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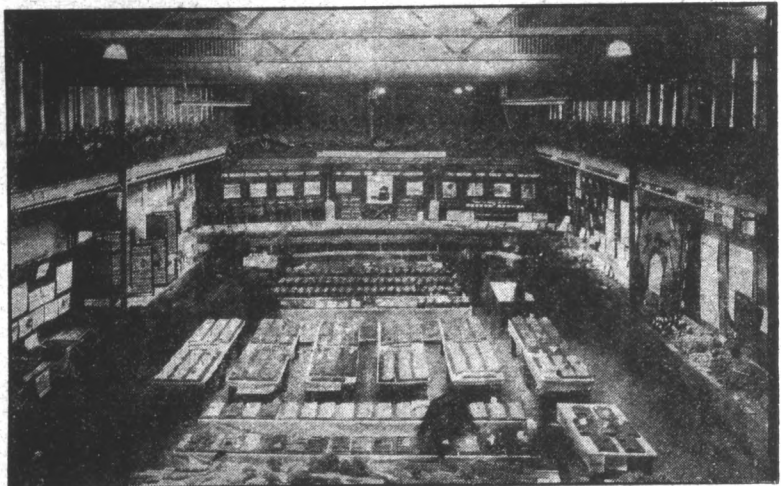
DETROIT, MICH., SATURDAY, FEBRUARY 19, 1921

ONE YEAR \$1.00
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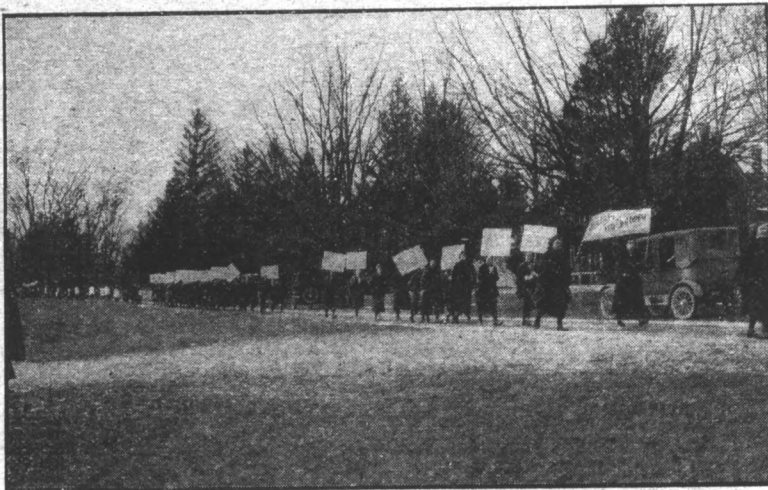
Snapped During Farmers' Week



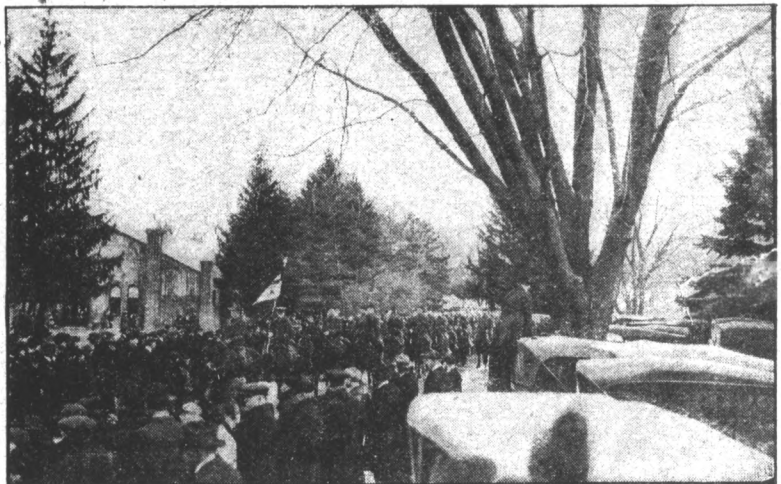
"All Scotch" Highland Lassies and Clydesdale Horses Gave Color to the East Lansing Parade.



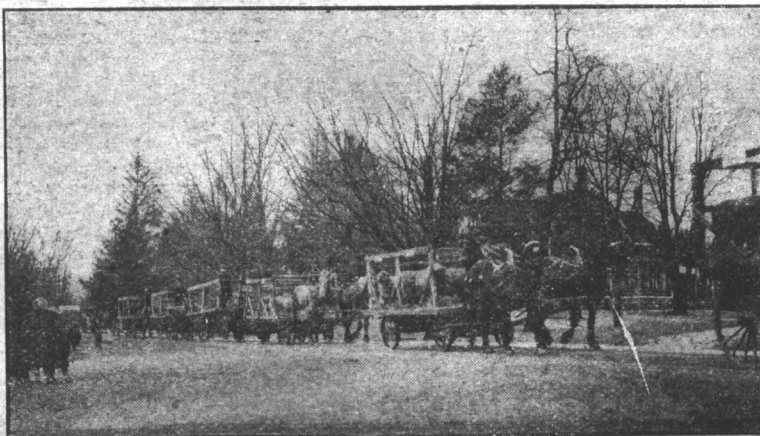
Thousands of Michigan Farm Folks Viewed with Pride this Championship Corn and Grain Exhibit at the M. A. C.



College Co-eds with Banners Flying Formed a Most Attractive Feature of the Great Agriculture Parade.



The College Military Unit Headed the Parade, with Major P. J. Wrightson, Commandant of the Cadet Corps, as Marshal.



Even the Sheep Came Out to Greet the Visitors at the Agricultural College Farmers' Week.



Some of the Beef Cattle from the College Herds were Out on Full Dress Parade on the College Campus.



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VOLUME CLVI NUMBER EIGHT

DETROIT, FEBRUARY 19, 1921

CURRENT COMMENT

State Taxation Problems

WITH a deficit of millions in the state treasury, and with extraordinary demands being made on every hand for state funds for the support of state activities, such as the care of unfortunates and dependents, the restraint and reformation of criminals, the maintenance and development of educational institutions, the carrying out of the road improvement program, the ever-increasing expense of law enforcement, etc., the ever-vexed question of taxation has become an all important consideration for the people of Michigan at this time.

As a means of providing funds for overcoming the present deficit in the state treasury and for increased appropriations to meet the indispensable needs for state purposes in the immediate future, Governor Groesbeck has proposed a capital stock tax on corporations, which plan is finding favor with legislators as a source of state income which can be quickly realized, as it is believed that such a tax can be made collectible during the present calendar year.

The farmers' organizations of the state have long been working on this tax problem. Their members have long realized, as other thinking citizens have come to realize, that the burden of property taxation on the farms and homes of this state has reached its practical limit. In casting about for other sources of state income to relieve the heavy burden of taxation on farms and homes, the farmers' organizations have settled on a state income tax as the most feasible method of securing such relief. Following up this crystallization of opinion these organizations have severally approved the adoption of a state income tax in Michigan, similar to that now in force in Wisconsin and some other states, which plan has also been approved by the State Tax Commission. Now practical action along this line is being urged by the federated legislative committee of these organizations, which met in the senate chamber of the capitol at Lansing on February 11, for the discussion of the proposition and the formulation of a plan of action. This committee consists of representatives of the State Grange, State Association of Farmers' Clubs, Gleaners, and the State Farm Bureau. The meeting was also attended by representatives of a number of other organizations not previously allied with the committee and

numerous lay members of the allied organizations.

After full discussion of the proposition it was agreed that it would be necessary to amend the state constitution before a state income tax law could be enacted. Accordingly a committee of five was appointed to meet with the governor and the taxation committees of the two houses of the legislature to submit a proposed amendment to the constitution which would permit the enactment of such a law, and urge its immediate submission to the voters of the state. It was believed that if prompt action could be secured, the proposal could be submitted at the general election in April. The initial presentation of the plan was made on Tuesday of this week, and the matter will be closely followed up by the committee to secure quick action by the legislature if possible.

Interested members of these organizations can be of great aid in getting early action on the submission of this proposed amendment to the voters of the state by urging the importance of such action on their representatives in both houses of the legislature through a personal interview, or by letter if that is impossible. It is conceded by all who have given careful study and thought to the situation that a material increase in state appropriations is unavoidable in the present situation. It is certainly apparent to every farmer that new sources of tax money are imperative under these conditions. You can help solve the problem by supporting this committee in its efforts to get a proposed amendment to the constitution which will make possible the adoption of an income tax for state purposes submitted to the electors of the state for their approval.

Raising Better Horses

THE country is short of suitable farm horses. There is no doubt about this, and when all things are taken into account it is plain that it is about time farmers saw the light more clearly and set about the problem of supplying their needs so far as suitable horses are concerned. The average farmer can raise better horses than he can afford to buy. The colts from his mares, the product of one stallion, will mate more closely in disposition and be better adapted to his work than horses that he can buy, one or two in a place. There is something about the working of horses that match in size, strength and disposition that makes the work much easier and the teams and men more efficient. It is difficult to buy good pairs of farm horses, and the necessity of making up three and four-horse teams makes it very desirable to have a lot of uniform horses that have the same size and disposition. This can best be accomplished by breeding a few uniform mares to one good stallion. The surer way to have matched pairs is to breed them. It means persistent effort and an adherence to one type until the purpose is accomplished.

The farmer who goes into the business of breeding a few good mares each year should do so with the firm resolve to patronize the best stallion within reasonable distance of his farm, and to continue his breeding operations on a moderate scale each year, through good and bad times. It seldom pays to keep more mares for breeding uses than can be furnished with steady, profitable work during the greater part of the year. Horses should have work. This is the main argument in favor of farmers keeping well-bred mares. Farmers need their work, and the work with intelligent management agrees with the mares. Many farmers are employing mares for work, and they are raising strong and growthy foals. More mares are abused standing in idleness than at work on the

farm. The draft mare must exercise to properly develop her breeding qualities, and, as a rule, she will get more moderate exercise at work on the farm than when she is given the run of the yards or pasture for an occasional frolic, and runs and jumps and kicks, slipping and straining her soft muscles. She is far more likely to injure herself in this way than by performing work on the farm to which her hardened muscles are accustomed.

To secure maximum results from the work teams the farm must be run on a systematic basis. Horses should have steady, profitable work every day when the weather is favorable. There is no excuse for work teams to stand idle many days in a week. Horses need regular work. Weather conditions will cause some loss of time, but there are always odd bits of work apart from crops that can be done as well a number of days or weeks ahead of time as when they demand immediate attention. More work is accomplished and there is less rush and expense if plans are made to do anything a few days or weeks ahead of time instead of a few days behind time as is usually the case during the rush season. When this policy is enforced there is less temptation to overwork the horses to make up for lost time. Every day horses are crowded beyond their strength is dearly paid for in loss of condition and broken spirits, if not in sickness.

Much of the horsepower on many farms is wasted because of the owner's inability to properly adjust the hitch to accommodate several horses. If one horse is able to do more work than one of his mates, make him do it. The whiffletrees can be adjusted to divide the load, and economy demands that each of the team do a full day's work according to his strength. The ease with which this can be done, however, is no reasonable excuse for keeping a miscellaneous bunch of farm work horses. It is hard to place too high an estimate on the value of the stimulus given to the business of the farm by well-matched teams. Good men prefer to work on the farm where the work is done with high-class farm horses.

Good, strong harness and durable implements increase the efficiency of the work teams. The horse that is well fitted with a collar and a good harness can do more work and do it easier than one that is compelled to wear a poorly fitted, dilapidated harness to annoy and irritate him every step he takes while at work. Strong and durable implements reduce breakage to a minimum and avoid delays required to make repairs during the busy season. Fly nets help to increase the efficiency of horses during the summer. They are not expensive and will last a long time if given good care. Large implements save the time of horses as well as of men. There are many times when three or four horses can do more efficient work than two horses, and leave an extra man to do the odd jobs about the farm. With several horses handled by one driver, there is more opportunity to keep everything moving smoothly without allowing the horses to stand idle in the barn. The cost of suitable farm horses and keeping them during the year makes it imperative that they have something to do every day when the weather is pleasant.

It is the steady, every-day work that counts, not the work that is accomplished through attempting to do two day's work in one. A well-laid-out system of crop growing distributes the work of the teams so regularly over the season as to greatly economize the horsepower required at any one time. By planning fall plowing, manure hauling during the winter, crop marketing, wood hauling, feed hauling and other odd jobs, various work may be finished by the time the spring rush comes

again, and the horses will be in better condition than they would have been if allowed to stand idle. On many farms two good teams, with skillful management, could be made to do more work, and do it easier, than three teams now do it with blundering management, thus cutting down the cost of operating the farm from three to four hundred dollars a year. Whether a farmer is operating a tractor or depending entirely upon horses for farm work, he cannot afford to overlook the possibilities of increasing the efficiency of his business through raising better horses and providing them with profitable work as many days as possible during the year.

News of the Week

Wednesday, February 9.

GREAT BRITAIN is supporting the United States in the proposal to internationalize Yap Island—An important election in South Africa is being held to determine whether the territory will remain one of the self-governing dominions of Great Britain, or set up an independent republic; to date the secession party seems to be in the lead.—The United States Senate and House committees agree on a bill for the government regulation of cold storage.—Health officers in this country are worried lest an epidemic of typhus start from victims now on emigrant ships in American harbors.—Egg prices show a decline of twenty-six cents during the past two weeks.

Thursday, February 10.

JUDGE GARY declares that existing prices and wage scales in the steel industry are to continue.—An order is issued by the Interstate Commerce Commission directing the public utilities commission of Michigan to increase intrastate railroad rates twenty per cent, which order has been temporarily blocked by injunctions.—A blanket indictment naming twenty-nine corporations charging violating of the New York state anti-trust law is returned by the grand jury investigating the alleged building trust.—It is reported that forty divisions of Soviet troops are being massed on the Polish front, and twelve divisions on the Roumanian front.

Friday, February 11.

THE latest returns on the South African election shows the imperialistic party to be slightly in the lead.—At least twenty-seven persons were killed and forty injured when a tornado strikes the town of Oconee, Ga.—A resolution is introduced in the United States Senate providing for an international conference to arrange for a reduction in the German indemnity and the settlement of the European war debt to this country.—Bavaria agrees to conform with Germany's disarmament pact.—Dr. D. C. Vaughan, dean of the medical school of the University of Michigan, resigns after fifty years of service in that capacity.

Saturday, February 12.

