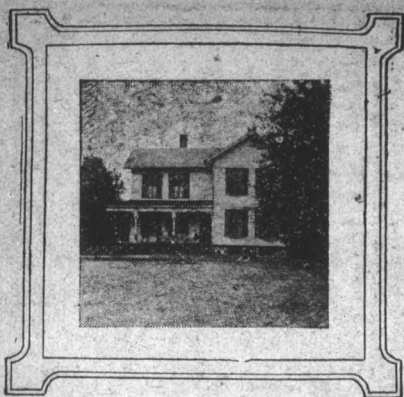
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What is beautiful is good, and who is good will soon be beautiful.
—Sappho.

Woman's Interests



What to Do In Case of Accident

By Charlotte Burd

IN case of an accident, the first thing to do is to keep one's head, do exactly the most helpful thing and, if necessary, send for a physician.

If a blood vessel has been cut or ruptured, note the color of the blood. If it is dark red and flows freely from the wound without spurting, it comes from a vein and the flow is to the heart. If the blood is a bright red and comes in spurts, it comes from an artery and the flow is from the heart and so there is great danger. In this case send for a physician and act at once. The patient should be laid down so that as much as possible the circulation should be quieted. Apply a bandage between the injury and the heart and tighten it by twisting with a stick. But this should be prolonged no further than necessary.

To staunch the flow of blood, warm water should never be used, because this will only stimulate the trouble. Foreign and germ-laden substances, like the bare, undisinfected fingers, mud, tobacco, and cobwebs, should never be allowed to come in contact with the wound. The wound should be covered as soon as possible but only with a surgical dressing. This consists of cotton or gauze which has been surgically treated to disinfect it.

For bruises, first bathe the parts in water as hot as can be borne to take out the inflammation. Then treat with a solution of equal parts of water and witch hazel or with tincture of arnica in the proportion of two teaspoonfuls to a cup of water. A night's treatment should almost make the bruise well. Or, if these remedies are not at hand, use one part vinegar to three of water.

For a sprain, heat water as soon as possible, as hot as the flesh can bear. Arrange the injured part over a tub or other vessel and from a considerable height slowly pour the hot water over the sprain. Continue to heat water and keep up this treatment for an hour or two till the danger of inflammation appears to be gone. A sprain is a more serious matter than a broken bone and this treatment will often save the patient from becoming a cripple. As an after-treatment apply a solution of vinegar or lemon juice or salt. For a knee or ankle sprain a stocking may be drawn on and filled with hot salt. This is a very efficacious remedy. But the hot water remedy is the best of all and should be used first.

In case of a person fainting the patient is suffering from too little blood in the head. Therefore, he should be laid flat on his back and kept so that the blood may flow back to his head and other parts of the anatomy. Cold water should be sprinkled on the face to stimulate circulation. If nothing more serious than a faint is the matter, recovery will soon follow.

A spasm is distinguished from a faint from the fact that the patient jerks spasmodically. In convulsions the circulation is much too rapid and there is too much blood on the brain. Therefore, the victim of a spasm should never be laid down flat but should be supported with his head ele-

vated. One in a spasm should be quickly put into a hot bath and well rubbed. Except by the advice of a physician no medicine should be given.

In case of a burn or scald a linen rag, saturated with a solution of baking soda, should be applied and kept wet. Or better, keep the injury always covered with a rag soaked in linseed oil and lime water, mixed equal proportions. A bottle of this should always be kept in the house ready for such an emergency. If the skin has been removed by the burn, lay surgical cotton carefully over the oil dressing and gently fasten into place so that the air may be entirely excluded. The dressing of a burn or scald should be disturbed no oftener than necessary, so that the new skin may form without hindrance.

In some cases of choking the obstruction may be removed by the finger. Otherwise, the swallowing of an unchewed crust of bread will commonly give relief.

When a child has pushed an obstruction, like a bean or a grain of coffee, up into its nose, one should not be excited and fish for it with other hard substances which may only aggravate the difficulty. If a little cayenne pepper is merely rubbed on the child's upper lip, the child will be set violently to sneezing and the obstruction will be promptly dislodged.

When any foreign matter gets into the eye, resolutely abstain from rubbing the eye. Often forcibly blowing the nose will do the rest. If not, a helper may roll a fine point in a silk handkerchief and with it painlessly remove the substance. This is especially successful in the removal of insects.

When a foreign substance gets into the ear, be very careful because the ear is delicate. In case of an insect a few drops of oil will drown it and cause it to float to the surface where it may be removed. But hard substances should not be put into the ear. If they are needed, see a doctor.

Crystallized Fruits and Flowers

By Gracia Shull

COUNTRY women do not half realize the possibilities of their flower gardens and orchards unless they crystallize a few pounds of fruits and blossoms each year.

With the arrival of the violets my busy season begins. I gather the violets early in the morning, making sure that each one has a long stem and I always crystallize stems and all, dipping them one at a time in the hot candy which I have previously made. This candy is made by taking one pound of sugar and pouring over it just enough boiling water to dissolve nicely; add one-half teaspoon of cream of tartar, boil until it spins a brittle thread, remove from fire, (keep hot but do not let it continue to boil). If it sugars, boil up again.

The blossoms are placed on waxed paper to dry and harden. The stems are kept straight and the blossoms retain shape and color. In May I gather cherry and apple blossoms and crystallize them in clusters. These are handled very carefully and make dainty decorations for cakes, ices, creamy desserts, etc.

Next in line comes rosebuds, rose petals and whole roses crystallized. There is a dainty little white rose, a single pink, and a single yellow rose that are the daintiest of confections when crystallized whole. I gather wild roses, hundred leaf, and other daintily colored roses, pluck off the petals and candy them. They find a ready market at all seasons of the year.

Clover blossoms, both red and white, mint leaves, and various other blossoms that are fragrant are gathered and crystallized. The clover blossoms retain shape and color and are used to decorate ices, cakes, etc. The candied mint leaves are delicious, sprinkled

over ice cream, whipped cream dessert, a few in the iced tea, punch bowl or lemonade pitcher, or served as after dinner mints. They are novel, too, as well as dainty and delicious.

In fruits I candy cherries, berries, thinly sliced peaches, pineapple, thin slices of orange and lemon, malaga grapes, etc.

When I candy strawberries I also candy some of the blossoms at the same time and serve a few of each on the same crystal saucer. Crystallized strawberries will keep only a few days as the centers are too juicy. I make these up only when specially ordered for luncheon or a tea or for my own use. Everything else I make up in great quantities for my own use and for commercial purposes. I also crystallize dates and thin slices of tender, young carrots. These latter are dainty and delicious.

In serving candied fruits I serve them in a crystal basket with asparagus ferns and a single, full-blown rose to garnish the basket. The candied fruits present a beautiful appearance because of the dainty colorings and they are in great demand by people who can afford to pay for such delicacies.

I use only the pink, white or yellow roses to garnish the dish of candied fruits as the darker roses spoil the effect. A few carnations or a blowsy chrysanthemum would also look nice on the tray.

This coming season I shall crystallize lilac and locust blossoms for the trade, as my experiment with them last season was a decided success. I purchase the best white sugar at wholesale and use only the purest and best ingredients in my crystallized confections.

In insect stings, if the sting is still present it should be removed. Then a little ammonia or baking soda in water will relieve the pain.

In case of a broken bone, it will allay anxiety to know that it does not have to be set immediately. However, do not delay to send for the doctor. Meanwhile, unless absolutely necessary, the patient should not be moved, for fear that the sharp edges of the bone may lacerate the flesh. With both hands gently lift the injured part while someone puts a pad or cushion under it. Cold, wet cloths should be applied. If the patient must be moved, temporary splints must be made. For this purpose use any stick of wood, stiff pasteboard, or anything which will keep its place straight. As padding for this, use anything soft, like cotton or wool, or a sleeve or stocking, stuffed with moss, or grass, or leaves till something better can be found.

CONTRIBUTED RECIPES.

Our Favorite Dark Cake.—Three eggs, two cups of brown sugar, one cup of butter, one and one-half cups of sour cream—not too heavy—one and one-half teaspoons of molasses, one teaspoon soda, one teaspoon each of cinnamon and ground cloves, one pound of raisins, one pound of currants, one-quarter pound of chopped walnut meats, and flour to make a very stiff batter. Bake about one hour in a slow oven, or until, when pierced with a toothpick, no dough will adhere. For a change, I make a loaf cake from this recipe by leaving out the fruit.—Mrs. S. E. W.

Spring Soup.—Use spinach, beet tops, chard, or any other kind of greens for this soup. Shred the greens in small pieces, add one head of lettuce also shredded, one cupful of peas, fresh or canned, a liberal seasoning of butter or bacon fat and a little water. Stew until very tender. Rub through sieve, and add a bit of thyme, a spray of parsley and a sprinkle of nutmeg. Let boil up, remove from fire, add the yolks of two eggs well beaten, stir thoroughly, add one cupful of rich milk and one teaspoonful of grated cheese, if this flavor is liked. Heat to the boiling point, but do not let it boil, as this would curdle the eggs. Serve with toast or wafers.—Mrs. L. T.

MINT JULEP A LA VOLSTEAD.

WITH a wooden potato masher bruise enough mint leaves to fill a cup. Place in a pitcher and add one thinly sliced lemon, two pieces scraped ginger root, one quart of boiling water. Cover and let stand in a warm place for two hours. Strain off tea and chill. Fill tall glasses half full of crushed ice and pour in tea to the top. Add a slice of lemon, a fresh mint leaf, and sweeten to suit.

The women in some Ohio counties have made from eight hundred to nine hundred dress forms. That means better-fitting dresses.

Plow Shares and Bibles

Our Weekly Sermon—By N. A. McCune

BE fruitful, and multiply, and replenish the earth," is an early statement in the Bible. That must mean, that raising good crops, fine animals and healthy children, is a religious business. Not that raising children is not more important than raising Shorthorns, red rock, or hubam. But without crops one could not rear his children. And today the church recognizes as part of its great task the teaching of the less favored peoples of the earth the need of good farming. It is well-nigh impossible for a starving man to develop his spiritual faculties. His whole attention is centered on food. The church of which the writer is pastor is assisting in the support of a missionary in China. He is a farmer. He wrote a while ago that he had been having a bit of hard luck of late. Two days before he wrote, tigers had leaped the high stone wall about the barnyard and killed two heifers. He stated that his work sometimes developed ill-will among the native farmers because he was more successful than they were, in production.