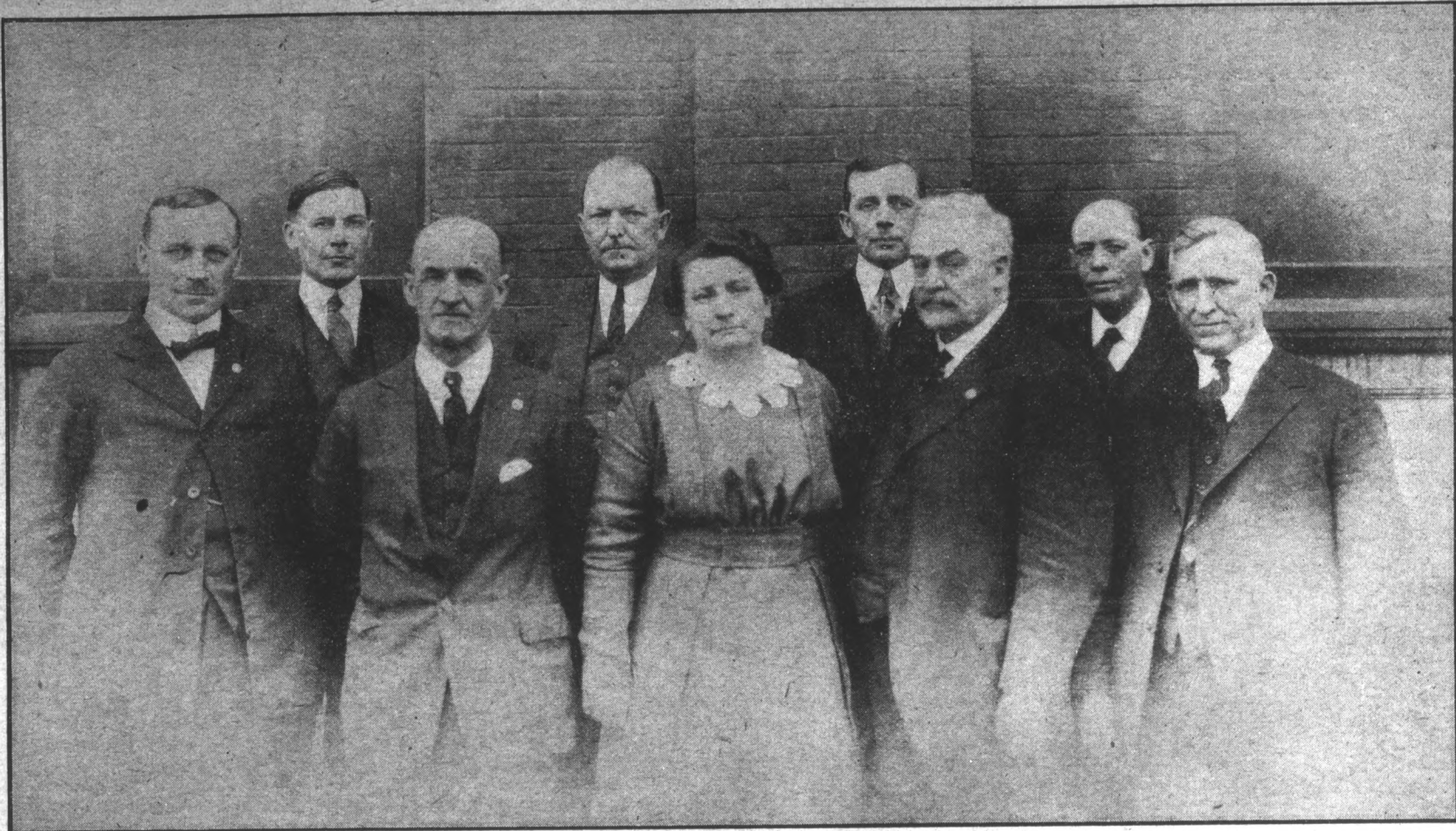
IT is announced that a general reduction in wages of railway employees is not being considered by the association of railway executives.—President Wilson declines to adopt the New York health commissioner's suggestion that a complete embargo upon immigration be placed on New York City as a protective measure against typhus and other communicable diseases.—During the past week about seven thousand men have returned to work in Detroit.—A treaty of peace between Soviet Russia and Poland is signed at Riga, according to a dispatch from Moscow.—Chicago tenants are organized to oppose high rents upon the expiration of their present leases.

Sunday, February 13.

A REVIVAL of trade with Japan is indicated by the substantial increase in imports and exports for January.—Secretary of the Navy Daniels advises giving the President control over oil resources.—The new administration is expected to take seventy-five thousand names from the government payroll, beginning July next.—Price readjustments by independent steel concerns was the feature of the past week in this industry.—Denmark has become a heavy buyer of American goods.—Admiral Knapp urges the United States not to withdraw the American forces from Haiti.

Monday, February 14.

PREPARATIONS are being completed for the opening of the British Parliament tomorrow when a constructive program offered by the government (Continued on page 252).



PRESENT OFFICERS AND EXECUTIVE COMMITTEE OF THE STATE FARM BUREAU

Rear Row, Left to Right.—A. J. Rogers, Secretary Pro-tem, of Beulah, Benzie County; Fred Smith, of Antrim County, (Elk Rapids); W. E. Phillips, of Decatur, Van Buren County; A. T. Depue, of Faithorn, Menominee County. Front Row, Left to Right.—Fred Van Nordsdall, Treasurer, of Three Rivers, St. Joseph County; A. E. Henden, of Adrian, Lenawee County; Mrs. Edith M. Wagar, of Carleton, Monroe County; James Nicol, President, of South Haven, Berrien County; M. L. Noon, Vice-president, of Jackson, Jackson County.

Farm Bureau Executive Committee Meets

MR. A. J. ROGERS, of Beulah, former member of Michigan State Farm Bureau executive committee, was elected temporary secretary, and Fred Van Nordsdall, Three Rivers, was reappointed treasurer of the State Farm Bureau at the first meeting of the new executive committee of the farm bureau, held at the Lansing headquarters, Wednesday, February 9.

Mr. Rogers will assume the duties of C. A. Bingham, former secretary, who was defeated by James Nicol, of South Haven, for the presidency of the organization, at the State Farm Bureau's annual meeting, held at the Michigan Agricultural College during Farmers' Week.

Several changes in organization were made by the executive committee, which adjourned after deferring action upon resolutions adopted by the delegates at the annual meeting. It was said that no action would be taken upon the resolutions until a permanent secretary had been appointed.

Two offices were dispensed with—that of the assistant secretary, and that of the campaign manager. Action

in both cases was taken in the interests of economy, the committee said, and as a step toward a more compact organization. It was said that President Nicol plans to take an active part in the administration of farm bureau affairs. He hopes to put in much of his time at the farm bureau offices.

The permanent secretary will take over the duties of the campaign manager and will handle all matters pertaining to organization, in addition to his own duties.

The executive committee clothed President Nicol and Secretary Pro-tem Rogers with authority to act for the entire executive committee in all matters in the absence of the executive committee.

President Nicol appointed as chairmen of farm bureau committees, the following members of the executive committee:

Upper Peninsula and Forestry, A. T. Depue, Faithorn, Menominee county.

Legislative and Field Work, Fred Smith, of Elk Rapids.

Dairy, Vice-president M. L. Noon, of Jackson.

Seed, W. E. Phillips, Decatur.

Publicity and Home Economics, Mrs. Edith M. Wagar, of Carleton, Monroe county.

The elevator exchange, live stock and beet chairmanships are pending.

Before adjourning to meet again at the farm bureau offices in Lansing on Friday morning, February 18, the executive committee voted to advance \$500 from a previous appropriation, voted by the delegates at an annual meeting, to the Michigan Sugar Beet Growers' Association for organization purposes. It also accepted the following statement from the sugar beet men calling upon their nine thousand members to study the scale of prices recently approved by the American Farm Bureau Federation at Chicago before signing beet contracts for the coming season. The beet growers' statement is as follows:

To Michigan Sugar Beet Growers.

The critical situation in the sugar beet industry is commanding the most painstaking consideration by every grower. The State and National Farm Bureaus in connection with the State

and National Beet Growers' Associations have united in working out a scale of prices for the 1921 season for all beet-growing states of the country. These prices are based upon those already reached in a conference of the Utah-Idaho Farm Bureau growers with the factories of that section and were approved by the recent conference of beet growers called by the American Farm Bureau Federation at Chicago. The scale is as follows:

For 5c sugar, beets per ton....	\$ 6.45
For 6c sugar, beets per ton....	7.74
For 7c sugar, beets per ton....	9.03
For 8c sugar, beets per ton....	10.32
For 9c sugar, beets per ton....	11.61
For 10c sugar, beets per ton....	12.90
For 11c sugar, beets per ton....	14.19
For 12c sugar, beets per ton....	15.48
For 13c sugar, beets per ton....	16.77
For 14c sugar, beets per ton....	18.06
For 15c sugar, beets per ton....	19.35

The sugar price used as the base of reckoning is New York or seaboard price averaged for the whole year.

Growers are urged to study these prices carefully and await developments before signing contracts offering a lower scale than the one here presented.

Alfalfa Seed for Michigan Farmers

By A. L. Bibbins, *Extension Specialist, Michigan Agricultural College*

ALFAFA successes and alfalfa failures! We have them both. Pride is taken in those stands which have proved to be successful; however, it is quite customary to endeavor to hide and forget the failures.

The successful stands are of great value, not only because of the yields of valuable feed that they produce and the influence the crop has upon the soil, but also because they serve as a guide for future seedings.

The failure may not be termed a total loss if we but make use of it to serve as a valuable experience. If all of those who have failed with alfalfa would carefully diagnose the case,

they would quite likely have a list of "Don'ts," and thus, failure furnishes information which if properly applied insures success with later seedings.

Michigan's Experience with Alfalfa.

The first alfalfa seedings made in Michigan clearly demonstrated the necessity of drainage and the thorough preparation of the seed bed. Many stands are testimonials to the value of lime and inoculation. The early experiences have been such that they tell us that if we do not believe in drainage, in a well prepared seed bed, in liming and inoculation that we have no right to seed alfalfa.

Even with these essentials well provided for there have been failures due to winter-killing. Our late experiences have taught us that there is a wide variation in hardiness between different alfalfa strains. Some easily succumb to the ravages of an open winter with little snow and lots of alternate freezing and thawing, and formation of smothering ice-sheets, while, on the other hand, there are varieties which are quite resistant to such conditions. It is quite apparent that the earlier growers of alfalfa overlooked one of the most important factors of successful alfalfa production.

To be sure, it is most essential to seed on well-drained fertile soil that

has been limed, inoculated and well prepared; however, to obtain the maximum returns it is very important that pure viable seed of the hardiest and best adapted varieties be planted.

What is Good Alfalfa Seed?

It must be pure. Most of us can readily detect dirt, sticks, etc., in seed, but very few notice the presence of weed seeds and adulterants. Occasionally, apparently high-class alfalfa seed upon examination is found to contain many weed seeds, which greatly lower the value of the seed and enhances the success of the crop.

The great majority of the seed trade endeavor to handle the best of seed;

The main object in the first few months of a pig's life is to produce bone, muscle and growth. Sort of get him in shape to carry a big load of corn to market.

Marketing Michigan's Fruit Crop

Mr. Hutchins Believes the Past Season's Experiences Argues Strongly for More Cooperation

THE season now closing has probably been one of the most disappointing and unsatisfactory to fruit growers, as well as to those engaged in other lines of agricultural production, of any in recent years. By the grace of a beneficent Providence these growers have been successful in making the two blades of grass grow all right, but the benefits have accrued mostly to the other fellow. But strangely enough, consumers have not benefited at all by the low prices to the producers.

A most peculiar and unprecedented combination of untoward causes have contributed to the poor showing. The scarcity of cars and poor railroad service, the increased cost of transportation, the high cost of labor, the big increase in price of packages, have all combined to levy a heavier tribute upon the returns from fruit than the industry can well stand. It remains to be determined whether or not the horticulturists of Michigan will be able to successfully surmount all of the difficulties or if people will have to go short of fruit. One or the other of these is inevitable. There are people enough to eat all of the fruit produced in this year of unusually large crops if only it can be gotten to them at prices which they can afford and which the growers can afford. There are plenty of people not far from the large commercial orchards who scarcely have a taste of fruit.

Some of the heavy expenses involved in marketing fruit cannot be very materially reduced by the growers at present, but there are some that can. It is difficult to get any reduction in transportation rates or for the people to gain much improvement in railway service, but the influence of the farm bureau may be able to help some and perhaps secure a better supply of cars. Unemployment may help out the labor situation, and a smaller fruit crop, which is certain another season after such a large yield, may make a lessened demand for packages and cause a reduction in price. But there are ways in which some of the enormous expenses of the past season may be materially reduced.

WHATEVER may be accomplished must be done through cooperation. Individual effort is futile, and one of the first things necessary for a closer union of forces is for the grower to understand more fully his limitations. There are some requisites in successful marketing which the individual grower lacks. The first is, he is not a salesman. Selling goods is an art, and there is an army of salesmen traveling over the country whose sole business is selling goods, and these do most of the selling. The owner of a large business establishment of any kind rarely goes out selling his products, nor does the superintendent or any of the hands or roustabouts. The selling is all done by men who are experts at the business, and without these there is not one concern in a hundred that could survive a month. But the farmer has to be superintendent, hired man and roustabout all in one, and salesman combined. No man is sufficiently versatile to be all of these at once, and should he attempt to close contracts with a trained buyer the chances are that the bargain will be favorable to the purchaser.

Another essential in selling goods is a knowledge of their value. This is not so important in selling staples like grains, where prices remain fairly con-

stant, as it is in marketing fruits, the prices of which are subject to violent fluctuations from day to day. With his ignorance both of prices and market conditions the farmer is at an especial disadvantage when dealing with buyers who are informed on both of these subjects, so he invites benevolent assimilation at the very start by asking, "what will you give?" A seller in any other line by asking such a question would set himself down as an easy mark. Instances are numerous where farmers have been buncoed because of their ignorance of values. An agricultural journal relates how a farmer not long since was offered seventy-five cents per bushel for potatoes when they were selling for \$2.50 in a market not twenty miles distant. A farmer having several hundred bushels of crabapples was offered \$3.00 per bushel for them. Compared with prices in former years this looked good to him, and although he belonged to a fruit exchange he feared the manager might not be able to get as much, so he sold. The buyer had no market for them, but went to the manager of the exchange and asked him to sell them, and wanted him to get \$4.50 per bushel. He didn't get quite that, but the buyer made enough to buy a good car out of the deal.

It is important, too, to know where

the best markets are. There are always places where a car of fruit can be sold for considerable more than is offered by local buyers, but it is necessary to have a carload to ship, and this the average grower does not have, nor does he know where to place it, in most instances, even if he has a carload. It is universally admitted that a wider distribution of our fruit is indispensable, but this is impossible with individual effort.

There would seem to be no sufficient reason why a considerable saving might not be effected by a return of empty packages. Thirty cents for a basket to market a bushel of fruit, or fifty cents to carry the same quantity in a barrel, is out of all reason. The return of empties is common in other lines, particularly with poultry and eggs.

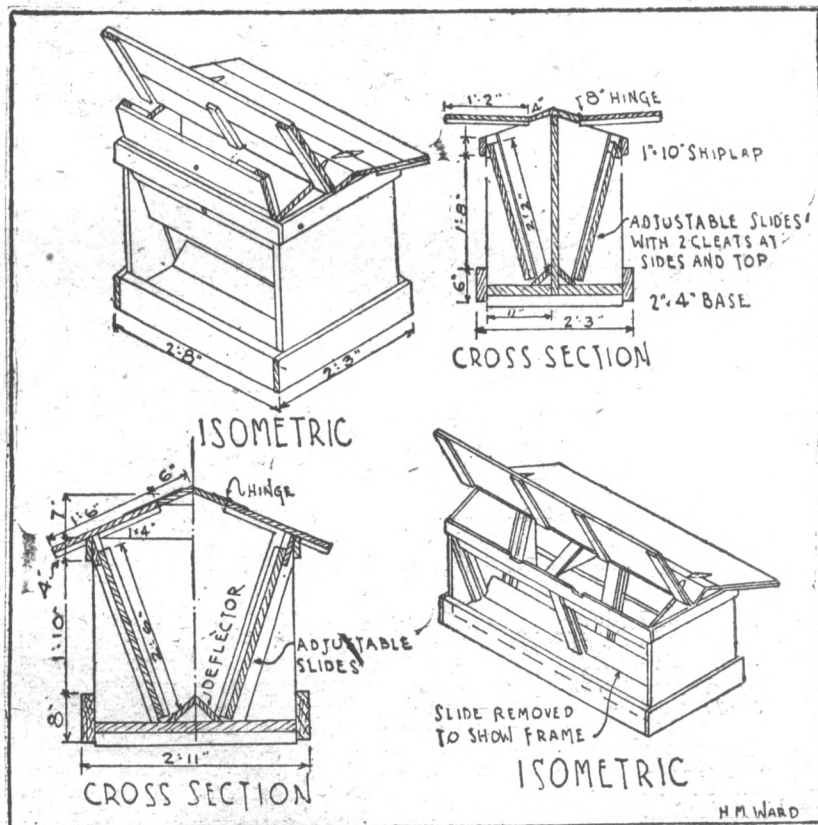
A number of fruit growers with whom I have talked agree with me that it does not pay to make the grades of apples put up in the exchange packing plants. Buyers will not pay enough for the better grades to pay for the extra work and waste in making them. There are always marks on apples, call them blemishes if you wish, which no spraying or cultural methods will prevent, such as small limb chafes and injuries caused by weather and by causes which perhaps nobody knows what, which in no way injures the quality or

keeping properties of the fruit, and its appearance but slightly, but which rule it out of the "A" grades. A considerable proportion of apples that are practically free from insect and fungus injuries, for the control of which spraying is done, goes into the lower grades or into the ciders because of these slight marks, and the buyers discriminate against the lower grades, but will not pay enough for the first quality to pay for making such discards. Farmers have been able to sell their merchantable apples put up in one grade, or in some instances for a flat price put up in two grades, for more money than is realized by the patrons of the exchange.

This statement needs qualifying. A large proportion of the apples of western Michigan now go through the exchanges, and the fruit is widely distributed throughout the country. If the immense crop of the year had been dependent on local buyers and near-by markets, as formerly, prices would have been too low to pay for marketing. But the claim that people will pay a fancy price for fancy fruit is not justified by the experience in the exchanges, and the lower grades, which are exceptionally fine apples, go for a low price, and an unusual amount of fruit which is better than will be found on the hotel tables of the state generally, go into the ciders, which this year hardly paid for handling. And with present labor costs it is mighty expensive making such grades.

How to Build a Self Feeder

Helping Hogs to Help Themselves—By H. M. Ward



THE illustration shown herewith illustrates two types of self-feeders which most any of the readers will be able to build with ordinary lumber purchased from your local lumber dealer. Build these feeders so that hogs can get at both sides of them, then you get just twice the feeding capacity for the length of each feeder, as you do when you make them usable on only one side. Make them of good strong lumber, weather-proof and hog-proof so that they will stand up and serve their purpose.

You can make one for grain and one for concentrates if you want to, or you

can put grain in one side and concentrates in the other side of each feeder. Where you have only a small number of hogs the latter plan will be the preferable one. After you have filled them two or three times you will know how often they should be filled and there will be little or no need for looking them over except on filling days.

Put the feeder where it and the hogs will be protected from the sun and from snow and rain. Then the hogs can eat from it in comfort. If it is high and dry so they do not have to stand in mud as they eat from it, they will keep their feet clean.

MANY imagine that the spread between prices to producers and consumers indicates profiteering, but an examination will show a chain of expenses which can be cut out by co-operative methods of marketing, and all are necessary under present methods. Fruit not marketed through the exchanges is either consigned to commission men or sold to local buyers. A bushel of fruit selling in Chicago on commission for \$1.50, or a barrel selling for \$4.50, which would be fair sales, incur the following expenses shipped by boat, rail rates still higher:

	Bushel.	Barrel.
Freight	\$0.30	\$0.60
Cartage	.05	.12
Commission	.15	.45
Package	.31	1.50
Expenses	\$.81	\$2.67
Returns	.69	1.83
	\$1.50	\$4.50

There is still a deduction to be made for labor costs of at least twenty-five cents per bushel, or eighty cents per barrel, which leaves the grower a net return of forty-four cents per bushel for fruit which sold in Chicago for \$1.50, or ninety-three cents for a barrel selling for \$4.50. But much of that fruit goes beyond Chicago and is subject to another set of expenses for transportation and commissions equal, probably, to those in getting it to Chicago, and we may estimate those expenses about as follows:

	Bushel.	Barrel.
Original cost	\$1.50	\$4.50
Transportation	.35	.72
Commission	.21	.58
	\$2.06	\$5.80

A retail dealer living beyond Chicago and doing business for only ten per cent, and that is not excessive where stuff is measured out by the peck or smaller quantity, must charge \$2.50 for a bushel which netted the grower only forty-four cents, or \$5.80 for the barrel for which the producer (Continued on page 231).

Farmer Interests at National Capital

By Elmer E. Reynolds

NOTWITHSTANDING the reports that wool consumption for December showed a decrease compared with the preceding month; that on January 1, fifty-four per cent of the wool textile machinery in this country was idle, and many cargoes of wool have arrived here or are headed for American ports, there is an encouraging trend in the wool market. According to the wool market specialists of the Department of Agriculture there is now a better market for domestic wools than at any time in the last three months, with a better demand and better prices. They report that territorial wools are in demand on the Boston market at prices ranging from eighty-five to ninety-five cents a pound on a scoured basis. There is a scarcity of fleece wool reported, with the stocks on hand small.

Vast quantities of wool are coming into this country. There has always been a rapid increase in wool importations during an agitation in congress for higher duties and just before the enactment of a protective wool tariff. This wool now coming to our shores, however, is low-grade and does not come directly into competition with our domestic wools.

The stocks of wool owned by the United States government at the present time total 51,000,000 pounds; but the greater part of these stocks are classed as carpet wool. At the last government sale, 3,400,000 pounds of wool were offered, and not one lot was withdrawn. Of this wool, 3,000,000 pounds was sold to carpet mills, 2,800,000 pounds having been purchased by two carpet mills. An auction sale of 4,000,000 pounds of government-owned wools scheduled for February 4, in Boston, was cancelled by Secretary of War Baker.

THE latest development in the so-called adulterated butter tax situation is information that Commissioner of Internal Revenue W. M. Williams has refused to make any concession to the butter manufacturers, except to postpone the date of the ten-cent tax becoming operative until April 1. In the meantime a hearing will be given on February 25, before the internal revenue commissioner, for the purpose of giving the butter producers an opportunity to present their case.

This butter tax, if collected, will hit the packers to the extent of several million dollars a year, as they are among the large distributors of centralized creamery butter. It is claimed that this tax will affect the entire carton butter business in the United States.

A hearing will be held before the house agricultural committee February 15, on the Dyer bill to remove the tax on colored oleomargarine. This is the first time oleomargarine legislation has been taken up during the present session.

The Maryland-Virginia Milk Producers' Association, supplying Washington with milk, has decided to operate a plant in or near Washington, for the purpose of manufacturing the surplus milk of the members into butter, cheese and other products. The association has reduced the price of liquid milk from forty-four to thirty-six cents a gallon.

After an unsuccessful attempt on the part of the friends of packer regulation to get the senate bill reported out without amendment, the committee on agriculture ordered a favorable report on a substitute bill, which places the control of the packers with the Federal Department of Agriculture, and places the stock yards under the jurisdiction of the Interstate Commerce Commission. The senate bill creates a live

stock commission to supervise the meat-packing industry.

The American Farm Bureau Federation and National Grange representatives are working actively to get the packer bill out onto the floor of the house for action this session. It is the opinion of close observers in congress that if the bill could be brought to a vote it would pass the house. The debate has been limited, and prospects are fair that the measure will be voted on by the fifteenth of this month. It is also hopefully predicted that the senate bill will be presented for action on the floor of the house instead of the one reported out by the agriculture committee. This is believed to be the only possible chance of its becoming a law during the present session.

THE friends of packer control legislation are confronted with a new and serious opposition to their measure, the United States Chamber of Commerce. Copies of a brief containing arguments against the proposed legislation have been sent to members of the senate and house, and there has been sent out from the Washington headquarters of the chamber to the fourteen hundred organizations and more than fifteen thousand corporations, firms and individuals included in its membership, a request that they lend their assistance in opposing the legislation. This emphasizes the efficiency of the business men's organization in lining up their support or opposition to any measure before congress, and also the necessity of the many farmers' organizations federating their interests under one great representative overhead organization, similar in its plans and methods to those now employed by the United States Chamber of Commerce.

The chamber points out what it terms "the farce of voluntary registration as proposed in the senate packer bill. The measure provides that packers may register or not, as they wish, but to those that register the government grants special favors, such as assistance in procuring cars and the dissemination of information which it is alleged would place those not registering under serious competitive handicaps. The effect of the provisions would be to force corporations engaged in this business to register. Once they are registered the government assumes a control of the operation of the business that is equivalent to actual government operation."

The chamber's brief contends that this is the first time that the congress has seriously considered taking control of the entire functioning of a private industry through a government commission.

A plan for the disposal of the stock yards and other subsidiary interests by the "big five" packing companies, were filed with the district supreme court on February 7, under a ruling issued January 4, which required the packers to submit such plans within thirty days of that date.

The plan provides for the sale of the stock yards holdings on a cash or an installment basis and names agents to conduct the sales. It is also provided that the district court appoint three trustees to supervise the sales and represent the packers at stockholders' meetings until their subsidiary interests shall have been disposed of. The sales agents are required to report to the court periodically, and the court is empowered to set the time limit for the disposal of the packers' stock yards holdings. It is claimed by the packers that sales of their interests are now in progress, and efforts are being made to hasten the consummation of the dissolution of interests.

CHARLES W. HOLMAN, representing the National Board of Farm Organizations, appeared before the Fordney ways and means committee in favor of a tariff on soja beans and soja bean oil, peanuts and peanut oil, copra and coconanut oil. Tariff duties are asked for that will be sufficient to guarantee that none of these products from the Orient can be laid down in this country at a lower price than American growers can afford to sell products with which these foreign products enter into competition. At the present rate of production in ten years Manchuria will be able to export enough soja bean oil to equal the cottonseed oil from a cotton crop of seven million bales.

The Dairymen's Cooperative Sales Company, of Pittsburgh, supplying the Pittsburgh district with liquid milk, has begun active work in its territory, comprising several counties in Ohio, Pennsylvania and West Virginia, to raise funds for the proposed Temple of Agriculture in Washington.

An amendment to the general agricultural appropriation bill, introduced by Senators Swanson and Glass, of Virginia, authorizes the secretary of the treasury during the fiscal years of

1921-1922, to purchase at par and accrued interest, with any funds in the treasury not otherwise appropriated from any federal land bank, farm loan bonds issued by such bank. Such purchases shall not exceed the sum of \$100,000,000 in either fiscal year, shall be made only upon recommendation in writing of the Federal Farm Loan Board, and the bonds so purchased shall bear interest at the rate of five per cent per annum.

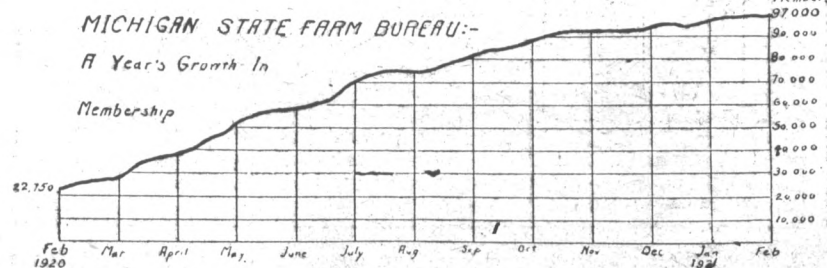
THE bill providing federal aid in the construction of post roads passed the house of representatives by a vote of two hundred and seventy-eight to fifty-eight. This measure makes available \$100,000,000 as federal aid to the states for road building during the next two years. The bill authorizes in addition the allotment from the treasury of an unexpended balance due the states by appropriations previously made. The money is to be allotted to the states proportionately, providing the states supply an equal amount. The sum of \$3,000,000 is provided for the building of national forest roads and trails. It is also provided that any person, firm, corporation, member of any highway commission, or employee that makes any false statement or representation as to the character of material used or quality of work performed in the construction of any project approved by the secretary of agriculture, with the intent to defraud the United States, shall upon conviction be imprisoned not to exceed five years or pay a fine not to exceed \$10,000, or be punished by both fine and imprisonment.

The producers are preparing to make an aggressive fight for a reduction in freight rates. It is said that they will go before the Interstate Commerce Commission with a well-planned program of protest against present rates and further increases, the cattle growers and shippers leading the movement.

Last fall when delegations of farmers were coming to Washington, asking for financial relief, Secretary of the Treasury Houston firmly and persistently turned them down with a declaration that the government could do nothing for them. All their proposals were very emphatically pronounced unworkable by the secretary of the treasury, and he would not suggest any method by which the credit situation could be improved. Even the War Finance Corporation, he declared, could not do anything to help the farmers because there was no money in the treasury for this purpose. Now, however, Secretary Houston insists that the government should loan the allies \$75,000,000. This he told the senate judiciary committee, at a hearing on the Reed bill to prohibit further credits to foreign countries, was the amount of authorized credits not yet absorbed by the allies, and which he claims the United States is under obligations to furnish them.

The trial shipments of apples from the Pacific Coast to England by way of the Panama Canal have proved very successful, only a small percentage of waste being reported. A cargo of California citrus fruits from Los Angeles by way of the canal, was unloaded in Baltimore a few days ago, in excellent condition, and it is said by the steamship officials, that at a rate of nearly \$1.00 per hundredweight below the railway rates between the two points. The vessel made the trip from Los Angeles to Baltimore in twenty-one days. An official from the Federal Bureau of Markets is cooperating with the steamship companies in promoting these trial shipments.

Farm Bureau Membership Growth



THE accompanying graph shows the reader the rapid increase in the membership of the Michigan State Farm Bureau during the year from February 1, 1920, to January 31, 1921. The year began with only 22,749 members and closed with 97,264. Only seven counties remain to be organized; these are Ontonagon, Mackinac and Keewenaw in the upper peninsula, and Iosco, Roscommon, Oscoda and Bay in the lower peninsula. The county membership ranges from one hundred and thirty-five in Crawford, to 3,220 in Sanilac, and the average for the seventy-five counties organized is 1,297 members, and forty-three of the counties have a membership of over a thousand and, and sixteen of over two thousand. In seven counties where the membership campaign has been continued by the County Farm Bureaus the number of members has been increased from 10,175 to 14,976, or an average increase of seven hundred members per county.

Among the Duroc Jersey Breeders

The Bred Sow Sale is Now an Established Feature of the Business

AS a result of the awakening of the meat-producing interests of the country to the fact that a large percentage of last year's brood sows have been shipped to market there is sure to be a lively scramble for bred sows during the next few weeks. But few farmers have good brood sows to sell at any price. Fortunately, however, some of our progressive breeders of pure-bred swine have held over many of their last spring gilts and during the next few weeks these animals will be offered at public sale in various parts of the state.

One of the most pleasing features of the present hog breeding and feeding situation is the fact that so many high-class pure-bred sows are going to sell at prices farmers can afford to pay for them. There are a remarkable lot of good sows being offered at public sales. One can find sows of all blood lines and of varying degrees of breed type and perfection, but nearly all are useful, producing animals that will deliver splendid profit for farmer purchasers. The prevailing prices are such that any good farmer can afford to own good sows. In fact, because of the current and prospective prices of grain and the relative higher prices of pork products, there are few good farmers who can afford to be without them. We are getting back to earth. The good brood sow begins to look better than ever. She will raise the value of farm feeds and contribute to the pleasure of farming. But be sure and select the good ones.

Prominent among the breeders who have good bred sows to offer at the coming public sales are some of the men who have put the Duroc Jersey breed of swine to the front here in Michigan. During the past few weeks the writer has visited many of these herds and the majority of the sale offerings are in fine condition and safe with pig to the best sires of the breed. Never were conditions more favorable for farmers to buy a few pure-bred sows and eliminate scrub hogs from their farms. The purchase of two or three good brood sows will furnish a fine drove of pigs to fatten for market next fall, and the sows themselves will be worth more next fall than they will sell for in these public sales.

The Duroc Jersey hog needs no introduction to the farmers of Michigan. The breed has made good on every farm where it has been given a fair trial for a reasonable length of time. The strong, arched back, body set well up from the ground; wide-sprung ribs; neat, straight underline, and rich cherry coat, represents a highly perfected machine for the economical production of high-class pork and lard.

ONE of the many points of excellence of the breed that should attract the attention of farmers is the remarkably strong constitution, which in itself means extreme hardiness; prolificacy, without which the farmers hog-raising efforts are sure to fail; size and bone, which are so essential to the making of profitable gains; early maturity; easy feeding and the economical use of grass, forage crops and feeds generally used on the farms of the state to supplement corn. This strong constitution is due largely to the high, arched back, the rangy body, good width and even underline. When you find hogs of that type you have the kind capable of giving a good return for the feed consumed.