A few weeks ago we were visited by Mr. Sam Higginbottom, of India, the premier of agricultural missionaries of the present time. What he has done makes the exploits of many captains of finance look like a ten-cent side show. Mr. Higginbottom went to India as a general missionary. He was a Princeton graduate. But he found the people so desperately poor, so ill-fed and so disease-ridden that he decided they should be taught to be self-supporting and independent, before any great advance could be made in Christianity. He therefore came back to America, graduated at an agricultural college, took thirty thousand dollars with him to India and with it bought a farm of two hundred and seventy-five acres. This farm has become the demonstration farm for all India. Mr. Higginbottom's pupils come from all classes of Indian society. Besides the people from the lowest caste there are many princes come to sit at the feet, so to speak, of the American. One such prince appeared one day, with his valet, and his private secretary, who was to take his notes in the class-room. After registering, Mr. Higginbottom told him to begin carrying fodder to the ensilage cutter. He was game, although his valet was horrified. In a few days he got into the spirit of the place and sent his secretary home, saying he would take his own notes.

The average Indian farmer raises six or seven bushels of wheat to an acre, while at the Alahabad farm twenty-five to thirty are grown. Millet two to three feet high is a good crop for the native, but with deep plowing and drainage, seventeen-foot millet is produced easily.

The American missionary's attention was drawn to the possibilities of Indian agriculture by accident. When he first went to India he taught political economy. One day he took his class to a certain prison. The warden of the prison was an English colonel. Around the prison were what had been two hundred acres of waste land. For years nothing but weeds, dust and cobras had been raised on it. But the colonel had transformed it into a garden of Eden. He was growing cabbages that weighed sixty pounds, cauliflower that weighed twenty pounds, and grain crops that would have been unbelievable, if one had not seen them with his own eyes. The secret of it was, that the colonel was taking several farm journals, some of them being American journals, and he was practicing what he had there. Up to the time he had been appointed war-

den of the prison, he had known nothing about farming.

To teach the Indian farmer Christianity when he is so deep in debt as to be practically a slave, Mr. Higginbottom concluded would be very slow business. He must be taught to be independent. He must stop paying an interest rate of seventy-five per cent. Christ said his followers should feed the hungry, clothe the naked and visit those in prison. If you teach a man to grow crops that will feed his family, when they have never had enough to eat in the past, is not that feeding the hungry? If you show him how to grow large crops of cotton where he has grown none before, is not that clothing the naked? If you enable a man to pay his debts and own his own farm, and thus keep him out of a debtor's prison, is not that equal to visiting him in prison? It is thus that the American missionary answers his critics who sometimes declare that he is not a true missionary, because he does not preach as other missionaries do.

As a means of combating the long drouth that takes such a heavy toll of life every few years in India, the native farmer is advised to use the silo. Materials for building silos above the ground are not plentiful, but every Indian knows how to dig a well, and so the silos are built below the surface. There are many crops that make excellent ensilage. The native farmer still uses the little crooked stick used by Abraham two thousand years before Christ. When the American plow is put into the earth, however, and turns up rich soil that has lain unused for years, there is an increase in production right away. One day the missionary showed his class the depth of the moisture on the mission farm. Said he, "Now let us go over to this other farm, where the native plow has been used, and we will see that the depth of moisture is only about one-third what it is here." To his astonishment, however, the depth of moisture was the same: "How's this?" he inquired. The Indian farmer fell at his feet. "Forgive me, master, but I watched what you were doing and at night I borrowed your plow of the foreman, and I plowed my land with it." Teaching is easy, with people as eager to adopt new methods as that.

With three hundred millions of people in India, and a wonderful soil, the possibilities for agriculture are well-nigh unlimited. The governors of the great Indian states are keenly aware of what the American farmer missionary is doing, and they are anxious to cooperate with him. If he would give up his connection with the Ewing Christian College, where the demonstration farm is located, and give all his time to one state, he would have six millions of dollars immediately placed at his disposal. The Maharaja of Bikaner invited Mr. Higginbottom to ride through his state on a private train. There were no Pullmans on the train, but there were some other things. There was an elaborate saloon-car with kitchen in connection. Next behind came the horse car, with two fleet steeds, so that the party could stop, the train—and the train had orders to stop anywhere the missionary wanted it to—and ride off across country. Next after the horse car came a car containing a French auto for use on the Maharaja's smooth macadamized roads which had been built for many miles through the desert. The American farmer missionary was touring in regal style. That is one way that the governing class shows its appreciation of the apostle of good-will and good crops.

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Write today for full information about "Universal" electric home needs—Irons, Toasters, Percolators, Grills, Heating Pads, etc. Don't endure another hot, exhausting ironing day without a "Universal". It means better work and comfort, too.

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Six dollar value at today's reduced prices. 2 elegant, snappy, specially finely woven Silk Finish Ponée Shirts. Only \$2.85 for both. Smart button-down attached collar, 6 button coat-front. Soft turned-back double cuffs. Double yoke and collar. Flap button pocket, handily sewn extra fine stitches. Masterpiece of one of the biggest Philadelphia shirt manufacturers—with \$100,000 to \$150,000 Bradstreet rating. Guaranteed by thirty years of shirt making for leading stores of East. Send order today. Pay C. O. D. or if you want shirts quickly, send P. O. Order. Give collar size. **YOUR MONEY BACK IF YOU DON'T LIKE THEM.** We won't even ask why. We pay postage. Light tan or all white. Collar sizes 14 to 18 inches. You can have same shirt, with laundered neckband, without pocket. Send for big lot of FREE SAMPLES. Newest stylish colors, patterns and materials in gentlemen's shirts from \$1 up. Also Pajamas and Night Shirts.

TUTTMAN BROS. 749 Spring Garden St., Philadelphia, Pa.

1000 Ferrets they hunt RATS and rabbits, price list free. N. A. KNAPP & SON, R. 2, New London, Ohio

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It is well established and supported by conservative financiers, that there is no class of Investment Securities that equal State, County, and City Bonds (Termed Municipals) for absolute safety, as this whole taxable property of the issuing organization is pledged for the payment of both principal and interest.

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PRUDEN & COMPANY

Nasby Bldg. TOLEDO, OHIO.
References: Any bank or business firm in Toledo

MICHIGAN FARMER PATTERNS.

Send fifteen cents in silver or stamps for our up-to-date spring and summer 1921 catalog, containing over five hundred designs of ladies', misses and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle, (illustrating thirty of the various, simple stitches).

No. 3247.—A Charming Gown. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 4½ yards of 36-inch material for the dress, and 1½ yards for the jumper or overblouse. The width of the skirt at lower edge is 1½ yards. Price 12c.



No. 3538-3543.—Ladies' Costume. Waist 3538 cut in seven sizes, 34, 36, 38, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3543 cut in seven sizes, 24, 26, 28, 30, 32, 34 and 36 inches waist measure. To make this dress for a medium size will require 7½ yards of 36-inch material. The width of the skirt at the foot with plaits extended is 2½ yards. Two separate patterns 12c for each pattern.

Choice Chicks \$8.00 Per 100 Prepaid



**S. C. English and American White Leghorns;
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From Heavy Producing Stock. Hatch every Monday. Order direct. Full count, live arrival guaranteed.

Royal Hatchery, R. 2, Zeeland, Mich.

POULTRY

Pullets Pullets

Good April hatched pullets. Will lay next winter when eggs are high and your hens are taking a rest.

It surely does not pay to keep poor quality old hens when they can be replaced at practically the same price, with our American English strain of bred to lay Single Comb White Leghorn pullets.

These pullets are produced from our own stock and are fully guaranteed. Choice breeding cockerels and yearling hens. Price on application.

**Macatawa White Leghorn Co.
R. 1, Holland, Mich.**

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\$16.00 per 100 and up. Hatching eggs, \$2.00 to \$15.00 per setting and \$9.00 to \$15.00 per 100, from 25 varieties of pure bred, farm raised fowls: Chickens, Geese, Ducks, Turkeys and Guinea. Price list and circular free. Plenty of nice breeding stock. Book now for early spring delivery. **WILLINGTON HATCHERY & POULTRY CO.,** Willington, Ohio.

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

Dandy White Plymouth Rocks year old birds. Fine layers. Best \$2.00 each. **MRS. FLORENCE HOWARD, Petersburg, Mich.**

Chicks Chicks

Great price cut for July deliveries to lower than pre-war prices. Better chicks at a real bargain price. **LOOK**

Pure S. C. W. Leghorns	\$8.00 a 100, \$4.00 for 50
Pure Barron Eng. Leg.	10.00 a 100, 5.00 for 50
Pure S. C. Anconas	10.00 a 100, 5.00 for 50
Pure B. P. Rocks	12.00 a 100, 6.00 for 50
Assorted chicks	7.50 a 100, 3.75 for 50

Hatch every Tuesday in July, order direct. Prompt shipment on all varieties by Parcel Post mail. Full count strong lively chicks on arrival. For quick service and an entirely satisfactory deal send us your order. 13 years reliable dealings. Fine instructive catalog and price list free.

**W. Van Appledorn
R. 7, Holland, Mich.**

Barred Rocks 8 to 12 week pullets, cockerels, hens and cock birds. Leading pen at M. A. C. for December averaging 22 eggs each. 1 pullet laid 27 eggs in both Dec. and January. 1 pullet laid 80 eggs in 91 days, winners at largest shows in state. Write for price list. **G. Caball, R. 4, Hudsonville, Mich.**

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If you want some good Eight Weeks Old Pullets, write us for description of White and Brown Leghorns and also yearling hens.

Also we have a limited number of three months old pullets—White and Silver Laced Wyandottes, White and Barred Rocks, S. C. Reds and Buff Leghorns. Also Cockerels.