The high back, so characteristic of the modern Duroc Jersey hog, is one

of the most desirable points to look for in the economical production of high-class pork. It means longer, heavier, leaner hams, shoulders and sides; besides it makes it possible for the sow to carry large, healthy litters safely to farrowing time. That long, broad back also weighs heavy when the hog reaches the market. Farmers who have bred and fed smaller hogs are always deceived in estimating weights of big type Duroc Jerseys that carry so large a proportion of their weight above the line from the base of the ear to the base of the tail. A well-sprung rib with a strong, broad back indicate the same qualities in the hog that a broad back and deep chest do in an athlete.

Good strong legs and plenty of bone are other points that contribute to the popularity of the Duroc Jersey hog. They make it easy for him to make greater use of forage crops and take

decided advantage over those who are feeding pigs that cannot be fed for the longer period without a loss.

ANOTHER valuable characteristic of the modern Duroc Jersey sow is the neat, well-set-up underline which prevents her udder from dragging on the ground and insures strong, robust pigs. Besides this part of the carcass is the least profitable at market time; the fewer pounds of live weight represented in the underline the more profitable hog you have to sell to the packers. It was not so very long ago that the low, shuffy hog was considered the ideal for pork production, but during recent years the big, mellow, long animals have demonstrated their superiority, both as breeders and feeders. There are Duroc breeders in almost every central and southern county in Michigan who commenced with one or

sow sale, for I am confident that prices will reach a high level between now and the first of May. Already farmers in Indiana and Ohio, who have sold themselves short of breeding stock have written inquiries and some of them expect to attend our sales. I am sure that if I could handle my sows during the farrowing period I could sell every pig saved for a good price next May and June. With cheap grain feeds and a scarcity of hogs there was never a more opportune time for farmers to feed a reasonable number of good hogs, and no farmer who feeds hogs can afford to waste his time and feed handling scrubs, for if there is any farm animal where the value of pure-breds stands out clearly, it is the hog. And sixty dollars invested in a good bred sow will give any farmer a good start. A hundred dollars invested in a better animal would give him a better start, but that is purely a matter for the individual to decide according to the amount of money he has to invest. The only pure-bred game that one can get a start in for less money is poultry, where a setting of eggs will turn the trick."

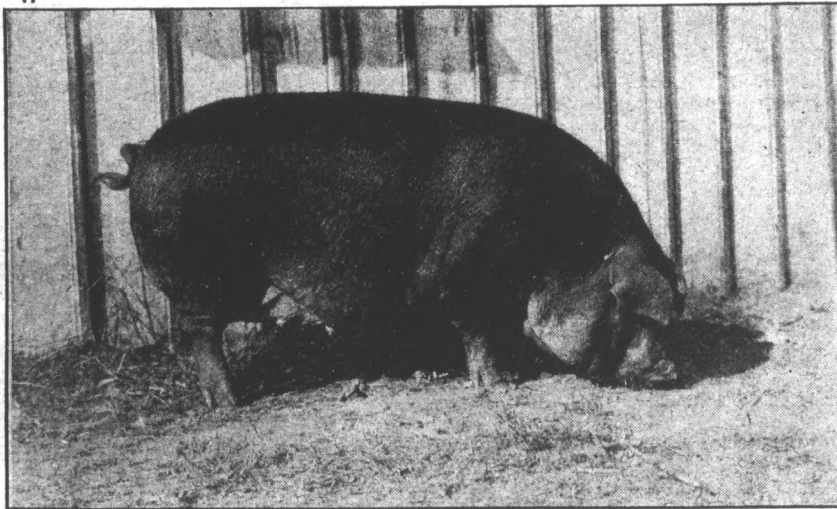
OTHER Duroc breeders are in the same position. They have fed high-priced grain to their breeding stock and developed their young sows with the expectation of finding a good demand for them from their farmer trade during the fall and early winter. Instead of reasoning along lines that the price of hogs must naturally follow the price of grain feeds, farmers who had finished this year's pig crop on high-priced grain feeds became disgusted and sent their brood sows to market along with their spring pigs. Today they find themselves with an abundance of cheap feeds and no animals to feed it to. Some of these men should thank their lucky stars that these breeders have had the nerve to hold their young sows for these spring sales, and give them an opportunity to correct their mistake in judgment before it is too late to get hogs to feed for next season. And many of them should also thank their lucky stars that it has also given them an opportunity to retire from the business of breeding scrub hogs.

Many breeders of pure-bred hogs, and farmers, have been surprised at the number of Duroc sales that have been announced for the next few weeks. Some of them have even hinted that the breed was becoming less popular. I want to say right here that more than fifty per cent of the pure-bred hogs in Michigan are Duroc Jerseys and it is not surprising that many breeders are putting on these bred sow sales. No one will deny that the breed seems to predominate here in Michigan. They have virtually splashed some of our leading hog-producing counties with red. This proud position of the breed has been won strictly on the ability of the individuals to go out on our farms and make good.

As grain prices decline and pork prices advance there is considerable gloom among farmers who have sold their brood sows, but fortunately a few of them can replace those sent to market by attending these sales and reinvesting some of their money in pure-breds. The majority, however, will be compelled to wait until another year before they can find good brood sows for sale at any reasonable price, for there is not one good sow to be offered at public sale for every one hundred needed on our farms at the present time.

Buy a Brood Sow!

THE farmers of Michigan are beginning to realize the future possibilities of breeding and feeding good hogs. The growing tendency to raise better hogs than have been produced in the past is noticed in nearly every county. Live stock shippers report a decided improvement in the quality of hogs shipped from various districts. Today the hog growers of the state are in a position to buy some of the best animals within the popular breeds of swine without sending their money outside of the state and paying excessive express charges for the transportation of breeding stock to their stations. The breeders of pure-bred swine have surely done their part in placing this improved blood within the reach of the farmers and breeders. It remains for those who are interested in raising better hogs for market to avail themselves of this good blood through attending some of these public sales and buying a few of these good individuals at prices they see fit to offer.



sufficient exercise to maintain body health and vigor. Some farmers still argue that the smaller, compact hog will mature quicker and produce more pounds of fat at an early age. But experienced feeders know that it costs more to produce a pound of fat than it does to produce a pound of lean meat, so that old argument of early maturity is knocked into a "cocked-hat" by the modern Duroc Jersey hog.

The large, vigorous, growthy pig is capable of producing more pounds of choice lean meat from a given amount of feed than the smaller, compact animal, and even though the tendency of the markets is toward lighter pigs there will always be a demand for hogs that produce a fine quality of well-marbled flesh, even though they may be carried along until they weigh from three hundred to four hundred pounds.

The farmer who is feeding a drove of pigs that may be carried along a few weeks at times when market conditions are unfavorable for selling has a

two brood sows costing little more than their actual value for pork, who now have their farms well stocked with good hogs. What these men have done farmers can do and they will soon be in a business producing an income almost as constant as the dairy cow, and generally much larger, as their herd improves and their experience broadens and the business becomes more profitable and interesting. For the past three or four years most of these men have made satisfactory profits. This year conditions have been against them. They have maintained their breeding stock and grown their gilts on high-priced feed, and now they are willing to pocket a loss on their season's business, because they still have faith in the Duroc Jersey hog and know that prices will reach a higher level before next summer.

Not long ago one of the most prominent Duroc breeders in Michigan said: "If I had the necessary hog houses and farrowing pens I would not hold a bred

Live Stock Exchange Delegates Meet

Endorse New Policy of the State Farm Bureau

THE following resolutions were passed by the annual delegate meeting of the Michigan Live Stock Exchange in session at M. A. C.

Whereas, during 1920 an aggregate amounting to three carloads of live stock were condemned to the tanks for tuberculosis.

Whereas, this loss must be considered by meat packers in fixing prices paid for live stock.

Whereas, tuberculosis in hogs is traced to creamery section where skim-milk is fed, showing that tuberculosis milk is a menace to the human family.

Therefore be it resolved, that we cooperate to our utmost in the campaign being made by the Michigan live stock producers for the eradication of tuberculosis, for better sires, and for better markets for their stock.

Whereas, there are now over fifty Michigan cooperative live stock shipping associations, including about one-quarter of our state exchange members, carrying transit insurance; and whereas, our state live stock exchange is interested in securing for its members the best possible protection at the lowest possible cost.

Resolved, that the delegates at this convention authorize the board to investigate the advantages to be gained

through some collective insurance arrangement with a reliable insurance company. If, upon investigation the board finds the collective insurance proposition worthy of action, they are empowered to act.

Propose Bill for Protection of Stock.

Resolved, that the following proposed bill be endorsed by the Michigan Live Stock Exchange, and that this resolution be referred to the legislative committee of the State Farm Bureau.

Proposed bill: To compel corporations, companies or individuals owning stock yards in this state from which live stock is being shipped, to construct and maintain covered yards and to provide penalties for violations thereof.

The people of the state of Michigan enact:

Section 1. All railroad companies, other companies, corporations or individuals owning stock yards in this state from which a minimum of fifty deckloads of live stock are being shipped yearly shall within (state time) after the taking effect of this act construct and maintain thereafter, roof covering at said yards of at least . . . square yards for each full seventy-five deckloads of live stock shipped therefrom yearly. Roofing shall be of such material and construction that it will

protect live stock from ordinary storms of rain or snow.

Section 2. Any company, corporation or individual subject to the provision of this act who refuses or neglects to comply with the provisions herein set forth shall be guilty of a misdemeanor and on conviction thereof shall be fined not more than . . . dollars, or imprisonment in the county jail for not more than . . . days, and upon continued refusal or neglect to comply with the provision herein named said company, corporation or individual shall be subject to an additional fine of . . . dollars, or imprisonment in the county jail for not more than . . . days, or both such fine and imprisonment in the discretion of the court for each additional period of thirty days, of non-compliance with the provisions of this act.

Endorses Farm Bureau.

Resolved, that the Michigan Live Stock Exchange hereby endorses the work of the Michigan State Farm Bureau and agrees to cooperate with the Michigan State Farm Bureau in becoming an organized department of same, in accordance with its recently established policy; and until such time as the Michigan Live Stock Exchange shall become a legal department of the Michigan State Farm Bureau, and in order to immediately facilitate cooper-

ation between these two organizations, be it resolved that a request be made to the executive committee of the Michigan State Farm Bureau to allow a duly authorized representative of the Michigan Live Stock Exchange to sit in ex-officio capacity with said farm bureau executive committee to act in such matters as pertain to the live stock industry; and be it further resolved, that the board of directors of the Michigan Live Stock Exchange be empowered to elect said representative.

The new board of directors elected by the Michigan Live Stock Exchange consists of George Boutell, E. A. Beamer, C. J. Miller, E. E. Compson, M. W. Stewart, E. K. Munson, and P. M. Granger.

Retiring officers are: President, Lee Harrison, of Constantine; vice-president, C. J. Miller, of Union City; secretary, L. E. Willet, of Laingsburg; treasurer, E. A. Beamer, of Blissfield. The new officers are to be elected by the new board.

The board of directors was empowered to investigate the possibilities of establishing cooperative commission houses in Detroit to compete with those privately owned. Ninety per cent of the stock handled by Detroit houses now comes from Michigan cooperative associations it is said.—H.

National Tractor Show Shows Progress

New Designs Are Conservative and Thoroughly Practical

THE Sixth Annual National Tractor Show held in Columbus last week was without a doubt the most complete exhibition of farming machinery ever held in this country. It not only reviewed the rapid progress that has been made in applying mechanical power to farm operations but it forcibly drew attention to the wonderful possibilities that gasoline and kerosene can bring to the American farmer. No one who inspected the eight large exhibition buildings, the permanent home of the Ohio State Fair, devoted exclusively to power farming machinery can help but visualize what farming will be in the future.

The idea back of the show was not to sell tractors. Power farming is broader than that. It includes the use of the truck for hauling purposes; the use of the tractor in soil preparation, planting, harvesting and other farm operations; the use of the motor cultivator in planting and cultivating rowed crops; the use of stationary engines in lighting, pumping water, milking and other services that liquid fuel can perform to make the burdens of the farmer lighter, to enable him to cut down production costs, to make life on the farm more enjoyable.

Manufacturers spared no expense in ably presenting the power farming idea. There was no admission fee, the only requirement being the securing of a pass by registration. The large dining-hall on the grounds was open the entire week and lunch stands were located in each building. Everything possible for the comfort and convenience of visitors was provided. Covered passageways between the buildings and mammoth heating plants in each building protected visitors from cold and rain.

Education and service was the slogan back of each exhibit. How it worked, how to take care of it, how to operate it—in other words, service and education was the aim of every exhibitor. Detailed information of every kind was

available, the intention being to show why power farming is a practicable thing, not only to the dealer but to the farmer.

In addition to the educational features found in each exhibit, a regular program on tractors and their operation was arranged by the management. Motion pictures on power farming were popular. The lectures on power farming: Adapting the farm to power, determining types and size of tractors to buy, the trend of tractor design, ignition trouble, tractor hitches, lessons from a tractor survey, the tractor and belt power, tractor service, tractor tools, community purchase of tractors, housing the tractors, by such prominent agricultural engineers as Olney, Dickerson, Davidson, Sjogren, Scoates, Blasingame, Aitkenhead, Duffee, Ives and McCuen and finally a frank discussion by four real farmers on what the tractor did for them rounded out the educational program. These men must be congratulated on the able way they handled their subjects and the interest which developed at these lectures indicated that their efforts were well worth while. The educational exhibit of the American Society of Agricultural Engineers was a worthy one—largely a compilation of data on power farming by the agricultural engineering departments of the state universities. The Society of Automotive Engineers also made the show an occasion for a meeting and program on power farming.

The show was marked by great advances in the construction of implements and machinery, which are drawn and operated by tractor power. Simplicity of operation, control from the seat, better materials and a higher grade of workmanship characterized by that fact. Implement units are almost every exhibit. Many exhibitors

had revolving, skeleton sections of their product, making it possible for the spectator to see and understand the operation of their machines. Grain separators, sufficiently small for the needs of individual farms were there in far greater numbers than ever before. Removable panels and cut-out sections with the machine in motion made the principles of their operation plain. The idea of standardization is being accepted and rapidly developed by manufacturers. This was particularly noticeable in the products of tractor manufacturers who are producing trucks. The same engine and parts can be used interchangeably in either truck or tractor. Belt power take-off for trucks was featured by a number of concerns. Complete seedbed preparation in one operation was featured by one manufacturer.

A number of new tractors made their first public appearance. A small steam-driven tractor for small farm use, of a design radically different from the ponderous steam tractors, attracted considerable interest. Several companies are working along similar lines, so it seems entirely possible that the small steam-driven tractor may win a place in power farming, achieving to some extent the supremacy which the gas engine now holds. Several foreign makes were also exhibited. There were numerous exhibitions of small garden tractors and implements.

Tractor-drawn implements was the idea back of implement companies' exhibits. The difference in the wear and strain of tractor-drawn implements over horse-drawn implements is being recognized more and more by implement engineers. New designs and construction have been largely governed by that fact. Implement units are being built more and more in sizes to

meet the demand of tractor service. Grain separators are being built small enough for the individual farm. On the other hand, especially in tillage and seedbed preparation tools, larger units demonstrated the fact that one man is able to control a larger number of operations. This fact in a large way accounts for the economy of tractor power and the popularity of power farming. Quite a few suggestions and changes in implement design were presented, a number of which will no doubt pass the test of service and be accepted as special tractor implements.

Companies manufacturing tractor accessories were very well represented. The latest development of magnetos, wheels, carburetors, engines, spark plugs, special hitches and steering devices, governors, bearings, lugs and so on were lavishly, though tastily exhibited.