Let us make you a price on what you want. **STATE FARMS ASSOCIATION, Kalamazoo, Mich.**

APRIL COCKERELS Winter Laying Pullets

now eight weeks old. Anconas and White Leghorns, Brown Leghorns, Buff Leghorns, Rocks, R. I. Reds, Wyandottes, Black Minorcas. Dollar and up as they grow older.

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CHICKS English Strain White Leghorn Bred to lay Brown Leghorn and Anconas. Bargain prices for our quality stock kept on free range. Order now for early deliveries. **Hillside Grove Hatchery Farm, R. 1, Holland, Mich.**

Fowler's Buff Rocks Egg prices cut one-half for balance of season. **R. B. FOWLER, Hartford, Mich.**

Barron White Leghorn Pullets. The greatest egg producers known. Large free range birds from 75c up. **Robt. Christopher, R. 4, Holland, Mich.**

Barred Rocks Hatching eggs from Parks 200-egg strain. Rich in the blood of Parks best pedigree pens. \$2 per 15, \$6 per 50, \$12 per 100. Prepaid by parcel post in nonbreakable containers. **R. G. KIRBY, Route 1, East Lansing, Mich.**

Chicks, Pullets and cockerels. Thorough bred \$11.00; S. C. R. I. Reds \$13.00 per hundred. Eight week old pullets and cockerels White Leghorns, Rocks and Reds at bargain prices. Write me your wants. Catalogue. **Brunner's Poultry Farm, Holland, Mich.**

Quality Chicks Black Minorcas, Light Brahma, 25c each, Barred Rock, R. I. Red, 18c each. **Tyrone Poultry Farm, Fenton, Mich.**



Baby Chicks

\$10 a 100 and up.

Postage PAID, 95% live arrival guaranteed. FREE feed with each order. 40 breeds chicks, 4 breeds ducklings. Select and Exhibition grades. A hatch every week all year. Catalogue free. Stamps appreciated. **NABOB HATCHERIES, Gambier, Ohio**

USEFUL ANCONAS June and July chicks lay before cold weather. Eggs half price \$6.50 per 100. \$3.50 per fifty. Hogan tested, beauty and utility combined. Specialty breeder S. C. Mottled Anconas. Send for booklet. (Useful facts about Useful Anconas). It is free. **College View Farm, R. 3, Hillsdale, Mich.**

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Michigan's Greatest Color and Egg Strain. Chicks all sold. 50 good cock birds, either comb, at bargain prices for quick sale. Catalog free. **INTERLAKES FARM, Box 39, Lawrence, Mich.**

HEASLEY S. C. Buff Leghorns eight-week-old pullets and cockerels and breeding hens at bargain prices. Bred from officially certified egg bred winners, original Dr. Heasley flock. Chicks at special prices. **Henry DeFree, R. 8, Box 137, Holland, Michigan**

ENG. and American W. Leg. \$8 per 100; Brown Leg. \$8 per 100; Mottled Anconas \$10 per 100; Barred Rocks \$12 per 100; Broilers \$7 per 100. All Single Comb. Safe arrival guar. Order direct from ad or send for catalog. **Knoll's Hatchery, R. 3, Holland, Mich.**

RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks. **H. H. JUMP, R. 5, Jackson, Mich.**

R. C. Br. Leghorn C'kls. \$1.50 each. Pekin ducks \$2.00 each. **MRS. CLAUDIA BETTS, Hillsdale, Mich.**

S. C. Black Minorcas Eggs from No 1 pen will be \$1.50 per setting of 15, for the bal. of the season. **R. W. Mills, Saline, Mich.**

Single Comb Buff Leghorn hens and early hatched pullets and cockerels. Good laying strain. **Willard Webster, Bath, Mich.**

Pullets and Breeding Stock 8 varieties, also ducks and geese. Send for prices. **BECKMAN, 26 E. Lyon, Grand Rapids, Mich.**

White Leghorns English and American strains. Choice cockerels, hens and 8-week pullets \$1.40 each for 10 or more; special prices in 100 lots. Will ship E. O. D. **FRANK HEINZ, Box 6, Comstock Park, Mich.**

WHITE WYANDOTTES 207 egg average; cockerels \$5 each, 3 for \$14, 6 for \$25. **FRANK DELONG, R. 3, Three Rivers, Mich.**

White Wyandotte and Barred Rock eggs, half price balance of season. **HOWARD GRANT, Marshall, Mich.**

DOGS

Trained American Fox Hounds Rabbit and Skunk dogs all ages. Send stamp. **W. R. LECKY, Holmesville, Ohio**

FOR SALE—Pair coon dogs. Open trier and silent. None better \$100.00 each on trial. **C. W. FRYE, Henderson, Tenn.**

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Live wire Michigan farm, 120 exceptionally productive acres, 4 tons hay, 264 bushels wheat, 74 bushels oats, 30 bushels beans, 12 1/2 tons sugar beets, 120 bushels corn acre common; on improved road, in one state's finest sections, close thriving RR town, easy drive big city; 93 acre level machine-worked fields, 25-cow wire-fenced pasture, lots wood; 1200 bushel apple orchard, about 50 plum, cherry, pear trees; grapes, sugar maples; fine 2-story 13-room house with bath, 2 large verandas, beautiful shade; 20-cow barn, granary, poultry house, etc.; water from windmill; to close affairs quickly pair horses, cow, vehicles, implements, hay, quantity crops included; \$12,000 takes all, only \$200 down, balance easy terms. Hard to duplicate this bargain in state. Come and see it. **D. A. JONES, Durand, Mich.**

Farm With 300 Apple Trees, Ho ses, Crops, 6 Cows and

Heifers, vehicles, implements, dairy utensils, tools, etc. thrown in; happiness and prosperity yours in delightful section, big fruit farms; 112 acres on good road, 1 1/2 miles village, advantages; machine-worked fields; spring-watered pasture; abundance wood, timber; fine orchard 300 apples; pears, plums, cherries, grapes, etc.; good 6-room house, magnificent outlook; 50-ft. basement barn, 2 poultry houses, ice house, etc. To settle owner's affairs all \$2800 easy terms. See page 9 Illus. Catalog 1100 Bargains. **FREE. STROUT FARM AGENCY, 814 BO Ford Bldg., Detroit, Mich.**

For rent one of Calhoun County best farms near Marshall. 240 acres stock and grain. Fine buildings, shares rent, immediate possession, must be reliable. Competent feeder of sheep and cows, 400 fine ewe, for sale. **M. JACOBS, Marshall, Mich.**

92 acre dairy farm. Good buildings, level, good soil. Fine herd dairy cows. Stock, crops, tools \$11,000. **F. J. PERRIN, Lawrence, Mich.**

WANTED To hear from owner of land for sale. **O. K. HAWLEY, Baldwin, Wis.**

Additional Farm Ads. on Page 67

Our Boys' and Girls' Page

BOYS' AND GIRLS' CLUBS WORK ON ADULT PROBLEMS.

VERY important improvements in farm practice are frequently introduced into a county through the medium of the boys' and girls' dairy, beef, poultry, or pig clubs, specialists in club work in the United States Department of Agriculture point out. In one county in California pure-bred swine have been developed by the boys and sold to over eighty per cent of the farms of the county. Farmers who are doubtful concerning the wisdom of any innovation suggested by the county agent often approve when they see the results obtained by the boys.

"We can think of the boys under twenty in a community as either the 'ins' or the 'outs,'" the specialists say.

and the community—no small consideration for a boy.

The necessity for education has increased and will continue to increase with the advance in the complexity of the processes of civilization. Because of the unparalleled progress in the arts and sciences during the past fifty years the need for education has in a generation multiplied many fold. For example, a century ago a transportation system was little more than a wagon and a driver who knew the road. Now, in handling a problem of transportation, experts in traffic must first determine whether a road in that place will be worth while, and what kind of road will be most economical and efficient; experts in finance must provide the tremendous sums needed to build the road; civil engineers must



One hundred and sixty-nine prospective school teachers, students of the county normal training schools, were entertained by the State Boys' and Girls' Department at M. A. C. last May. Mr. Turner, State Club Leader, plans to do similar entertaining every year as he believes it highly desirable that prospective school teachers become acquainted with the State Agricultural College and the Boys' and Girls' Work.

"Those from six to fourteen who are still in school, are the 'ins.' Our work is more directly with the 'outs'—from fourteen to twenty—the 600,000 boys in the thirty-three northern and western states who should have some sort of instruction and stimulus to accomplishment, because they have dropped out of school. Our theory can be illustrated by these apparently equivalent statements:

20 plus 50 equals?
50 plus 20 equals?

"The twenty-year-old boy, helped and guided to good practices, has some likelihood of using what he learns for the ensuing fifty years of normal life expectancy; but if work is begun first with the fifty-year-old father, even if he is equally capable of adapting himself to new ideas—which is seldom true—he can have but twenty years or less, according to expectancy calculations, in which to use what he has acquired."

GET AN EDUCATION.

FIRST and last, our advice to boys is to get the best obtainable education, both general and technical. The educated man, as Carlyle tells us, works with a strength borrowed from all past ages. The "university of hard knocks and practical experience" has its advantages as a training school but its courses need to be generously supplemented by other more specialized means of education. Skill in the use of the hands only will never make more than a good workman. Men rise only in proportion as their brains are alert, active and trained.

To learn more is to earn more, and not only that; to learn more is to be more, to count for more, to yourself

lay it out; bridge engineers plan the bridges; chemical engineers test the materials; mills and factories with scores of chemical and physical experts make the rails, build the locomotives and steel cars; and a host of traffic experts, auditors, accountants, and specially trained managers and clerks, telegraphers, engineers, conductors, and others keep the trains moving with safety and with profit.—Boys' Life.

BOYS' CAMP AT TORCH LAKE.

A STATE conference and camp for young men training for rural leadership will be held at Camp-Hayowent-Ha, on the shores of Torch Lake, from August 17 to 27.

This conference will be a great adventure as it will be replete with sports and instruction. Attractive awards will be given to those who excel in camp activities. The State Farm Bureau trophy will be given to hold for one year, to the fellow who makes the best all-round efficiency record. And the Western State Normal will give a shield to the best all-round athlete. Those who make ninety per cent, or better, on the four-square program become members of the H. W. H. Circle and will receive a monogram.

The camp program will be under the leadership of R. A. Turner, State Club Leader, and H. C. Coffman, of Detroit. A program fee of \$2.00 will be charged, which must be forwarded with the application for a reservation in the camp. In order to insure a reservation this must be received on or before August 10. Board and room and all else pertaining to the camp will cost \$14 for the entire conference.

Applications should be sent to the county agent, county club leader, Y. M. C. A. secretary, or to Mr. H. C. Coffman.

DAIRY EXHIBITS AT STATE FAIR.

IMPORTANCE and diversification of the dairy industry in Michigan is to be shown in all its phases at the Michigan State Fair, September 2-11, inclusive, by the dairy department of the fair. Two men are now at work preparing the dairy show—former governor Fred M. Warner, member of the fair board of control in charge of the dairy department, and H. D. Wendt, acting director of the bureau of dairying of the State Department of Agriculture, also superintendent of the fair's dairy show.

It is planned to have assembled in the dairy building a complete exhibit of dairy equipment and machinery used in the production, manufacturing and marketing of milk and milk products. A working dairy will be housed in a large glass refrigerated room, according to plans. The room will also house a complete collection of manufactured milk products "made in Michigan."

Exhibits showing the food value of milk and milk products as compared with other foods which commonly go to make up the human diet are now being prepared, and constitute a part of the Michigan Agricultural College's contribution to the success of the fair.

A dairy bar will be one of the unique features. Varied milk drinks and dairy lunches will be served. This is an exclusive concession to be operated under the auspices of the alumnae council of the Michigan Agricultural College and will be semi-educational in character.

A demonstration here has been arranged for, to show the relative productivity of individual animals and for the purpose of demonstrating the need for intelligent selection and breeding in order to promote greater economy in production.

One of the high spots of the dairy department show at the fair will be an exhibit depicting the results obtained by the government at Grove City, Pa., in the matter of developing a coal mining community, ranking almost zero as an agricultural section, into one of the most intensified dairy sections in the east, if not of the whole country. The milk produced by the community of Grove City is manufactured into various forms of fancy cheese, condensed and evaporated milk, casein and fancy sweet cream butter. Michigan dairymen will be especially interested in this exhibit, in view of the plant planned by the Michigan Milk Producers' Association in Lenawee county, which is designed to utilize some of the milk produced in the Detroit market milk area for the production of fancy butter and cheese. This proposed plant, it is disclosed, will be equally as profitable to the producer as the sale of his milk for purposes of distribution in the city.

Another dairy exhibit that is being planned for the fair will show a mediocre dairy as compared with one that is operated on a modern and profitable basis.

AVOID AGRICULTURAL CAMPS.

THE farmer who breeds a perfectly proportioned horse or cow is as much an artist as Michelangelo, in the opinion of Dr. Thomas Nixon Carver, Harvard economist, who spoke on "The Drift from Outdoor to Indoor Industries," before the economic conference at M. A. C. But until such achievements as the raising of high-class live stock are appreciated by the nation at large, ambitious boys of the country will be led to seek careers in the city, he said.

"I went through 'Who's Who' the other day," added the speaker. "I found the names of agricultural professors, agricultural editors, long-distance and Christian-science farmers—everybody except men that do the farming. The man who does things

ought to have at least as much appreciation as the man who talks about them."

Work of building for the future has just begun, according to Dr. Carver. Up until now the national life has been characterized by the restlessness and instability of the pioneer. He termed many of our cities and farms "manufacturing and agricultural camps."—H.

RURAL CHURCH AS A SOCIAL CENTER.

(Continued from first page).

of his people with this idea. He organized a young men's Bible class, co-operative societies for selling grain and apples, a farmers' institute with special lectures on agricultural topics; built up a community library of one thousand volumes, and made his church indispensable to the community.

The average American rural community needs to be converted—get a new spirit. If it achieves the new vision of social, education and economic service to fellowman, it is safe to believe, from demonstrations already history, that the religious goal will be achieved. The average rural community in this county insists that it is the most "peculiar" spot on earth, that wonderful things might be done in other place but "not in this town." To put in the place of this spirit a spirit of pride in the neighborhood, to put neighborly friendliness and cooperation in the place of suspicion and independence, to get the "newcomers" and "old-timers" alike to look upon the community as their own, belonging to the both, and as a place where it is good to live—that is to convert the neighborhood. Not until a community has this atmosphere can the church as an institution perform its best service. In fact, neither can the school.

The dying off of wholesome recreations growing naturally out of country life and occupations, the apple parings and the sugarings off, the corn huskings and the singing schools, have found, indeed, poor substitutes in the few village dance halls and the movies.

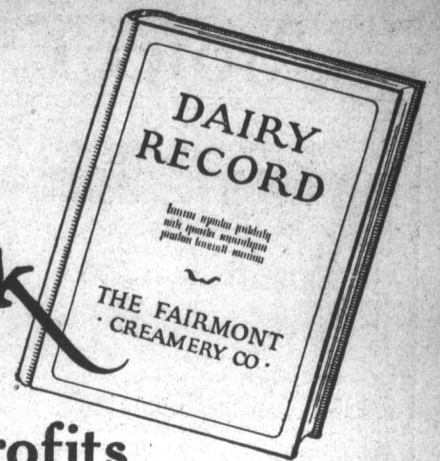
Therefore, the modern problem of the church and the school is to take charge of the recreational life of the village and open country so that there will be an abundance of wholesome relationships. We must get away from the rural church which is essentially a preaching room and vestibule, as it was at the close of the Civil War, and erect a church "plant" capable of meeting the diversified needs of the community.

The first need is to make the country church so attractive that it will bring in the same type of militant leaders as other lines of endeavor. The trite witticism that the rural ministry is "trying to live on earth and board in Heaven" is not far from the facts. How thousands of country ministers live is a mystery difficult to explain, for they are certainly not paid a living salary, a salary sufficient to support a family.

This problem of financing the country church involves the question of the permanency and status of the rural ministry. Too long it has been lightly regarded as merely a stepping stone to the city ministry, a temporary makeshift for young preachers while they are making their first blunders and experiments in the pastorate. Some of us have come to feel that the efficient rural ministry is a specialized ministry, just as the city ministry should be, requiring some special fitness and specialized preparation and adaptation. If so, it should be a ministry for life. Meanwhile, earnest young men who love the country, and have heard the country's call are asking, "Is there a life work for me in the rural ministry?" The answer should be in the affirmative.

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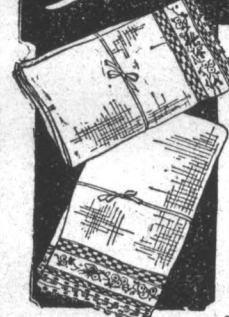
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Send me 10 yards of Scrim as described above. Special Offer No. 512. I'll pay the postman 88¢, plus postage when he delivers them. If I'm not entirely pleased in every respect, I'll return them and you will refund the purchase price plus postage. I assume no obligation.

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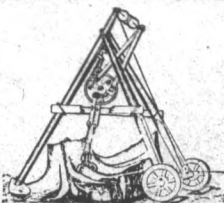
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REGISTERED Aberdeen-Angus. Ten heifers, six bulls from eight to fourteen months. Best of breeding, the growthy kind that make good. Reasonable. Inquire F. J. WILBER, Olio, Mich.

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Containing blood of world champions.
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Guernsey Bulls of May Rose Breeding. Their dams have records 420 to 650 lbs. fat also a few cows and heifers are offered. H. W. Wigman, Lansing, Mich.

Guernsey bulls, grandsons of Carrie of Hillhurst 3rd A. A. Class Leader, and out of cows on test. Also a 2 yr. old out of a 3 1/2 yr. old with a 500 lb. record. Priced to sell. Federal tested. Satisfaction guaranteed. G. W. and H. G. RAY, Albion, Mich.

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WHAT AN OPPORTUNITY

We are now offering a beautiful calf born Aug. 2nd, 1920. His sire a 35.68 lb. bull. Dam's sire has three sisters each with yearly records of over 1200 lbs. two of them former World's champions. Write for pedigrees HILLOREST FARM, Kalamazoo, Mich.

Holstein Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements. Browncroft Farms, McGraw, N. Y.

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Buy a "milk" Bull of Quality from the Breeders of the world's only cow to produce 800 lbs. milk in 7 days, having an 800 lb. daughter.

Our herd is rich in the blood of Colantha 4th Johanna, the only cow that ever held all world's records in every division from one day to one year at the same time. She produced 651.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7 1/2 lbs. in 7 days.

His dam's records are:—
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His name is
KING VALE CORNUCOPIA WAYNE, No. 312599
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His dam and sire's two nearest dams average
Butter 7 Days 33.02 lbs.
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Handsomely marked about one third white.
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KING SEGIS transmitted to his sons the power to transmit to their daughters the greatest of production over long periods. It is his offspring that has recently made the greatest yearly production ever dreamed of 37,381.4 pounds of milk in a year.

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No. 1. 18 mos. old—Dam 19 lbs. 3 yr. old.

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Dam of No. 3 has 1031 lbs. butter 23543 lbs. milk

in a year—One of our best foundation cows.

Don't delay but buy one of these ready for service

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Place Orders NOW for BERKSHIRE boars or sows 6 to 8 weeks old Reg. and Trans. and delivered any where in Mich. for \$15, or a fine large bred sow at \$40.00. I also have an exceptionally fine 400 lb. boar for sale at \$40.00. He is a dandy and anybody in the market for him should never pass this up. He is a good one. O. H. WHITNEY, Merrill, Mich.

Berkshire spring pigs, either sex, \$10, \$12 and \$15 according to age. Also fall gilts and yearling sows. CHASE STOCK FARM, Nariette, Mich.

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All of the right type and the best of breeding. Prices reasonable. Mail orders a Specialty. Satisfaction guaranteed.