In contrasting the product of 1921 with those of former years, one thing is evident and encouraging. Tractor and implement engineering is making progress. Freak designs were not in evidence. New designs are conservative and practical. Engineers are being guided by past experience and are not attempting radical designs with which they hope to revolutionize the tractor industry. This fact will undoubtedly have a beneficial effect on new developments.

From any viewpoint, the show was a huge success. Any spectator who viewed the three hundred and fifty-six exhibits—all presenting the idea of power applied to farm operations—could do nothing but praise the completeness with which the idea was presented. Early attendance, in spite of rain and inclement weather, gave a good indication of the interest of farmers and dealers and even the general public in the new era of farming operations. The management of the show, particularly Mr. Wraley and the Columbus Tractor Club, deserves praise for the way the show was managed.



Rye on Sweet Clover Stubble

THE attention of the Emmet County Farm Bureau was called last summer to a striking demonstration of the effect of sweet clover stubble on rye on the farm of O. P. Churchill in Bliss township in Emmet county.

In 1919 Mr. Churchill had a strip of sweet clover running across a field. The first crop was cut for hay and the second crop was used for the same purpose. The whole field was then plowed and sowed to rye. The follow-



ing summer there was a noticeable difference in the rye growing on the sweet clover stubble. A quicker start was made, it was heavier stooled, larger stalk and heads, better color and thriftier condition all around. The grain when threshed out was large, plump and had a good appearance. The

writer's attention was called to it and in company with G. M. Grantham, of the Soils Department at the Michigan Agricultural College, visited the field in July and cut one-fourth square rod samples of rye growing on the sweet clover, and rye adjoining but not having the benefit of the sweet clover stubble. These samples were sent to the college and threshed out. The yields were as follows: The rye on the sweet clover stubble yielded seventeen bushels of grain per acre and 2,200 pounds of straw. Where there was no sweet clover, the yield was eight and a quarter bushels and 1,440 pounds of straw. The presence of the sweet clover stubble doubled the yield of grain and gave an increased straw yield of 760 pounds. The accompanying illustration shows Mr. Churchill with the two bunches of rye cut. The difference can be readily seen. They were both cut from equal areas.

Here was a startling demonstration of the benefit of sweet clover and organic matter on a crop of rye. If it will do it on rye it will repeat on other crops. The soil was light and had been run. Other soils in Emmet county, Michigan, need similar treatment. Sweet clover will turn the trick.

K. K. VINING.

Good Roads—Motor Trucks

FOR the purpose of ascertaining the essential facts relating to the impact, or wearing effect on the road, of motor truck traffic, the United States Bureau of Public Roads conducted this year an elaborate series of tests, using apparatus in many cases specially designed for this purpose. The complete report of these tests has not yet been published, but the preliminary report establishes certain facts that show the popular opinion in regard to gross weight and road damage to be wholly unfounded, and that it is the "unsprung weight," or weight not sustained by springs, the tire equipment, speed at which the truck runs, and the overloading of trucks beyond their rated capacity, that are the important factors in determining the impact.

Thus in one series of tests it was shown that a three-ton truck, with a load of five tons, running at a speed of fifteen miles per hour over a two-inch rut, had an impact, or crushing blow, of seventeen tons. A five and a half-ton truck with a load of five and a half tons, so designed as to have a light unsprung weight, under the same conditions had an impact of twelve tons, or only sixty-eight per cent of that of the smaller truck, showing that the overloading of the small truck, and its heavier unsprung weight, greatly increased its impact. It was also shown by these tests that the kind of tires used, their condition, and speed at which the truck is operated, are factors in determining impact. When the rate of speed is increased there is an increase in wearing pressure on the road.

There are other important facts that must be taken into consideration in dealing with this question. The various sizes of standard types of truck are equipped with tires proportionate to the gross weight of truck and the load it is intended to carry. The tires of the larger trucks are made sufficiently wide to provide that their pressure on the road surface shall be the same as that of the smaller types, so that in reality the inweight on a given area of road is no greater than that of the smaller truck with narrower tires. Again, it must be remembered that prohibiting the use of large trucks leaves the same tonnage of freight to be mov-

ed, and if several small trucks take the place of one of large capacity the additional weight to be carried over the road, represented by the weight of the trucks, exclusive of load, amounts to an increase of fully fifty per cent. With the large truck prohibited there is a direct incentive to overloading the smaller sizes, with the result that the tires are forced to carry a much greater load than they should bear, thus increasing the danger of breaking or cutting the road surface. It must be self-evident that one large truck, with wide tires, and light unsprung weight, moving at a slower rate of speed, will do less damage to the road than three small trucks with relatively heavier unsprung weight, running at a greater speed.

That the large trucks are unjustly blamed for road damage is shown by the fact that some sections of a road over which these trucks are operated, together with smaller trucks and passenger cars, will be badly worn, while adjoining sections of the same road, subject to the same traffic, are in good condition. If it was the large truck that caused the damage it would have had the same effect on all the road over which it travelled. That it did not have this effect shows that the failure of the damaged section was due to other causes, generally some defect in road construction, such as insufficient foundations, lack of drainage, frost or inferior materials.

With the rapid growth in number of cooperative associations for marketing crops and hauling farm supplies by rural freight and express service, the demand for the motor truck in the country districts will steadily increase. It has been demonstrated by twenty years' experience that the large capacity truck is the most economical and efficient type for moving many classes of local freight.

The farmers should not be misled by repetition of the assertion that it is the large truck that destroys the road. They should study the question for themselves, and be guided by facts of official record, so that their influence may be used to secure fair treatment for the class of truck that has been shown to have no more injurious effect on the road than the smaller trucks.—W. G.



The silver lining to the passing cloud

Ever hear the old saying "High-priced seed means a low-priced crop"? Ever notice that *the reverse is equally true*—and that today's situation should therefore spell OPPORTUNITY to the farmer who has "his ear to the ground and his eye to the future"?

He knows that over-production never occurs two years in succession. He is assured better distribution of next season's crops because of greatly improved transportation conditions.

That is the "silver lining" the wideawake farmer sees on the cloud of low prices now passing. While others are waiting, *he* is acting. And when the rise comes *his* crops are ready; *he* "cashes in".

He is going to use fertilizers—good fertilizers. For *he* is the kind of farmer who never thinks of missing the profitable extra yield they produce. He is ordering them now—to avoid last-hour rush and probable delay in getting them.

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Farm Bureau Notes

PRESENT prices for farm products Michigan farmers operate their own will not cause an exodus from farms, twelve per cent higher than the Michigan farms, according to early figure for Ohio. Michigan has 206,689 returns from twenty-three of seventy-five county agents answering the Michigan State Farm Bureau's question, farmers, 172,310 of which are operated by their owners, and 32,689 are farmed by renters. Salaried managers operate "Will low prices for farm products cause any marked number of farmers in your county to retire this year?" mission has opened for investigation Four counties—Missaukee, Otsego, every rate in the state, and the Michigan Grand Traverse and Benzie—said "No." Four others said that only a going in Grand Rapids on February 27 to go over the matter and see what action it will take. The farm bureau traffic department is a member of the league.

The Michigan State Farm Bureau has secured a second break in the fertilizer market, which, based on an estimated spring requirement of 60,000 tons for the state, and figuring in a reduction secured in January, will save the farmers of the state considerably in excess of half a million dollars on this commodity.

The State Farm Bureau is pushing a movement to secure for Michigan farmers through rates and through routings on shipments going over electric and steam lines. Separate rates and routing, which prevail at present, are discriminations upon farmers living along electric lines, and upon those having need of both lines for any single shipment, charges the farm bureau. Hearings on the subject are now being held at Detroit.

The Michigan State Farm Bureau, through its traffic department, is working to secure a reduction in the minimum weights fixed by the railroads for carload shipments of live stock. Its traffic manager is appearing before the Interstate Commerce Commission hearings on the subject. The farm bureau maintains that the present minimum weights cause the farmer to pay for weight he can't get into the cars. More than eighty-three per cent of

Wisconsin Farm Bureau

VOTING delegates from twenty-three of the twenty-five organized counties attended the first annual meeting of the Wisconsin Farm Bureau Federation, held in Madison. Determination was the keynote of the meeting—determination to push the organization of the farm bureau into every corner of the Badger State.

George McKerrow, of Waukesha county, was elected president, replacing George W. Hull, of Rock county, who retired because of sickness in his family. James Murphy, of Walworth county, was elected vice-president, and C. A. Keys, of Fond du Lac county, was unanimously reelected treasurer.

The feature of the meeting was the address of President J. R. Howard, of the American Farm Bureau Federation. Optimism was the theme of Mr. Howard's address, and the audience interrupted him frequently with applause. He said he was hopeful of the future, "because I live in the United States, not Russia. Sanity will rule—not chaos. There has never been a better time to stick to the farm." Mr. Howard pledged the aid of the American Farm Bureau Federation at any time to the Wisconsin Farm Bureau. He also pointed out that the Farm Bureau Federation was not antagonizing any other farmers' organizations but was cooperating in every possible way. The farm home is the heart of the country, said Mr. Howard, and there should be in them the same comforts that are found in city homes.

"All but two states have started the farm bureau movement now," said Mr. Howard. "These two are Louisiana and Arkansas, and I had a wire from Secretary Coverdale, who is in the south, this morning saying that before he came home, he would help Louisiana get started."

Mr. Howard vigorously attacked the statement recently given out by a well known business statistician that the farmer is inefficient. "The farmers are the most efficient people in the world," he declared, amid a roar of applause.

He further pointed out that the banking system of the country must be changed so that the farmer will not

be compelled to dump his crops on the market at one time in order to meet his notes. "The farmer must be financed," he said, "so that he can send his crops to market as they are needed. It's a case of either the speculator or the farmer carrying the crops and the farmer is the one to do it."

The resolutions committee brought in resolutions expressing pleasure that the farm bureau movement had come to Wisconsin, favoring cooperative marketing, urging all possible aid for the cheese federation and the milk producers' associations, asking the University of Wisconsin to investigate the feasibility of distributing market reports by wireless, thanking George W. Hull, the retiring president, for his work to help the farm bureau, and urging the legislature to pass such laws as may be found necessary to stop discrimination against cooperative selling and buying organizations. These were unanimously adopted and referred to the executive committee for action.

The constitutional committee reported in favor of several minor changes in the constitution, which were adopted after considerable discussion.

The budget committee brought in a budget based upon an expected income of \$40,000. This committee also urged a state-wide conference of cooperative shipping associations, with a view to having them work with other states. They also recommended aid in reorganizing the Southwestern Sugar Beet Growers' Association. These resolutions and budget were adopted and referred to the executive committee.

The legislative committee recommended that the president, vice-president and secretary act as a general legislative committee to aid in securing the passage of laws of benefit to the farmer. This motion was unanimously adopted.

The treasurer's report showed receipts of \$17,375, expenditures of \$7,470.48, and a balance on hand of \$10,318.77, with about 2,500 outstanding bills. This speaks well indeed for a farm bureau federation which has been under way for as short a time as has the Wisconsin Farm Bureau.

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The Michigan Farmer, one year...\$1.00
 McCall's Magazine, one year.... 1.50

Total value\$2.50
 All for \$1.75.

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Michigan Farmer, one year.....\$1.00
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Michigan Farmer, one year.....\$1.00
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 Best result from large spready cow hides for **COATS**

Trade with your hide buyer. Get a black hide. We make **ROBES**
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Fence Posts For Sale

Made from High Carbon STEEL Angle. Are to be driven. Saves labor and expense of digging post holes.

Guaranteed for 20 Years
 Have sold STEEL fence posts for 20 YEARS.
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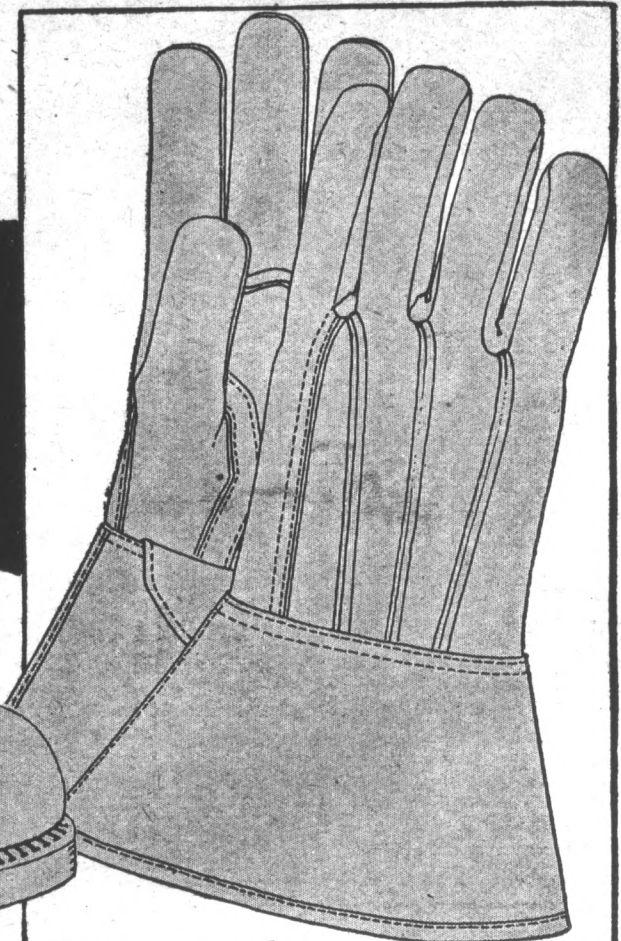
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A MCGILL AUTOPOWER attachment and your Ford make a 12 H. P. power plant. Reduced to \$35.00. Send for descriptive circular.

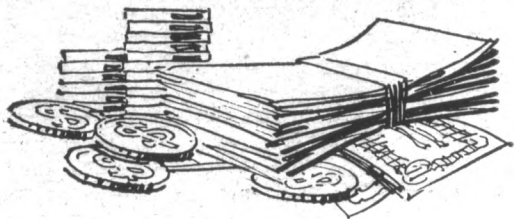
H. F. HANNIGAN, 2161 Bewick Ave., Detroit, Mich.

FARMS AND LAND FOR SALE

BARGAIN for quick sale. A-1 80 A. some timber, spring brook, 4 1/2 m. Hastings, 60 r. St. tr. line, fine new modern 8 r. bungalow, bath, running water, shady lawn, good barn, other farm bldgs., also fine 60 A. with 10 A. timber near by, equipment if desired. Write **WILL TREGO,** R. 3, Hastings, Mich.



\$300,000 in Prizes



Contest Open to Everybody

For years we have been advertising our shoes to the good people here in Michigan.

For years Michigan People have worn and continued to buy our shoes.

The shoes make good; everywhere they tell us so.

What kind of an advertisement would you write for such a shoe?

Try your hand at it. Three hundred dollars in prizes will be paid for the thirty-six best letters on this subject, divided as follows: First prize \$100.00, Second prize \$25.00, Third prize \$10.00, next thirty-three best advertisements will receive a prize of a pair of \$5.00 Hirth-Krause More Mileage Shoes.

This Contest is open to everybody. To help you, we have prepared a circular on the contest, giving all the particulars. This circular also gives you a description of the Shoe. Better study up on this. Or go see the shoe. Or better yet, buy a pair and wear them, find out about them for yourself.

Then sit down and write the kind of an advertisement you think we ought to have for such a shoe.

Send for the descriptive circular. Use the coupon.

For the Man who Works

Genuine Horse Hide Gloves

Just the kind of a glove a man should have who has to use not only his head but his hands as well.

**Built of Mileage Leather —
Therefore Smileage Quality.**

In case of a tie, prize will be paid to both contestants.

Contest closes midnight, April 15th.
Prize award to be made before May 10th.

Use this Coupon



COUPON

Please send me your contest circular.
Also tell me who sells Hirth-Krause More
Mileage Shoes in this district.

Name _____

Address _____

Town _____

Hirth-Krause Co., Grand Rapids, Mich.