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Write Me at once I have just what you want heavy bone registered Duroc Jersey boars ready for service. W. H. MAYES, L. B. 505, Durand, Mich.

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Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Gd. Rapids and Saginaw 1919

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Herd Boars Wolverine Pathfinder by Pathfinder Wolverine Sensation by Great Orion Sensation. Wolverine Renown Wonder by Great Wonder IAM Fall boar and gilts by the Sensation boar. 100 spring pigs from these boars.

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Duroc Bred Gilts for Sept. farrow from prize winning stock, at \$25 and \$35. Spring boar and sow pigs of Orion Cherry King, Col., and Pathfinder breeding. W. C. TAYLOR, Milan, Mich.

DUROCS A few choice, ready for service, boars for sale. HARRY FOWLER, Sturgis, Mich.

Woodlawn Farm Duroc hogs are from select breeding stock, well mated for size, type and color. Herd boars, sows and pigs, will ship C.O.D. and furnish Reg. certificate. W. E. Bartley, Alma, Mich.

Duroc Jerseys Am booking orders for spring pigs. Few fall gilts. E. D. HEYDENBERG, Wayland, Mich.

DUROC SOWS and gilts bred to Orion King No. 169258 Son of the \$10,000 boar owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply THE JENNINGS FARM, Bailey, Mich.

Buy good hogs now, from one of the largest herds of registered Durocs in the state. Open fall gilts at \$25. Sows and gilts bred for summer and fall farrow. Booking orders for spring pigs. Will accept a few sows to be bred to good sons of Great Orion Sensation and Duration. Michigana Farm, Pavilion, Mich.

Duroc Jerseys A few extra good fall boars, and a choice lot of spring boars of the heavy boned type popular blood lines at reasonable prices. DRODT & BERNIS, Monroe, Mich.

Chester Whites Big stretchy, spring pigs for sale. These are good ones. George D. Springer, R. 6, Grand Rapids, Mich.

Chester Whites Choice March boars; new blood for old customers; cholera immunized; price right. F. W. Alexander, Vassar, Mich.

O.I.C's Last fall gilts bred to farrow in Aug. boars for service, also spring pigs for sale. MILO H. PETERSON, Ionia, R. 2, Mich., Elmhurst Farm.

O.I.C's Choice gilts for April and May farrow, also fall pigs. Booking orders for spring pigs. A. J. BARKER & SON, Belmont, Mich.

THE CONDENSED MILK MARKET.

THERE has been little change in the condensed milk market, although all canned milk has moved to a little better advantage during the recent hot weather, which was conducive to an immense output of ice cream, and there seems to be a steadier market for that product. The domestic consumption of case goods remains unchanged and there is but little demand from foreign sources. There is no tendency for a change in values of case goods, however, in spite of the weak demand, although manufacturers of unadvertised brands have shown a tendency to consider slightly lower prices for their products.

There has been no rapid movement of evaporated milk as manufacturers of advertised brands feel inclined to accumulate stocks rather than move them at reduced prices. The fact that there has been a decrease in milk production during the recent period of extremely hot dry weather has influenced manufacturers in that regard. Unadvertised brands have moved fairly well at slightly reduced prices. There is practically no demand for powdered skim-milk but some sales have been made at reduced prices. On the whole, however, manufacturers of the higher grades are inclined to advance their asking prices.—W. B. L.

HAMPSHIRE BREEDERS ACTIVE.

THE breeders of Hampshire hogs in Cass county are surely a live bunch. On April 19 they perfected the Cass County Hampshire Swine Breeders' Association and have been "up and at it" ever since.

They organized a Boys' and Girls' Pig Club this spring, enrolling twenty members. On June 11, when the club pigs were distributed, the association pulled off quite a novel stunt. The twenty belted pigs, averaging about thirty-five pounds, were placed in the biggest show window in Cassopolis, and at three o'clock in the afternoon the boys and girls met there and drew their pigs by lot. This window was the center of attraction, holding a crowd around it all day. The boys and girls will feed these pigs for ninety days, at the end of which time the association plans for a big Hampshire hog show at the fair grounds. They have put up a purse of \$50 as premium money for this contest.

Plans are being formulated now for a bred sow sale next March. About forty good sows, selected from the various herds in the county, will be sold at auction. Some of the best bred hogs in the state are to be found in Cass county and it is anticipated that this sale will eclipse all other Hampshire activities ever attempted in Michigan.

The association is very much interested in breed promotion and is anxious to cooperate with other like organizations in the state to put Michigan plainly on the map of the Hampshire world. Alfred J. George, Cassopolis, Mich., is secretary of the Cass County Association.—G.

PREMIUM LIST OF INTERNATIONAL GRAIN AND HAY SHOW NOW READY.

A COPY of the \$10,000 premium list of the International Grain and Hay Show to be held in connection with the International Live Stock Exposition at Chicago, November 26 to December 3, has just been received. Many readers of this journal are interested in this list, which they can receive by writing the International Live Stock Exposition, Hay and Grain Department, Union Stock Yards, Chicago, requesting a copy of this list.

Wheat, remaining on farms July 1, is estimated at 54,534,000 bushels, or 6.9 per cent of last year's crop. Wheat remaining on farms July 1 last year was 47,620,000 bushels and the average for the previous five years was 29,328,000 bushels.

NEW WOOL TARIFF.

THAT the wool tariff schedules contains a joker which is likely to develop into a full-sized "nigger in the wood pile," is the belief of wool growers' representatives who have given the Fordney tariff bill much consideration. They are objecting to the provision in the bill which limits the duty on wools to thirty-five per cent ad valorem and which when applied to the present values of wool in this country will afford protection of only eight to eighteen cents per pound on quarter and three-eighths blood cleaned wool instead of twenty-five cents per pound specific duty which it was supposed the bill would carry. This point was brought out forcefully by J. F. Walker, chairman of the wool committee of the Ohio State Farm Bureau Federation, before the house ways and means committee.

It was thought that the tariff committee was favorable to a specific duty of twenty-five cents per pound on cleaned wool. It is found, however, that a limiting clause has been added which provides that in no case shall the duty exceed thirty-five per cent ad valorem. The wool growers' representatives say that when wool is low as at present the thirty-five per cent ad valorem gives the farmers practically no protection.

Most of the western wool is known as quarter and three-eighths blood. South American wools of this grade are now quoted at about eleven cents per pound. Under an ad valorem duty of thirty-five per cent they would pay a duty of 5.8 cents per pound, cleaned basis, and 3.7 cents per pound in the grease. This means that the importer could bring this grease wool into the United States at a total cost, including duty, of 14.7 cents, whereas the same domestic wool is selling here at twenty-four to twenty-eight cents.

"The wool producing industry is in no condition to be handed a joker in the form of a tariff," declares Mr. Walker. "In the past eighteen months enormous quantities of wool have been rushed into this country pending the enactment of the tariff bill and we now have enough wool to take care of normal requirements for from eighteen months to two years. But what of the future? The sheep population of the United States has decreased twenty-eight per cent during the last ten years and the wool producing industry is in the dumps." It was said that instances could be multiplied by the thousands where men would be glad to get out of the sheep business with a twenty-five per cent recovery on their investment. In one instance an Arizona sheep raiser shipped 1,017 lambs to the Chicago market, and after paying freight, feed bills, yardage, and commission charges, he was \$1,446 in the hole, the lambs selling that much less than the cost of shipping and selling them.

FARMERS' FINANCE BODY IS FORMED.

WITH the receipt of the articles of incorporation and the election of the permanent officers, the final steps in the formation of the Farmers' Finance Corporation were completed. W. F. Schilling, of Northfield, Minn., was elected president. Vice-presidents are: Adam L. Middleton, of Eagle Grove, Ia.; F. A. Mudge, of Peru, Illinois, and George C. Jewett, of Spokane, Washington; H. W. Avery, of Wakefield, Kansas, is secretary, and J. K. Mason, of Milton, Indiana, is treasurer.

The board of directors of the organization will be made up of the officers just named, together with Harry W. Robinson, of Cleveland, Ohio; C. H. Hyde, of Alva, Oklahoma, and U. L. Burdick, of Williston, North Dakota. J. D. Nichols, of Lansing, Michigan, was offered a place on the board but did not feel in a position to serve.

Some nationally known financier will be employed by the board to act as general manager of the company. In addition the directors, all of whom

are farmers living on their own farms will be aided by an advisory committee of prominent financiers. Bernard M. Baruch has consented to act as chairman of this advisory committee.

The Farmers' Finance Corporation is virtually the fiscal department of the U. S. Grain Growers, Inc., and is to be the agency through which the latter will obtain money and credits needed in handling the grain of its members. The officers of the Finance Corporation are also directors of the U. S. Grain Growers, Inc., so that the facilities of the former will be absolutely at the disposal of the latter organization.

With the organization of the Finance Corporation complete, it is expected that the Grain Growers can proceed more rapidly toward the actual handling of grain of its members. No definite date has been set, but it is confidently expected that some grain will be handled during the present crop year. This is especially likely to take place in the northwest where previous organizations have done much to pave the way for the work of the U. S. Grain Growers.

A committee from the Equity Cooperative Exchange of St. Paul, and consisting of Magnus Johnson, Glencoe, South Dakota; F. D. Wood, Wheeler, North Dakota; John E. Kelley and Benjamin Drake, St. Paul, met with the board of directors of the U. S. Grain Growers, Inc., at its meeting at Chicago, July 5-9, to consider the drawing up of a cross-contract between the two organizations for the handling of grain. No details have been made public as yet but the matter has been placed in the hands of attorneys and an agreement is expected at an early date. This step will clear the way for organization work in the northwest, particularly in Minnesota.

The relations of the U. S. Grain Growers, Inc., with the Northwest Wheat Growers' Association are still in the hands of the sub-committee appointed some time ago and no report of progress has been made recently.