Be Sure

Be just as sure when you buy clothes as you are when you buy live stock!

Long experience has made you judge of the things you work with daily.

Our daily work, for 75 years, manufacturing men's clothing, has taught us what is the most dependable fabric for your clothes—year in and year out.

For wear—service—looks—most-for-dollar—you can't beat Clothcraft Serge Specials—tested by over a half million wearers.

This largest single clothing plant in America, specializes on common-sense clothing—makes the greatest number of serge suits—and sells them for less. Wouldn't you like to have actual samples of these long-wearing Clothcraft Serges, in blue, gray, and brown, just to test for yourself?

A little folder with a big message is yours for the asking—write for the folder today and feel safe the next time you need clothes. Just write, "Send Serge Folder" and address:

THE JOSEPH & FEISS CO.
625 St. Clair Ave., N.W., Cleveland, Ohio

Record Garden Yields



Plant Northern Grown Seeds

Assure yourself of the biggest yields—the best your garden can grow. Use the Isbell Catalog as your guide. It shows

varieties almost unlimited of the finest vegetables, many prize winners of international reputation—all produced from

NORTHERN GROWN

Isbell's Seeds
As They Grow, Their Fame Grows

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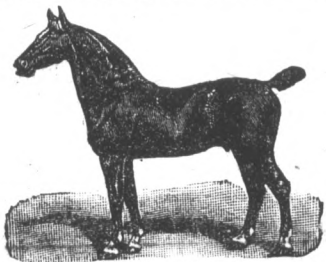
Plant only the best, hardest, earliest maturing seeds. Our 42 years' growing seeds in Michigan—careless experimenting, careful selection, and perfect cleaning have made more than 200,000 satisfied Isbell customers. You buy direct from the grower and save money. Satisfaction guaranteed.

FREE 1921 Catalog

Write today—get the 1921 Isbell seed book. It's a valuable guide for growing great crops. Gives complete cultural directions. Post card brings it Free.

S. M. ISBELL & COMPANY (3)
322 Mechanic St. Jackson, Michigan

Warranted to Give Satisfaction Gombault's Caustic Balsam



Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diphtheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address The Lawrence-Williams Co., Cleveland, O.

Please mention the Michigan Farmer when writing to advertisers.

Poultry Association Meetings

By R. G. Kirby

THE meetings of the Poultry Association were largely attended by practical breeders and in this report the writer will try and place as much of the practical information gleaned from the series of meetings as can be condensed into a small space. The points must of necessity be rather disconnected because of the large range of information which was combined under each address.

Prof. C. H. Burgess stated that the problem of the poultryman is to produce the type of birds that other men want. This means a combination of utility and fancy qualities. There are now more good flocks in Michigan than ever before and culling has saved a feed bill estimated at \$2,000,000 per year. In some sections only one out of five of eastern poultrymen in business five years ago are now in business. In other eastern sections it is one out of ten. This explains the high prices received for eggs this winter in spite of comparatively low feed costs.

The college departments are now receiving many inquiries from men about to go into the poultry business. Some write for information on the handling of as many as 15,000 hens, thus showing their inexperience at once. When they are told that 1,000 hens eat forty-five tons of mash and forty-three tons of grain per year they realize somewhat the problem of caring for 15,000 hens. Professor Burgess says that what Michigan needs is one hundred good hens on every farm.

The fanciers are a great help to the poultry business and it pays to keep pure-bred stock. Six years ago everyone seemed to aim at utility alone. Before that there was a time when everyone wanted ribbons and utility was neglected. A union of the two is important and necessary. The hen of tomorrow will have uniform shape and color and produce a good number of eggs. For example, a flock of White Leghorns can be of all types, but the uniform flock is best.

Diseases Take Large Toll.

In speaking of poultry diseases, Professor Burgess said that 100,000 hens died of disease north of Grand Rapids last year, according to their estimates. Hens with tuberculosis are usually lame but all lame hens do not have it. The loss of appetite in a hen is one of the first signs of disease. It is said that only a goat or a man will eat when sick. In cases of tuberculosis the post-mortem may show that the liver is normal but in most all cases it is found to contain gritty nodules. The remedy is to kill the infected flock. Then the birds found normal can be marketed and the remainder burned.

A poultry house must be thoroughly cleaned. This means the ceiling and windows as well as the floor and dropping boards. To disinfect a poultry yard it must be plowed and lime scattered. The chicks must be raised on clean soil whenever possible.

The first stage of a cold is the watery eye, the second is the swelling and the third is roup. Roup is indicated by the offensive odor. Spray permanganate solution in the roof of the mouth and nostrils for colds in the first stage. Paint iodine on chicken pox.

Finding the Good Stock.

In answer to a culling question, Professor Burgess states that Mr. Foreman is now at Guelph finishing his work, but will be back in April and available to help with the culling in Michigan. They found a fraction of less than two per cent difference between pullet and hens' eggs for hatching when the pullets were well developed birds that had not been heavily forced for winter eggs. It pays to mark

the winter layers and use them as breeders. Use good-sized eggs of standard weight. The standard weight of eggs is two ounces each, or twenty-four ounces per dozen. To test the vigor of newly-hatched chicks place a chick on its back on a board. If it turns over and jumps up and is ready for business, it is a good chick. If it lies there and weakly yelps it is no good and better out of the way.

Pointers.

Milk is the best animal food for the breeding stock. Meat scrap and ground bone are the best for layers. Among the succulent feeds are sprouted oats, mangels, cabbages and ensilage. The sprouted oats can be used at the rate of a cubic inch per hen per day. The use of green food in the winter helps to make hatchable eggs.

Here are some good egg pointers. Artificial lights have been found to increase the vitality and vigor of a flock as well as the egg production. Stopping egg production starts the moult. The clippings from meat can be cooked and fed mixed with bran and it will be good for egg production. Fifty to



sixty degrees is the right temperature in which to keep eggs saved for incubation.

High-grade meat scrap is safest. Test all brands by pouring boiling water on a sample. If the odor is offensive it is not fit to feed the hens. The eggs from tankage-fed hens are not so good in flavor as those from hens that are fed meat scrap. Don't feed marble with the idea of giving the hens both lime and grit at the same time. The lime in the marble is not available. Granite makes good grit and it pays to keep oyster shells before the hens at all times.

If epsom salts are given to hens use one pound to one hundred hens and give it once a month in a moist mash. This is considered a very good tonic to keep the digestive system in good condition. Do not give the salts in water or the hens may not touch the water.

If hens have all the milk they can drink the amount of meat scrap in the dry mash can be cut in two. Professor Burgess is a strong advocate of milk in the poultry ration and believes that it is worth all it costs. Buttermilk has proven fine as the first drink for young chicks.

Feeds by Judge Hale.

Judge D. E. Hale, of Chicago, gave many interesting points about poultry feeding. He stated that vitamins are essentials of life of which we know little but they are contained in the leaf of plants, the yolk of eggs and milk. The great loss among chicks occurs during the first ten days because the chicks are fed too soon or too often. The stuffing causes an impaction of the digestive system. Two-thirds of the bowel trouble is simply caused by digestive disorders. Chicks do not feed until forty-eight hours old, and sixty hours is better. That is why day-old chicks often do so well. The egg-yolk

is consumed on the journey to the buyer, who does not receive them until they are ready for food.

Take the chill from the drinking water that is given to young chicks. Do not give too much water at first. The chicks hatched out in a stolen nest might only get the moisture on leaves and grass in the morning. Yet the old hen makes them exercise and probably they get little water, and yet they thrive and are husky when the mother hen brings them up to the house for inspection.

Dry mash is good for the first feed for chicks. Give the amount they will eat in ten or fifteen minutes and feed four or five times a day. Give scratch feed after a few days to make the chicks dig in the litter. Protein is needed to make everything about the chick but fat. This includes feathers, bone, blood and muscle. Enough protein cannot be placed in the scratch grain and the best mash feeds run sixteen, eighteen or twenty per cent protein. The same kind of milk should be used at all times. Do not give sour milk one day and sweet milk on the next. Lack of exercise breaks down hens and hens that are forced may produce eggs lacking in fertility.

Lauds Michigan as Poultry State.

The next speaker, Judge W. H. Card, of Manchester, Conn., is a poultryman with years of practical experience, a keen sense of humor and a remarkable way of making scientific poultry problems easy to understand. He says that no state has increased in the value of its poultry products as the state of Michigan. In 1915 the value of products was estimated at \$5,000,000. In 1920 it is placed at \$27,000,000. Judge Card has recently been in forty-one states and says that no state has progressed like Michigan in the quality of its flocks. He gives great credit to Professor Burgess and his department for their activity in culling work and other lines which have boosted the poultry industry in Michigan.

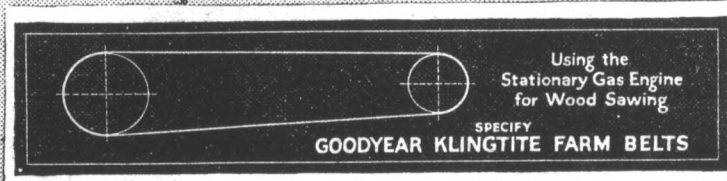
He advises poultrymen to breed from their highest specimens in vigor and stamina and strive to make the beautiful useful and the useful beautiful. He gives line breeding the credit for the development of much fine poultry. Outbreeding is crossing unrelated specimens of the same kind. Crossbreeding simply means crossing two different breeds. Line breeding means breeding from related stock. He says that the wild birds are bred by a single mating system and that nature is above man in breeding methods.

The real fancier today wants a union of utility and fancy, according to Judge Card. He also believes that inbreeding is all right if birds of good stamina are used. The undercolor of fowls affects their market value. Buyers do not want a black pigment in the skin of the birds they buy for the table. That is one reason that the White Leghorn is more popular than Leghorns of other colors.

In raising chicks Judge Card fights red mites, hawks and crows and takes the chicks from the brood coops as soon as they are old enough to roost. He says the poultryman must take himself by the back of the neck and make himself do things. He believes there would be more presidential timber if most of us would do more and learn more in 1921 than we did in 1920.

Other points from his lectures are as follows: Standard types do not detract from egg production. It does not pay to caponize Leghorn cockerels. In an open-front coop near the roosts the temperature will be fourteen degrees higher than outside the coop. Of course, this will vary with the type of

(Continued on page 245).



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Power Farming—and Goodyear Belts

The great advantage in farming today is the use of mechanical power. Along with those other gifts of agricultural science—soil chemistry, seed selection, and crop rotation—it is the source of greater production, at lower cost, and with infinitely less drudgery.

One of the striking changes which power has brought about is in the nature of its user's problems. The farmer today, operating a variety of machines, faces problems more like those of the modern factory manager than like those his father fronted. He has to guard against waste of power, know how to utilize all of it, and know how to produce and transmit it at the least expense in money, energy and time.

Belting is so vital a factor in all of these that the question of *what belt* deserves from every progressive farmer the same careful consideration that industrial managers give it. To every such farmer, it must appear logical that the most powerful, efficient and economical belt for him is that which is accurately specified to the everyday duty he expects of it.

That is the exact basis on which Goodyear Klingtite Belts are built for farm power service. Back of their special construction, back of their very designing, in fact, is a body of close study and actual experience with all the approved farm power ma-

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By this sort of service the Goodyear Klingtite Belt, like Goodyear Cord Tires for motor trucks, protects our good name and earns the universal demand it enjoys. Other information about Goodyear Belts, and a copy of the Goodyear Farm Encyclopedia, will be sent on letter request to The Goodyear Tire & Rubber Co., Akron, Ohio, or Los Angeles, California.

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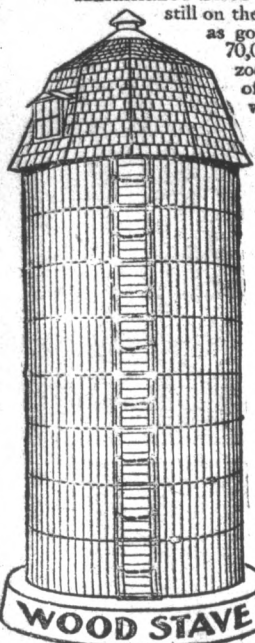
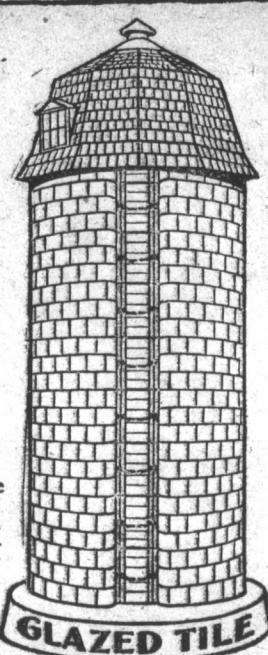
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Livestock in Michigan

THE annual inquiry relative to the quantity of live stock on farms was made on January 1 by Charles J. DeLand, Secretary of State, and Verne H. Church, Agricultural Statistician, United States Bureau of Crop Estimates.

The report shows a less number of all kinds of farm animals in Michigan than one year ago, and that the price of each kind has declined from the high level of last year. The total value is estimated at \$174,468,000, while that of one year ago was \$236,231,000, the highest on record. The quantity and value of each kind has also declined for the United States as a whole. The average value per head is higher in Michigan than for the United States, for all except mules and cattle, excluding milch cows.

Horses.—The constantly increasing use of automobiles, trucks and tractors is displacing greater numbers of horses each year. A less number of colts has been raised in recent years and the amount of young horses on farms is considerably less than formerly. The total number of horses is estimated to have decreased four per cent during the last year in the state, a loss of 26,000. The average value per head is placed at \$93, which is within two dollars of the price one year ago.

Mules.—Very few mules are raised in the state, the number being chiefly maintained by importations from other states. The number does not change materially from year to year. The estimated number is 4,000 and the average price per head is \$96 as compared with \$99 last year.

Milch Cows.—The number of milch cows has declined to the extent of two per cent during the year. The present estimated number is 856,000, or 17,000 less than one year ago. The present average value is \$70 per head. Last year it was \$96. The total valuation is approximately \$23,000,000 less than on January 1, 1920. The loss in numbers and valuation is mainly due to the

lack of demand for and falling prices of dairy products.

Other Cattle.—Other cattle have been reduced in numbers during the year from 773,000 to 727,000, or six per cent. The present value is \$21,180,000 as compared with \$33,084,000 on January 1, 1920, representing a loss of about thirty-four per cent.

Sheep.—The lack of demand for, and the low market price of wool has discouraged many sheep owners, and large flocks have been reduced and many small flocks sold. However, the number of lambs on January 1 was somewhat greater than the previous year, due to the fact that the marketing has been slower than usual. Otherwise the loss in number of sheep would have been greater than the estimated net loss of four per cent. The estimated number is 2,135,000 with a total valuation of \$14,731,500. Last year the number was 2,224,000 and the value, \$26,243,000.

Swine.—While there was a tendency to reduce the number of swine, the loss for the year amounted to only one per cent, as the declining prices and slack demand has delayed the marketing. Corn is plentiful and many farmers continued to feed until after January, hoping that the market would improve. Under normal conditions these would have been largely marketed during December and would not be counted in the January 1 estimates. The indicated number on January 1 is 1,435,000. The value is \$20,520,500, more than \$11,000,000 less than last year.

Total Numbers and Values of Michigan Live Stock, January 1, 1921.

Kind	Total No.	Total Value
Horses	614,000	\$57,102,000
Mules	4,000	384,000
Milch cows	856,000	59,920,000
Other cattle	727,000	21,810,000
Sheep	2,135,000	14,731,500
Swine	1,435,000	20,520,500
Total value		\$174,468,000

Fighting Cattle Diseases

LAST August when the Holstein breeders of northern Michigan gathered at the Loeb Farm near Charlevoix for their annual picnic and get together, they heard Dr. T. S. Rich, federal inspector of bovine tuberculosis eradication work in Michigan, describe how the state and federal governments were setting out to eradicate bovine tuberculosis. In the audience were several county agents and farm bureau officials and when Dr. Rich described how Gogebic county, in the upper peninsula, had hired a veterinary and set him to work on the tuberculosis proposition, an idea came to these county agents and farm bureau men to get four counties together, have the supervisors make necessary appropriations, get the cooperation of the state and federal authorities and go after bovine tuberculosis.