The pooling committee of the board of directors of the U. S. Grain Growers has formulated additional regulations for the handling of pool grain and these have been adopted by the board. No cash advances will be made to growers until the grain has been delivered to a country elevator. Advance payments also will be made upon the basis of grade and variety and the complete deduction for lower grades will be made at the time of the first payment. Subsequent payments until the pool is completely sold out and final payment is made will be the same to all members contributing to the pool. Freight differential also will be computed to the basic zone market, which will be designated by the sales committee. Another regulation subject to change provides that farmers will be allowed one cent per bushel per month for grain held on the farm after it is threshed.

Growers who sign the pooling contract will be required to report to the pooling department of the National Sales Agency the approximate amount of grain they will pool as quickly as crop conditions will warrant. The pooled grain will be subject to control by the sales agency as soon as the pooling committee notifies the grower that it is ready to handle his crop.

These regulations, of course, apply only to the national pool and not to grain handled in the local pool, nor do they affect grain sold directly to local farmers' elevators or sold on the consignment.

The board of directors also passed resolutions to prevent a state director or state organized from employing solicitors or assistants except when such persons are working under the standard contract form. Also no person is to be employed by the U. S. Grain Growers, Inc., at a salary in excess of \$4,000 a year without the approval of the board of directors. Higher salaries can be paid temporarily subject to the approval of the board at its next meeting.

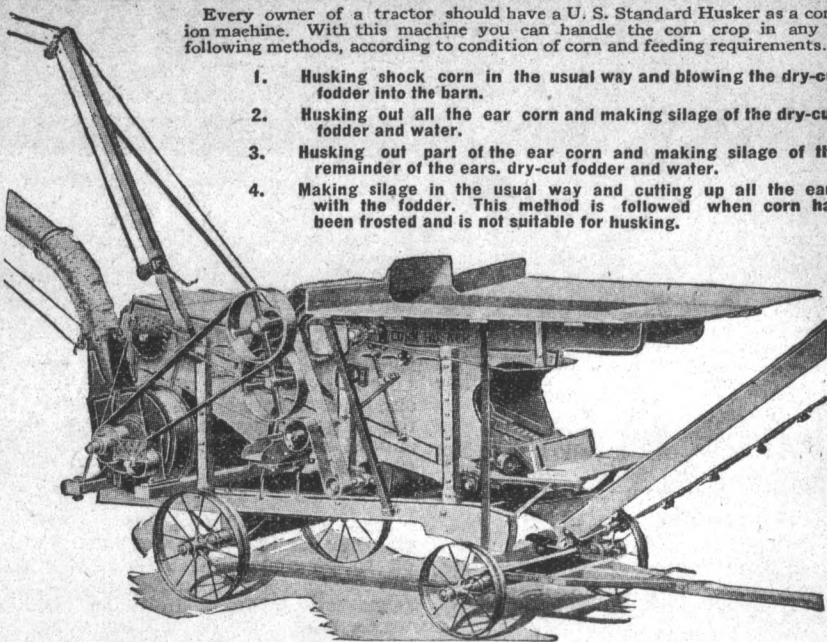
One of the high lights of the meeting of the board of directors was the verbal statement from U. L. Burdick, who is acting as director of organization in North Dakota and told of the progress being made in that state. Over thirty elevators have already signed the elevator contracts and nearly two thousand farmers have signed the growers' contracts. These alone will assure the U. S. Grain Growers, Inc., of more than five million bushels of grain in one state. The campaign for members was started on June 20. The success of the campaign has far exceeded expectations.

It is reported that thus far all the North Dakota members have signed the pooling contracts.

Get the Greatest Value out of your Corn Crop by using the U. S. STANDARD HUSKER and SILO FILLER

Every owner of a tractor should have a U. S. Standard Husker as a companion machine. With this machine you can handle the corn crop in any of the following methods, according to condition of corn and feeding requirements.

1. Husking shock corn in the usual way and blowing the dry-cut fodder into the barn.
2. Husking out all the ear corn and making silage of the dry-cut fodder and water.
3. Husking out part of the ear corn and making silage of the remainder of the ears, dry-cut fodder and water.
4. Making silage in the usual way and cutting up all the ears with the fodder. This method is followed when corn has been frosted and is not suitable for husking.



These machines have been in use several years with great success and largely increase the value of the corn crop. Write us today for information and reports of Feeding Tests at Experiment Stations on various ways of handling the corn crop. U. S. Wind Engine & Pump Co., Canal St., Batavia, Illinois

O. I. C. HOGS

all ages sired by Callaway Edd 1918 world's grand champ. boar and C. C. Schoolmaster 1919 world's grand champion also Wonder Big Type and Giant Buster. Write your wants, all stock shipped on approval.

CRANDELL'S PRIZE HOGS,

Cass City, Mich.

HOGS

Raise Chester Whites

Like This
the original big producers

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

O. I. C. Swine Strictly Big Type with quality. A few gilts bred for last of April, and May farrow. A few Sept. and Oct. fall pigs either sex. Extra good ones. Of our State Fair prize winning blood lines. Will ship C. O. D. and record them free. **NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.**

Write for Prices on O. I. C. pigs of March and April farrow. Both sexes, Sire C. C. Callaway Boy. Good long ones the kind that fills the Pork bbls. Some good Jersey bull calves of the Albertas Jubilee kind. All stock reg. in buyer's name. **VILLAGE STOCK FARM, Jeddo, Mich.**

O. I. C's. one yearling boar, last fall gilts bred for next fall farrow; this spring pigs not akin, big growthy stock, reg. free. City's phone. 1/2 mile west of Depot. **OTTO B. SCHULZE, Nashville, Mich.**

O. I. C's. Special prices on spring prize winning stock. Must be sold to make room. **WEBER BROS. Phone R. O. 408, 10 mile Rd. W., Royal Oak, Mich.**

Central Mich. O. I. C. Swine Breeders Ass'n.

Hogs of all ages of popular blood lines. Every sale guaranteed by association.

DR. H. W. NOBLES,
Sales Mgr. Coral, Mich.

O. I. C's. Special prices on choice pigs of March and May farrow by C. C. Big Callaway. **O. J. Thompson, Rockford, Mich.**

O. I. C's choice boars and spring pigs at farmers prices.
CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C. GILTS Bred for June and July farrow.
H. W. MANN, Dansville, Mich.

L.T.P.C. \$15, \$20 & \$25

Our top notch stretchy boar pigs are weaned and ready to ship. They are sired by such boars as Harts Block Price Cline's Big Bob, Right Kind, Clam and Leonard's Big Bob. **HART, FULCHER AND CLINE, Address F. T. Hart, St. Louis, Mich.**

Spotted Poland Chinas

The hog with more outcrosses than any other breed. Which insures vitality and prolificacy. Why breed and feed grade hogs when you can buy registered hogs at special low prices. Write me your wants in bred gilts, boars or spring pigs. Cholera immuned. Satisfaction guaranteed.

SAMUEL GERBER
R. 4, Bluffton, Ind.

Big Type Poland Chinas. Choice spring boar pigs \$15 each when 8 weeks, sired by Clansmen Buster and their dam being a prize winner at the State Fair. Also gilts bred for Sept. farrow for \$40 and up. Guarantee Satisfaction. **DORUS HOVER, Akron, Mich.**

L. S. P. C. a few choice boars at farmers prices, bred gilts all sold. Also a grandson of The Clansman and Harrison Big Bob. **H. O. SWARTZ, Scherbrooke, Mich.**

Big Type P. C. some very choice boars double immune, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. **E. J. Mathewson, Burr Oak, Mich.**

Big Type Poland Chinas. A great litter by Checkers, dam a grand-daughter of Giant Buster, are for sale now. They were farrowed Mar. 11, and were purchased of Jim Bloemendaal, Alton, Ia. in dam. Do you want the best the breed produces? Come over and see them. **Wesley Hile, Ionia, Mich.**

Leonard Farm BIG TYPE P. C. boar pigs at weaning time, \$25 from Mich. Champion herd. Satisfaction guaranteed. Call or write. **E. R. LEONARD, R. 3, St. Louis, Mich.**

Big Type Poland Chinas at lowest prices. Both sows and gilts. **G. A. BAUMGARDNER, R. 2, Middleville, Mich.**

Sows bred for spring litters all sold. Have some choice gilts bred for Aug. litters, also some Sept. boars for sale. **Clyde Fisher, R. 3, St. Louis, Mich.**

T. P. C. few choice bred gilts sired by T's Clansman L. Mich's 1920 Gd. Cham. bred to Smooth Buster 1st Jr. yearling 1920. A. A. Feldkamp, Manchester, Mich.

L. T. P. C. Nothing for sale at present. **W. J. HAGELSHAW, Augusta, Mich.**

Hampshire bred gilts now ready for Aug. and Sept. farrow; spring and fall boar pigs at a bargain. **JOHN W. SNYDER, R. 4, St. Johns, Mich.**

Hampshires

1914 A few choice boars of this spring farrow that sure will improve your herd if used for herd boars. They are bred right and are right, and will produce right. Write for description and prices. We are glad to answer inquiries.

Steuben's Hampshire Farm,
Angola, R. 3, Ind.

Pine Grove Hampshires

Bred sows all sold. We are offering 100 spring pigs of excellent breeding and quality. Either sex, order early. **GEO. COUPAR & SONS, Marlette, Mich.**

SHEEP

INGLESIDE SHROPSHIRE

During the past 30 years Ingleside Farm has produced over a 1000 Shropshires of sustained excellence, but never before have we been able to present to our ever-widening circle of satisfied customers such an attractive offering of Shropshires of all ages.

In rams we have a strong assortment of lambs, yearlings and aged rams—splendid individuals of the choicest breeding obtainable. We have young ewes of quality for exhibition or foundation stock. We can supply 2 or 3 fitted flocks for show at county fairs. Write your wants—or better yet, come and inspect this stock personally. **H. E. POWELL & SON, Ionia, Mich.**

Good Clubbing Offers

OFFER No. 303.

Michigan Farmer, one year.....\$1.00
American Boy, one year 2.50

Total value\$3.50

Both for \$3.25.

OFFER No. 304.

Michigan Farmer, one year.....\$1.00
Christian Herald, one year..... 2.00

Total value\$3.00

Both for \$2.35.

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, July 19.

Wheat.

Detroit.—Cash No. 2 red \$1.30; September \$1.31½; No. 2 mixed and No. 2 white \$1.25.

Chicago.—No. 2 red \$1.24½@1.26½; No. 2 hard \$1.25½@1.26½; September \$1.28½.

Corn.

Detroit.—Cash No. 2 yellow 69c; No. 3 yellow 68c; No. 4 65c.

Chicago.—No. 2 mixed 62½@62¾c; No. 2 yellow 63@63¾c.

Oats.

Detroit.—Cash No. 2 white 44c; No. 3 white 42½c; No. 4 white 39½c.

Chicago.—No. 2 white 39@41c; No. 3 white 37@38¾c.

Beans.

Detroit.—Immediate and prompt shipment \$3.40 per cwt.

Chicago.—Market held unchanged and about steady. Hand-picked Michigan beans choice to fancy \$3.80@4.15; red kidney beans \$9@9.15.

New York.—The market is steady without much change in prices. Choice pea \$4.50; do medium \$4.75; red kidney \$11.75.

Rye.

Detroit.—Cash No. 2 rye \$1.26.

Chicago.—No. 2 \$1.27@1.27½.

Seeds.

Detroit.—Prime red clover \$13.50; October \$13; alsike \$11; timothy at \$3.10.

Hay.

No. 1 timothy \$21@22; standard and light mixed \$20@21; No. 2 timothy \$19@20; No. 1 clover mixed \$15@16; No. 1 clover \$14@15; rye straw \$13.50@14; wheat and oat straw \$12.50@13; per ton in carlots at Detroit.

WHEAT

The world's wheat situation is at the stage in which rapid changes take place due to the character of the weather in various wheat growing countries. The factors are becoming more clearly defined, however, and it should be possible within a short time to determine roughly how closely supply and demand will be adjusted to each other. Within the last two months drouth has been reported in a number of countries but the amount of damage has not been officially estimated and foreign countries apparently have minimized their crop losses in order to prevent a sharp advance in prices. There are good reasons for believing that world import requirements will be large. Germany, England, France, Holland, Belgium, Russia and Argentina have had dry weather although relief has been received in some sections within the last few days. Fears of famine have again been forthcoming from the spring wheat belt of Russia, due to a prospective crop failure. Within the past week export buying again assumed prominence with Germany as the leading purchaser. A credit of \$20,000,000 has been negotiated by that country for the purchase of grain. Some corn and rye was taken in addition to wheat. On the basis of recent reports it is estimated that the import requirements of the United Kingdom, France and Italy alone will aggregate 350,000,000 bushels, an amount equal to the probable surplus of the United States and also 100,000,000 bushels from Canada. Primary receipts of wheat have become very large, practically doubling in the past week and are running more than twice as high as at this time last year, due partly to the fact that the harvest has been unusually early. Prices undoubtedly would have sagged if crop damage reports had not been numerous and export buyers in the market.

CORN

The corn crop has been threatened with dry weather but rains have arrived at the opportune time and barring instances of firing in a few sections, the crop has come through unscathed, thus far. Considerable deterioration can occur before the crop yield will be reduced below the early season estimate, due to the increase in the par yield in the later returns. The crop is at the stage in which a

great deal of moisture is necessary. Market receipts have been shrinking but are still ample for immediate consumptive demand. Chicago has had difficulty in caring for daily arrivals because of the large stocks of corn and other grains in terminal elevators. Exports continue at the rate of about 2,000,000 bushels per week. Corn is now the cheapest grain on the market and even though the prospect is for the largest crop on record, the prices should not fall much below the present basis.

OATS

The heaviest losses due to hot dry weather in the northwest are expected to be shown in oats as the crop the producer are extremely low, an Iowa report giving 15 to 18 cents as was caught at the critical stage and a great deal of light weight grain has resulted. New oats have already arrived at terminals and shows a light weight test in contrast with the high weights of the last crop. Prices to the price in that state, with 11 cents reported paid in sections of Oklahoma. These figures leave little above harvesting expenses and some fields may not be cut in consequence. The drouth abroad will undoubtedly enlarge the market for oats during the coming year as spring-sown grains have been affected much more than wheat. Already this increased demand has been in evidence. Old oats are likely to be at a premium on this account because of their heavy weight.

FEEDS

Feed markets have advanced slightly during the past week. Stocks are liberal and demand is so limited that prices seem likely to remain comparatively low for several weeks. The advance was due largely to buying by operators who considered prices low enough. The small coarse grains are abundant and cheap and thus far pastures in practically all sections have been in good condition. Dry weather in late summer might enlarge the demand for mill feeds considerably. During the coming fall and winter the

markets for cottonseed meal and linseed oil meal will be affected by the sharp reduction in the cotton and flax crops. In general the feed situation promises to be much stronger in the coming year than in the last twelve months.

SEEDS

The government's report on the condition of clover hay as of July 1 was 74 per cent of normal, while timothy was 76.9 per cent. Acreage in both cases was about the same as last year. The low condition estimates point to lighter seed crops than are usually obtained. Cash markets have remained within a narrow range during the past few months but prices for fall delivery have advanced as a result of crop damage reports.

HAY

Hay market receipts are ample although much smaller than a year ago. Demand is limited although the dry weather in some sections may stimulate demand presently. New hay began arriving at some southern and western markets a week or two earlier than usual and is bringing \$2@5 per ton less than old hay.

WOOL

Demand for wool remains of an intermittent character with mills purchasing in a leisurely manner. The American Woolen Company, leading manufacturers, claims to be operating at 95 per cent of capacity. Most mills are working upon old orders and report but few new orders for goods. Demand is most keen for wools grading three-eighths and higher. The latest London auction was at prices five to ten per cent lower than a month ago as the total quantity offered was large and demand had been largely supplied by recent sales. The tariff schedule is calling forth a great deal of protest from producers. The 25 per cent ad valorem limitation means a low tariff upon this commodity which of all the agricultural products stands decidedly in need of protection. Prices have changed but little recent-

ly. The Boston market is quoted as follows: Ohio and Pennsylvania fleeces, delain unwashed 35c; fine unwashed 29@30c; three-eighths blood combing washed 27@28c; half-blood combing 26c. Michigan and New York fleeces, delaine unwashed 31@33c; fine unwashed 26@27c; half-blood unwashed 28@29c; three-eighths blood unwashed 25@26c; quarter-blood unwashed 24@25c.

EGGS AND POULTRY

In spite of rapid piling up of reserve egg holdings in early spring, the preliminary report of stocks on July 1 shows only 7,450,000 cases compared with 6,740,000 cases on the same date last year when the available supply was below normal. Prices have advanced about 25 per cent above the low point of the year. Poultry prices remain high in consuming markets but are comparatively low in producing sections. Receipts are fairly liberal and average higher than those of last year.

Detroit.—Eggs fresh candled 30@31; live poultry, spring chickens 35c; hens 28c; light hens 24@25c; roosters 14c; geese 15c; ducks 20@25c; turkeys at 25c per pound.

BUTTER

Butter markets have been on the upgrade for seven consecutive weeks and prices have gained from 10 to 15 cents per pound. Consumptive and storage demand is strong and speculative buying has been active as a result of lighter production and poor quality due to hot weather. Since foreign butter prices also have advanced there is more confidence that prices can be maintained without competition from abroad. The preliminary report on cold storage holdings as of July 1 was 63,750,000 pounds compared with 52,526,000 pounds a year ago. In spite of hot weather the supply of undergrades has not been large and prices upon them have made the most marked advance. It is rarely that an advance of the kind that has occurred in butter is maintained without setbacks and it will be no surprise to see such a turn at any time but the market seems to be in a rather strong position. Prices for 92-score fresh butter were: Chicago 40½@41c; New York 41½@42c. At Detroit the fresh creamery in tubs is quoted at 37½@39c per pound.

CHEESE

Cheese markets made further advances during the past week and the undertone is firm with supplies at distributing markets clearing easily. Some styles are scarce, especially twins, double daisies and longhorns. Demand for white cheese continues at about the same price as for colored. Export buying has been active in eastern country and distributing markets. Receipts at the four leading cities increased slightly over the preceding week but are less than in the corresponding week last year. Cold storage holdings at these points are about the same as a year ago.

Chicago.—Flats 17@18c; twins 17½@18c; single daisies 17½@18½c; double daisies 17½@18c; young Americas 18½c; square prints 18@18½c; longhorns 18@19c.

New York.—Flats 19½@20½c; twins 19½@20c; single daisies 20@20½c; double daisies 19½@20½c; young Americas 20@21c.

COMING LIVE STOCK SALES.

Guernseys.—October 19, Michigan State Sale, Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Manager.

Aberdeen-Angus.—September 23, Eastern Aberdeen-Angus Breeders' Association Sale, Eastern States Exposition, Springfield, Mass. F. W. Burnham, Greenfield, Mass., Secretary.

Aberdeen-Angus.—October 12, Indiana Aberdeen-Angus Breeders' Association Sale, Indianapolis, Ind. Prof. C. F. Gobble, Lafayette, Indiana.

Holsteins.—October 21, Howell Sales Co., Eighth Annual Sale at Howell, Mich. Wm. Griffin, Secretary.

Fertility is a by-product of good farming. Good farming is a combination of science and art with plenty of field for expansion.

Live Stock Market Service

Wednesday, July 20.

DETROIT

Cattle.

Receipts 621. Good grades steady; common dull.

Best heavy steers	\$ 7.50@ 8.50
Best handy wt bu steers	7.50@ 8.00
Mixed steers and heifers	6.75@ 7.00
Handy light butchers....	6.00@ 6.50
Light butchers	4.50@ 5.50
Best cows	4.75@ 5.50
Butcher cows	4.00@ 4.50
Common cows	2.00@ 2.75
Canners	1.50@ 2.00
Best light weight bulls...	5.00@ 5.75
Bologna bulls	4.75@ 5.25
Stock bulls	3.75@ 4.50
Feeders	5.00@ 6.00
Stockers	4.00@ 5.00
Milkers and springers....	\$ 45@ 70

Veal Calves.

Receipts 591. Market slow.