The live stock men in four counties—Grand Traverse, Antrim, Charlevoix and Emmet, were approached by the farm bureau men and county agents and much good sentiment was expressed in favor of the work. A meeting was held in September at the Loeb farm and attended by Dr. Rich and Dr. Hunt, of Lansing, county agents, and farm bureau men of the four counties mentioned. The proposition was gone over carefully. At the October meeting of the boards of supervisors, a tentative appropriation of \$1,000 per county was made in each county and in nearly every case without a dissenting vote. Committees were appointed from each board. These met at the Loeb farm again in November and drew up plans for carrying on the work and meeting the expense of

the same. Each county sharing equally in the salary and expense of the veterinary. Each county is to share equally in the time of the veterinary. The latter's activity will be directed from Dr. Rich's office in Lansing. These plans were presented to the boards of supervisors at their January session in the different counties and approval was given the plan. It is expected that the work will start about February 1.

Breeders of both dairy and beef cattle in all the counties have been interested in the work and many have made application for the same with the result that the veterinary employed will be more than busy. The rules and regulations as set forth by the state and federal government will be carried out to the letter. Herds qualifying will be put on the "accredited herd list."

These counties have taken a step that no counties have yet taken in the lower peninsula and the men in touch with the cattle business feel it is a step worth while. Not only from an economic standpoint but from humanity side as every tubercular milk cow removed lessens the chances of tuberculosis in children.

The county agents who have been active in the work are: Dr. J. P. Houston, acting county agent of Grand Traverse county; L. L. Drake, of Antrim county; C. W. Wing, of Charlevoix county, and Keats K. Vining, of Emmet county.—V.

The quality of the feeders is the most valuable point in the whole economy of feeding.



A BATHROOM is not merely a space in which plumbing fixtures are grouped in the most compact and economical manner.

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640 acre stock farm in Osceola Co. two large modern barns, fair house, 300 acres cleared, bal. pasture and second growth timber. Woven wire fences, two miles from railroad town, good fertile soil. Will give the right man a good chance to pay for it. Write the owner. ROSELL BLYM, Rochester, Mich.

For Sale 80 acre farm, Montcalm County Michigan near markets, good buildings, apple and small fruit orchard, soil number one clay loam. Farmed by owner for over fifty years. Particulars upon request. M. R. Newell, East Lansing, Mich.

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45 Acres farm for sale cheap, on good gravel road 3 miles from Ionia. Write for particulars. ERNEST CLEMENT, Ionia, Mich.

Our Service Department

LICENSE FOR SELLING NURSERY STOCK.

Please tell me if it is necessary for me to get a license to sell grape plants that I raise myself on my farm.—SUB.

Under the state law, persons who grow grape plants for sale are required to take out a license, and to have the stock inspected before it is delivered. The wording of the law is as follows: "Any person or persons, growing or offering for sale, in this state, any trees, shrubs, vines or plants, commonly known as nursery stock, shall on or before the first day of August, in each year, apply to the Michigan State Board of Agriculture for the inspection of said stock and for a license for its sale. A license fee of five dollars shall be paid and a bond for one thousand dollars, with sureties satisfactory to said board, and conditioned upon the compliance with this act shall be filed."

The words "vines or plants" would certainly include grape vines, and that they would be classed as "nursery stock," is indicated by the definition of "nursery stock" given in many federal and state laws which reads as follows: "The term 'nursery stock' wherever used in this act shall be held and construed to mean and include fruit trees, fruit tree stocks, nut trees, grape vines, fruit bushes and fruit plants, rose bushes, forest and ornamental trees and shrubs (both deciduous and evergreen), field-grown florists' stock, and cuttings, scions, seedlings of fruit or ornamental trees or shrubs, and all other woody plants and parts thereof, and plant products for propagation or planting."

During the last year or two the high prices of grape plants have caused quite a number of vineyardists to propagate and grow a considerable number of grape plants for sale. They have taken out licenses and had the plants inspected in accordance with the law. A few have claimed that they should not be required to take out a license since they are not nurserymen. Attention is called to the fact that the law does not use the word "nurserymen," but it requires "any person, or persons growing plants or vines for sale to take out a license." However, it would not be too much to claim that persons who grow grape vines for sale really are nurserymen since, according to the above definition grape vines should be classed as nursery stock and several state laws define nurserymen as persons who grow or sell nursery stock.

The object of the law is to prevent the spread of dangerous insects and diseases and our observations show that there is really more danger of spreading insects and diseases on nursery stock propagated by the small growers than by the larger ones. The latter, of course, have more at stake and naturally are not only better posted regarding the insects and diseases but are prepared to combat them. Everything else being equal, they will take more pains to see that the stock which goes out is free from insects and diseases. Parties growing nursery stock are required to secure a certificate showing that it has passed inspection and to furnish a copy to each customer. They are also under bond to keep a list of the parties to whom the stock is sold so that if necessary the stock may afterwards be located and inspected.

Failure to comply with the provisions of the law subjects one to prosecution, and on conviction may be fined not less than ten or more than one hun-

dred dollars, and imprisoned for not less than ten or more than ninety days.

While it in no way changes the requirements for selling grape plants, it may be well to note two exceptions to the above. These permit persons who are not nurserymen to dig and sell shade trees from their own wood-lots, and to dig and sell or exchange surplus small fruit plants without taking out a license.

The "surplus small fruit plants" are construed to relate to strawberry runners and red raspberry suckers which may be dug along the borders of the fruiting rows and these can be sold without a license, provided the fruit grower is not a nurseryman. In this case he would be considered a nurseryman if he makes a business of growing and selling the plants. When all of the plants are dug and sold the owner could not be considered to be a fruit grower, and if the plants are advertised for sale in any way, he would make a business of selling them, and would require a license.

The object of the law being to prevent the spread of dangerous insects and diseases, it requires that all plants to be shipped shall have a certificate of inspection. This applies in all cases.

In some sections of Michigan many fruit growers sell their surplus plants to dealers who have a license, but as these dealers have given a bond that they will only sell plants which have received a certificate of inspection, arrangements have been made to examine and issue certificates upon such plants as they contract for, on the payment of a fee sufficient to meet the cost of the inspection.

AMOUNT OF FEED PER HEN.

I would like to know the amount of grain a hen needs. My hens do not lay, but just take on fat. I feed my eighteen hens one and a half quarts of wheat in the litter in the morning and the same amount of corn at night. They have a dry mash and meat scrap in a hopper, and eat quite a lot of it. They also have table scraps, etc., at noon. They have plenty of grit and oyster shell, and seem ready to eat at any time. Will you tell me just how much to feed to get eggs.—Mrs. G. B.

Experiments have proven that a bred-to-lay hen in good condition needs approximately seventy pounds of feed per year. This will consist of thirty-five pounds of a properly balanced dry mash and thirty-five pounds of mixed scratch grain. At that rate the daily ration would be about one-tenth of a pound of mash and one-tenth of a pound of scratch grain.

Of course, the amount of feed eaten will vary with individual hens. The over-fat condition can usually be prevented by feeding the scratch grain in litter so that the birds have to work for it. If hens become over-fat when properly fed it usually means that they are not good layers and should be culled out. The feed that they eat all goes to fat and not much of it into eggs.

If hens that are overfat seem to have some value as breeders it will pay to keep them on a bran and water diet for a while until they begin to thin down. Then they can be returned to an egg-producing ration. We find that it pays to market a hen that becomes heavy with fat or use her on the home table. Such cases do not often occur when the hens exercise and lay. Old hens are more apt to take on heavy fat than pullets. By breeding from the active and alert hens which scratch and sing and lay, it seems possible to breed out the tendency to become over-fat and produce a flock largely of hens which are easier to manage.

R. G. K.



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CORN ON SHARES.

I have a piece of ground I wish to let out to plant to corn on shares. I propose to furnish one-third of fertilizer (if any is used), and one-third of the twine to harvest it. In return I want one-third of the corn put in the crib and one-third of the stalks put in the stack. Now, if that is not right and fair, what is? What is customary for corn, wheat or oats let out on shares? V. A. G.

There is no hard and fast rule for renting land on shares. There is so much difference in the fertility of land. Good rich land in splendid condition, the renter could afford to give a larger share of the crop than he could with poor land that would not give a good crop, and the renter could afford to work for a smaller share. Anyway, a broad general rule is that the land draws one-third. If the man furnishes the seed, fertilizer, twine and does the work he gets two-thirds of the crop and the landlord gets one-third. But it is supposed that the renter harvests the landlord's share as well as his own, and I should think that if you furnish one-third of the twine, if this is good land and there is a prospect of a good crop that the renter could well afford to crib your corn and haul your stalks.

There is another element that enters into this question that the landlord should consider, and that is the character of the renter. If he is a good man and will take good care of the corn, and do it on time so that you will get a good crop you can afford to pay him a little extra if necessary and really, when all is said and done, the renting of land is a private arrangement made between the two parties. Whatever can be agreed upon.

C. C. L.

MARKETING THE FRUIT CROP.

(Continued from page 219). realized ninety-three cents. It must be expected, therefore, that those apples must retail for fifty to sixty cents per peck. Manifestly some method must be devised by which the fruit can be gotten to the consumer for less expense.

A further serious objection to the commission system is that it allows those men to fix prices, and with any considerable amount of fruit marketed in this way it is impossible for any marketing association of farmers to go much beyond that price. And if farmers are to take their places on an equality with other lines of business it must be possible for them to fix prices the same as other business men do.

When fruit is sold to local buyers the situation is only improved inasmuch as the grower knows what he is getting for his stuff and has his money before it leaves his hands. For the buyer naturally argues that Chicago prices should be a basis for prices at shipping points, and if a bushel sells for \$1.50 in Chicago the charges for transportation and commission should come out of it, and \$1.00 should be the proper price to the grower. The consumer does not appear to derive much benefit from such a transaction, however. The spread between him and the producer is narrowed but little by this system.

Through the cooperative system, with a central packing house, it is possible to ship in carlots, thus reducing freight charges, and cut out one set of charges, amounting as we have seen, to fifty cents per bushel. The fruit industry has got to come to this system, and the sooner growers comprehend this and get in line the more rapid will be the progress towards a profitable system. Farmers must work this out for themselves, and they don't need any assistance from the government other than a recognition of their right to cooperative bargaining without being subject to prosecution.

"Pays 500% on Money Invested"

Clarence Wright, a farmer and stockman of Perry, Missouri, makes the statement that his John Deere Spreaders pay him 500% on money invested. Mr. Wright was only one among a large number of farmers who were asked by a prominent farm publisher, this question, "Do you think the manure spreader is a profitable investment?"

Every farmer who answered this question, and who owned or used a spreader stated that the manure spreader is a highly profitable investment. You ask your neighbors who own spreaders, and they too will tell you it's the best machinery investment you can make.

A Spreader Pays in More Than One Way

These men who have turned from the old fork method of distributing manure to the machine method, find that a spreader pays big in a number of different ways.



Manure Goes Twice as Far

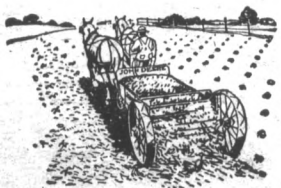
These spreader users make manure go twice as far—the same quantity fertilizes more land more effectively because the manure is evenly distributed—its value is doubled.

With the mechanical spreader, they instantly control the amount of manure put on the land—the spread can be heavy or light to meet the needs of the soil and the crop.



Saves Extra Labor

Two men spreading with forks can not get out as much manure as one man can load and spread with a John Deere Spreader. Spreader users save and utilize every load of manure that is made because it takes less than half the time to load and spread it.



Manure Spreader Makes Top-Dressing Profitable

Only by using a good spreader can you do a thorough job of top dressing pasture and hay land, corn, etc. Top-dressing has proved a mighty profitable way to increase production.

What a Few Other Farmers Said:

A. A. Baker, Winnetoon, Neb. says: "The manure spreader is the best investment a farmer can make."

Harry L. Gregg, Hamilton, Mo., says: "By using the manure spreader the amount of labor is reduced 50%, and therefore, we are inclined to save more manure. Since using spreaders we make and haul 50% more than by the old method."

Sheldon Shaklee, of Woodhull, Ill., Route No. 2 says: "The spreader gets the biggest returns in the shortest time."

Robert Test, Stoutland, Mo., says: "The spreader is a great labor saver and land builder."

Doubles Fertilizing Value of Manure

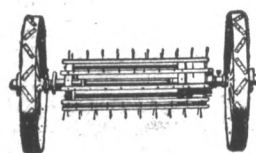
Manure—the greatest of all fertilizers—is of value only to the extent that it is judiciously used. You can double its fertilizing value with a John Deere Spreader. This is the big reason why this machine makes a profitable investment at twice its cost.

Don't Delay Buying a Good Spreader

Get your order placed at once for a good spreader. Get the full advantages the spreader gives you on every load of manure you have to haul—the saving of labor, the distribution, the control of the quantity of manure to meet the soil's needs.

Look Over the John Deere Spreader

Go to your John Deere dealer and look over the John Deere Spreader. Notice its extreme simplicity—no clutches, no chains, no adjustments and only one beater.



See the Beater on the Axle

Notice that the beater and the main working parts of the John Deere Spreader are mounted directly on the axle. This permits extreme simplicity, and working parts that can not get out of line to cause binding, heavy draft and breakage.

**JOHN DEERE,
MOLINE,
ILLINOIS**

Drive-Gears Enclosed in a Dust-Proof Case

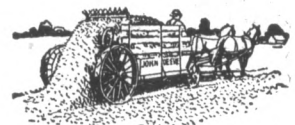


The illustration shows the beater drive gears with one side of gear case removed. This simple gear arrangement, much like a triple-geared horsepower, insures effective transmission of power. The gears operate in a bath of oil—they will last for many years.



An Easy-Loading Box Combined With High Drive Wheels

On no other spreader can you get this valuable combination. The John Deere is so easy to load that the manure is in the box before the hard part of lifting manure comes. The high drive wheels insure extra traction and light draft.



The Straw Spreading Attachment

You can get a perfect straw spreading attachment at any time for the John Deere Spreader. With the John Deere Spreader with straw spreading attachment you can utilize to the fullest extent two valuable fertilizers—barnyard manure and straw.

It's the extra bushels per acre that count—there's where your big profits lie—and here is where the John Deere Spreader fits in. Get the extra profits that its use makes possible.

Three Books You Will Want—FREE

"Soil Fertilizers" is crammed full of valuable information on barnyard manure, how to preserve it, when, and how to spread it to get the most of it. Written by Dr. W. E. Taylor, an agricultural authority.

"Better Farm Implements", illustrates and describes the full line of John Deere labor-saving implements—a valuable reference book for your library.

John Deere Spreader booklet illustrates and describes fully the construction and operating advantages of the John Deere Spreader. To get these books free, drop a post card to John Deere, Moline, Ill., and ask for Package S-322.

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Grain acreages in 1921 will naturally be much reduced. Everything points to higher prices next year.

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OTHER STATE FARM BUREAUS.

THE South Dakota Farm Bureau Federation states that every member in that state has already received benefits through the organization which will pay the membership fee for three years at \$10 a year. The American Farm Bureau Federation, it says, has saved the farmers of the country an average of \$30 each on freight charges for 1921. The South Dakota Farm Bureau has recommended that the state appropriate a reasonable sum of money each year to finance a cost survey on the production of farm products, to be made by the extension department of the South Dakota Agricultural College.

One of the outstanding events of the South Dakota Farm Bureau year was the connection of the growers of that state with the Michigan State Farm Bureau, with the result that considerable amounts of Dakota seed will be planted in Michigan this year.