Best	\$10.50@11.50
Others	4.00@ 8.50

Hogs.

Receipts 1,140. Pigs 25c higher; others steady.

Mixed hogs	\$10.75
Pigs	11.00
Heavies	10.00

Sheep and Lambs.

Receipts 352. Sheep steady; lambs 25c higher.

Best lambs	\$10.50@11.00
Fair lambs	8.50@10.00
Light to common lambs..	6.00@ 7.50
Fair to good sheep.....	4.00@ 4.50
Culls and common	1.00@ 2.50

CHICAGO

Hogs.

Estimated receipts today are 20,000; holdover 11,676. Light and medium steady to strong; others 10@15c lower. Bulk of sales \$10.55@10.80; tops \$10.90; heavy 250 lbs up medium, good and choice \$10.40@10.55; medium 200

to 250 lbs medium, good and choice \$8.65@9.20; light 150 to 200 lbs common, medium, good and choice \$10.25@10.65; light lights 130 to 150 lbs common, medium, good and choice at \$10.40@10.75; heavy packing sows 250 lbs up smooth \$8.65@9.20; packing sows 200 lbs up rough at \$8.25@8.55; pigs 130 lbs down medium, good and choice \$10@10.65.

Cattle.

Estimated receipts today are 7,000. Market steady to 15c higher. Beef steers medium and heavy weight 1100 lbs up choice and prime \$8.25@9.25; do medium and good \$7.50@8.25; do common \$6.50@7.50; light weight 1100 lbs down good and choice \$8.65@9.50; do common and medium at \$6@8.65; butcher cattle heifers common, medium, good and choice \$4.50@8.75; cows common, medium, good and choice at \$3.75@7.25; bulls bologna and beef at \$4.75@6.75; canners and cutters cows and heifers at \$2.25@3.75; do canner steers \$3.50@3.75; veal calves light and handy weight medium good and choice \$9@11; feeder steers common, medium, good and choice \$5@7.50; stocker steers common, medium, good and choice at \$4@7.25; stocker cows and heifers common, medium, good and choice \$2.50@5.50.

Sheep and Lambs.

Estimated receipts today are 17,000. Market steady. Lambs 84 lbs down, medium, good, choice and prime \$8.25@10.75; do culls and common \$5@8; spring lambs medium, good, choice and prime at \$6@8.25; ewes medium, good and choice \$3.25@5.50; ewes cull and common at \$1.50@2.75; breeding ewes full mouths to yearlings at \$3@6.50; yearling wethers medium, good and choice \$6@7.

BUFFALO

On this market medium and heavy hogs sold for \$10.75@11.25; others at \$11.50@11.55; lambs and calves \$12.

The "Better Sire" Train

SCHEDULED to pass through twenty-five counties of the lower peninsula of Michigan, the "better sire train," which will make its tour in August under the joint auspices of Michigan Agricultural College, the Michigan Holstein-Friesian Association, and the New York Central and Pennsylvania Railroads, will represent the greatest single attempt ever made to eliminate the scrub bull from the dairy industry of the state.

Through the fourfold bull exchange plan, the Holstein-Friesian Association will dispose of two carloads of pure-bred sires, and men in charge of the train will carry on, in every county visited, a campaign of education that is expected to be far-reaching in its effect.

The itinerary of the tour, as arranged by J. A. Waldron, extension specialist at M. A. C., in cooperation with railroad officials is as follows:

Leave Lansing, Monday morning, August 1; Chesaning, noon to 2:30 p. m.; Saginaw, 3:30 to 6:00. Tuesday, August 2, Rochester, 8:00 to 10:30; Oxford, 11:30 to 2:00; Lapeer, 3:00 to 5:30. Wednesday, August 3, Otter Lake, 8:00 to 11:00; Millington, 11:30 to 2:00; Vassar, 2:30 to 6:00. Friday, August 5, Midland, 8:00 to 11:00; Mt. Forest, 2:00 to 5:00. Saturday, August 6, Gladwin, 8:00 to 10:30; Standish, 1:00 to 4:00. Monday, August 8, Alger, 8:30 to 10:30; West Branch, 11:00 to 2:30; Roscommon, 3:30 to 5:30. Tuesday, August 9, Grayling, 8:00 to 10:30; Johannesburg, 11:30 to 1:30; Gaylord, 2:30 to 6. Wednesday, August 10, Wolverine, 11:00 to 1:30; Cheboygan, 3:00 to 6:00.

Leaving Mackinaw City at 8:45 a. m. on Thursday, August 11, the train will arrive at the following places at the hours given: Levering, 9:15 a. m.; Alanson, 12:10 p. m.; Harbor Springs, 4:40 p. m. Friday, August 12, Petoskey, 9:30 a. m.; Boyne City, 1:40 p. m.; Alba, 5:45 p. m. Saturday, August 13, Mancelona, 9:30 a. m.; Kalkaska, 1:40 p. m.; Manton, 4:50 p. m. Monday, August 15, Cadillac, 1:10 p. m. Tuesday, August 16, Merritt, 9:30 a. m.; Falmouth, 1:10 p. m.; Lake City, 5:20 p. m. Wednesday, August 17, Tustin, 9:00 a. m.; Reed City, 12:20 p. m.; Big Rapids, 4:50 p. m. Thursday, August 18, Morley, 1:10 p. m.; Howard City, 4:30 p. m. Friday, August 19, Pierson, 9:00 a. m.; Cedar Springs, 11:20 a. m.; Rockford, 4:30 p. m.; Grand Rapids, 9:50 p. m. Saturday, August 20, Conklin, 9:20 a. m.; Ravenna, 11:45 a. m.; Muskegon, 4:50 p. m.; Grand Rapids, 11:10 p. m.

Seven cars will be included in the train—two containing bulls to be exchanged, two containing exhibits, one for lecture purposes with a seating capacity of one hundred and twenty-five, one containing cattle from M. A. C. for demonstration purposes, and one in which the demonstrations will be carried on.

Exhibits in the first car will be of interest particularly to women, showing the care of milk in the home, and stressing its use in children's diet.

The second car will combine exhibits by the dairy, soils, crops and farm mechanics departments at M. A. C. Samples of more or less common dairy feeds of various balanced rations demonstrating feeding economies will be shown. Methods and apparatus for cooling and handling milk on the farm will be on display by the dairy manufacturing department, and the soils department will stress the results of using lime, green manures and commercial plant foods in obtaining successful stands of alfalfa and sweet clover, etc. Cultural methods for sweet clover and alfalfa will be shown

by the crops department, placing special emphasis on sweet clover as a pasture and hay crop on the dairy farm. Building plans for dairy farm buildings will be on display by the farm mechanics department. In planning this car leaders aim to show the necessity of considering other phases of farming, such as soil and crop problems, to succeed ultimately in the dairy business. They also wish to further the idea that permanent agriculture in Michigan depends upon live stock, legumes, lime and commercial plant food carefully fitted into a short rotation scheme.

Several famous dairy animals will be taken on the trip for demonstration purposes. Among them will be the cow, Johanna Mutual Girl, the grand champion at the Michigan State Fair in 1920. Another will be College Butter Boy, (No. 293508), first prize bull in his class at the Michigan State Fair last season.

The ultimate purpose of the "better sire train" will be to get pure-bred dairy bulls into the hands of dairy farmers who heretofore have been using grade and scrub sires. This will enable the dairy farmer gradually to become a breeder of better dairy cattle and thereby increase the efficiency of his herd—not more milk but the same amount of milk from fewer cows is the idea.

Four proposed plans to get these bulls to the farmer are as follows:

First. In each county, one pure-bred animal will be exchanged for a scrub animal for animal. The details of such an exchange will be worked out. It is preferred to have a group of men bring in the scrub and own the pure-bred cooperatively.

Second. All scrub and grade bulls of breeding age brought to the train will be taken in at a one cent premium per pound over the prevailing Detroit market prices. In return the farmer will receive a pure-bred registered Holstein bull from six to twelve months old, the selling price of the scrub or grade to apply on the pure-bred and the farmer to pay the difference in cash. The pure-bred bulls will range in price from \$75 to \$150, a special sacrifice price offered by the Michigan Holstein-Friesian Association in order to further the interest of better live stock in Michigan.

Third. Local chamber of commerce bodies or other local groups or individuals may desire to assist in stimulating interest for live stock improvement in their counties. To help bring out many farmers on the day that the train arrives in their town, a plan has been proposed whereby such interested party buys one of the pure-bred Holstein sires carried by the train. The local merchants then can give away tickets numbered in duplicate for every dollar purchase made in their store, they retaining the duplicate ticket. On the day of the train's arrival, the merchants will pool all the duplicate tickets given away and have someone draw, the lucky number drawn getting the pure-bred bull.

Fourth. The most valuable plan suggested is the formation of bull clubs and bull associations. These organizations will assure the most permanent results and leave the greatest benefits in the county for live stock improvement. Through the county agent it may be possible to locate a number of farmers desiring jointly to use the best bulls obtainable with no great outlay in money for any of them.

It is the aim of the dairy department of M. A. C. to foster bull clubs and bull associations. Wherever possible assistance will be rendered, not alone in the preliminary work but also after the train has passed through,

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Agricultural Gypsum
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Best Hog Feed on the market. Broken ice cream cones. \$35.00 per ton f. o. b. Detroit. Write for samples. ROYAL CONE CO., 2179 Franklin St., Detroit, Mich.

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FARMS & FARM LANDS

Continued from Page 82

\$1.00 Per Acre Down

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Buy first class cut-over Gladwin Co., Michigan lands near R. R. Markets and Schools. \$1.00 per acre secures immediate possession, balance easy payments. Be independent. Send for literature "Opportunities in Gladwin County."
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Poultry Keeper, one year..... 1.00

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Michigan Farmer, one year.....\$1.00
Potato Magazine, one year..... 1.00
Tractor & Gas Engine Review
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average yield of more than 80 extra bushels of wheat for each ton of fertilizer used



80 extra bushels for each ton of fertilizer

It takes a certain number of bushels of wheat per acre to pay the actual cost of raising the crop.

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