Forty thousand Kansas farmers reported recently on a live stock questionnaire sent out by the Kansas State Farm Bureau. Questions asked in the census included the number of live stock on each farm and the number that would probably be seeking market each month during the winter. The bureau is now assembling the whole report.

Resolutions adopted at the second annual convention of the Iowa State Farm Bureau included one deeming the present charges made by live stock commission firms to be excessive and unjust and calling upon the American Farm Bureau Federation to direct efforts to reduce these charges. Henry C. Wallace was endorsed for a place on the Harding cabinet as secretary of agriculture.

Ohio wool growers are preparing for a 30,000,000-pound wool pool at Columbus. The proposed pool will function as a clearing house for wool from surrounding states. Certificates issued by the warehouse will be bankable securities.

The Wisconsin Farm Bureau Federation held its first annual meeting at Madison, February 2. President J. R. Howard, of the American Farm Bureau Federation, delivered the opening address. The Wisconsin Dairymen's Association has gone on record as commending intelligent action looking toward the cooperative marketing of all dairy products on a quality basis. The organization of the Wisconsin Cheese Makers' Federation was endorsed.

The American Farm Bureau Federation now includes a million and a half members. If the membership were to march four abreast down the main street of your town at the rate of five thousand a day, it would take the members just ten months to pass a given point. Forty-five states of the Union have farm bureau organizations.

The Texas Farm Bureau Federation has started off with a membership of twenty thousand and is planning a drive to make it one hundred thousand before the close of 1921.

Comparable to the Michigan State Farm Bureau's wool pool is the task of the Texas "committee of twenty-one," which plans to sell 1,000,000 bales of cotton for Texas farmers during its first year of operation.

The cooperative live stock shippers of Iowa and the Iowa Farm Bureau Federation have affected a definite affiliation. All cooperative shipping associations in the state have been invited to join.

It is a great mistake to send unripe beef cattle to market. They will not ripen on the road, like California fruit. One of the chief advantages of feeding a small number of animals is that of getting a better class of feeders.

The well-finished steer at two years of age will bring more money than the same animal would at four years of age in the same condition.



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The Gleaners have saved farmers thousands of dollars every year by distributing millions of pounds of Prison Twine on a co-operative basis and this year we want them to know of the necessity of ordering NOW so that none will be disappointed in not being able to get the twine they need.

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WORLD EVENTS IN PICTURES



An interesting photograph of President-elect Harding golfing in Florida. Anticipating a strenuous four years ahead the President-elect is endeavoring to put himself in physical trim for the drill.



This 19-year-old girl is working out interesting "silk-paintings" after the fashion of the old guild tapestry weavers.



William Jennings Bryan entertains President-elect Harding.



Geologist declares Eden was in Ohio.



Erna Kemol, renowned exhibition skater, performing a stunt which many might try but few can accomplish.



Mrs. Sheridan's thrilling story of how she entered Russia and sculptured Lenin and Trotzky has interested the world.



These girls have found ice-boating a most interesting sport and have already become enthusiasts.

THE VOICE OF THE PACK

By EDISON MARSHALL

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"Yes?" Cranston had hard work from the gallows. I did aim at him—" curbing his impatience. Again Gibbs' "But you just lacked the guts to pull eyes were full of ominous specula- the trigger."

"He stopped at the body, and it was besides—the snows are here now, and plain he'd been there before. He went he won't be able to even get word crawling through the thickets, lookin' down to the valleys in six months. If for clues. He done what you and me you want him killed so bad, do it your- never thought to do—lookin' all the self."

This was a thought indeed. On the other hand, another murder might not be necessary. Months would pass before the road would be opened, and in the meantime Cranston could have a thousand chances to steal back the accusing letters. Perhaps they would be guarded closely at first, but by the late winter months they would be an old story, and a single raid on the house might turn the trick. He didn't believe for an instant that the man Gibbs had seen a detective. He had kept too close watch over the roads for that.

But I went back the next morning, as soon as I could see. And the mountain lion had already been there. I went back lots of times since. And that, shell ain't nothing—but all the time I supposed I put it in my pocket. You know how it is—a fellow throws his empty shell out by habit."

Gibbs' eyes grew more intent. What was this thing? Cranston's tone, instead of commanding, was almost pleading. But the leader caught himself at once.

"I don't see why I need to explain any of that to you. What I want to know is this: why you didn't shoot and get those papers away from him?"

For an instant their eyes battled. But Gibbs had never the strength of his leader. If he had, it would have been asserted long since. He sucked in his breath, and his gaze fell away. It rested on Cranston's rifle, that in some manner had been pulled up across his knees. And at once he was cowed. He was never so fast with a gun as Cranston.

"Blood on my hands, eh—same as on yours?" he mumbled, looking down. "What do you think I want, a rope around my neck? These hills are big, but the arm of the law has reached up before, and it might again. You might as well know first as last I'm not goin' to do any killin's to cover up your murders."

"That comes of not going myself. You fool—if he gets that evidence down to the courts, you're broken the same as me."

"But I wouldn't get more'n a year or so, at most—and that's a heap different

and would probably pigeonhole them until spring in Lennox's desk.

And the truth was that Cranston had reasoned out the situation almost perfectly. When Dan awakened in the morning, and the snow lay already a foot deep over the wilderness world, he knew that he would have no chance to act upon the Cranston case until the snows melted in the spring. So he pushed all thought of it out of his mind and turned his attention to more pleasant subjects. It was true that he read the documents over twice as he lay in bed. Then he tied them into a neat packet and put them away where they would be quickly available. Then he thrust his head out of the window and let the great snowflakes sift down upon his face. It was winter at last, the season that he loved.

He didn't stir from the house, that first day of the storm. Snowbird and he found plenty of pleasant things to do and talk about before the roaring fire that he built in the grate. He was glad of the great pile of wood that lay outside the door. It meant life itself, in this season. Then Snowbird led him to the windows, and they watched the white drifts pile up over the low underbrush.

When finally the snowstorm ceased, five days later, the whole face of the wilderness was changed. The buckbrush was mostly covered, the fences were out of sight; the forest seemed a clear, clean sweep of white, broken only by an occasional tall thicket and by the great, snow-covered trees.

"Yes?"

"Wears a tan hat?"

"That's the man."

"I know him—and I wish you'd punctured him. Why, you could've taken those papers away from him and slapped his face, and he wouldn't have put up his arms. And now he'll hide 'em somewhere—afraid to carry 'em for fear he meets me. That's Failing—the tenderfoot that's been staying at Lennox's. He's a lunger."

"But he didn't look like no lunger to me."

"But no matter about that—its just as I thought. And I'll get 'em back—mark my little words."

In the meantime the best thing to do was to move at once to his winter trapping grounds—a certain neglected region on the lower levels of the North Fork. If at any time within the next few weeks, Dan should attempt to carry word down to the settlements, he would be certain to pass within view of this camp. But he knew that the chance of Dan starting upon any such journey before the snow had melted was not one in a thousand. To be caught in the Divide in the winter means to be snowed in as completely as the Innuits of upper Greenland. No word could pass except by a man on snowshoes. Really there was no urgency about this matter of the evidence.

Yet if the chance did come, if the house should be left unguarded, it might pay Cranston to make an immediate search. Dan would have no reason for supposing that Cranston suspected his possession of the letters; he would not be particularly watchful,

ed the full significance of her name until he saw her flying with incredible grace over the snow—laughed at him at first and ran him races that would usually end in his falling headfirst into a ten-foot snowbank. She taught him how to ski and more than once she would stop in the middle of an earnest bit of pedagogy to find that he wasn't listening at all. He would seem to be fairly devouring her with his eyes, delighting in the play of soft pinks and reds in her cheeks, and drinking, as a man drinks wine, the amazing change of light and shadow in her eyes.

She seemed to blossom under his gaze. Not one of those short winter days went by without the discovery of some new trait or little vanity to astonish or delight him—sometimes an unlooked-for tenderness toward the weak, often a sweet, untainted philosophy of life, or perhaps just a lowering of her eyelids in which her eyes would show lustrous through the lashes, or some sweeping, exuberant gesture startlingly graceful.

Lennox awakened one morning with the realization that this was one of the hardest winters of his experience. More snow had fallen in the night and had banked halfway up his windows. The last of the shrubbery—except for the ends of a few tall bushes that would not hold the snow—was covered, and the roofs of some of the lower outbuildings had somewhat the impression of drowning things, striving desperately to keep their heads above water. He began to be very glad of the abundant stores of provisions that overcrowded his pantry—savory hams and bacon, dried venison, sacks of potatoes and evaporated vegetables, and, of course, canned goods past counting. With the high fire roaring in the grate, the season held no ills for them. But sometimes, when the bitter cold came down at twilight, and the moon looked like a thing of ice itself over the snow, he began to wonder how the wild creatures who wintered on the Divide were faring. Of course most of them were gone. Woof, long since, had grunted and mumbled his way into a winter lair. But the wolves remained, strange gray shadows on the snow, and possibly a few of the hardier smaller creatures.

More than once in those long winter nights their talk was chopped off short by the song of the pack on some distant ridge. Sometime, when the world is old, possibly a man will be born that can continue to talk and keep his mind on his words while the wolf pack sings.

(Continued on page 237).

When the clouds blew away, and the air grew clear, the temperature began to fall. Dan had no way of knowing how low it went. Thermometers were not considered essential at the Lennox home. But when his eyelids congealed with the frost, and his mittens froze to the logs of firewood that he carried through the door, and the pine trees exploded and cracked in the darkness, he was correct in his belief that it was very, very cold.

But he loved the cold, and the silence and austerity that went with it. The wilderness claimed him as never before. The rugged breed that were his ancestors had struggled through such seasons as this and passed a love of them down through the years to him.

When the ice made a crust over the snow, he learned to walk on snowshoes. At first there were pained ankles and endless floundering in the drifts. But between the fall of fresh snow and the thaws that softened the crust, he slowly mastered the art. Snowbird—and Dan never fully realiz-

AL ACRES—Al Found It Difficult to Keep His Feet Warm and His Head Cool

—By Frank R. Leet

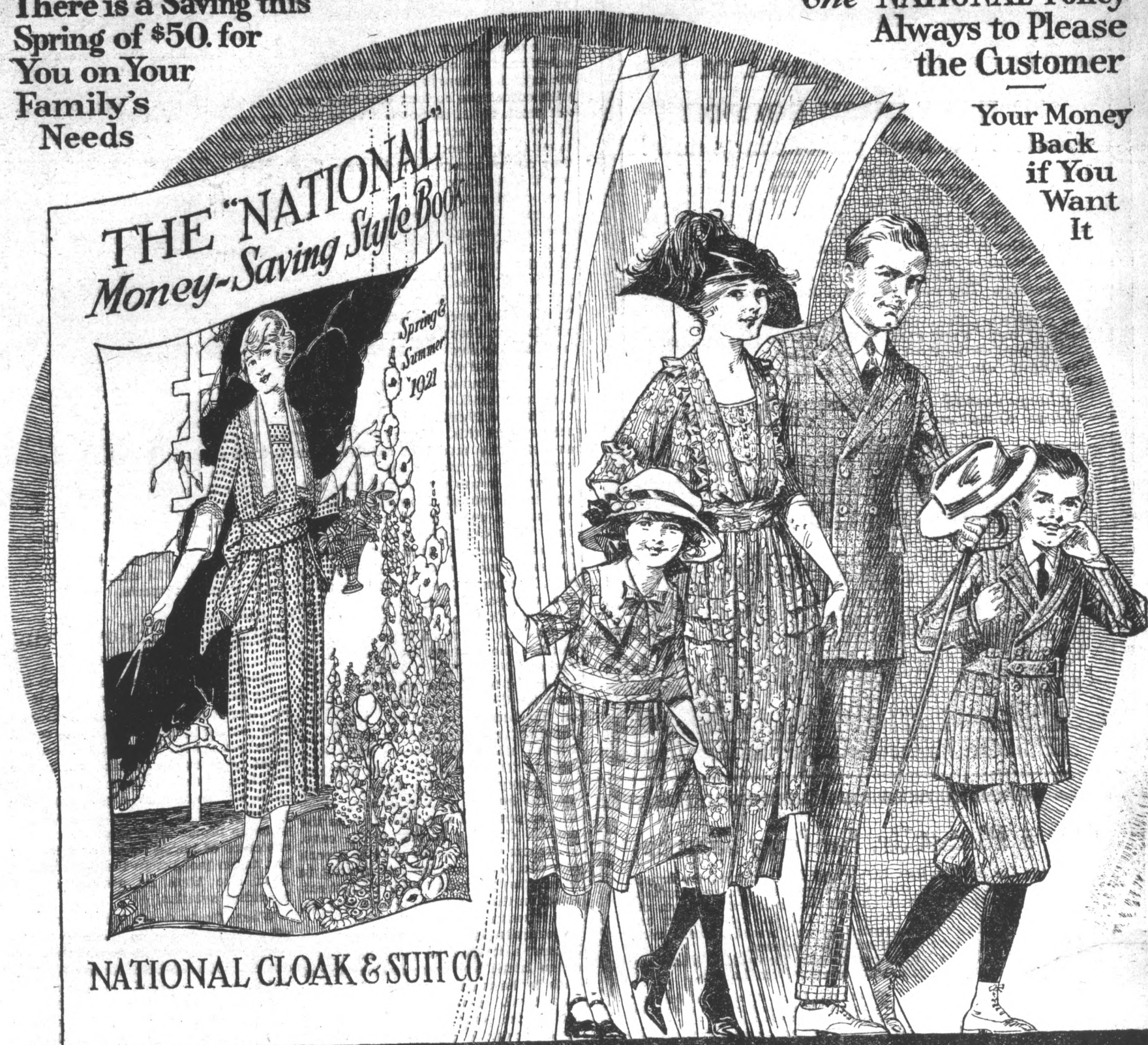


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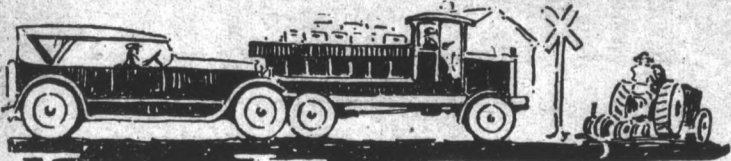
All-Silk Taffeta Dresses.....	from \$11.66 to \$25.98
Last Spring's Prices were.....	from \$21.98 to \$54.50
All-Silk Georgette Waists.....	from \$2.96 to \$9.98
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Waists of the Stylish Cotton Fabrics.....	from 98¢ to \$2.98
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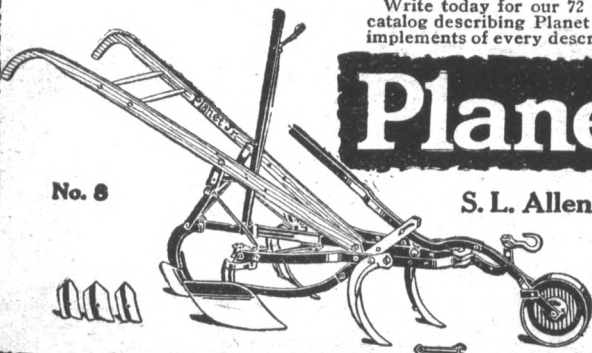
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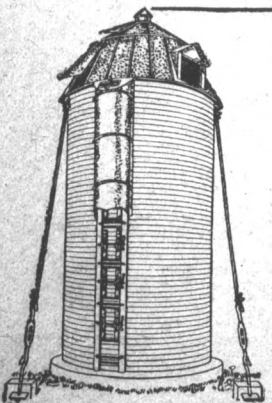
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Blind Men

Our Weekly Sermon—By N. A. McCune

IN the seventh chapter of St. Mark's gospel, Christ makes a serious charge against a certain class of men. He says there they have forsaken the commandment of God and have substituted the commandment of men. He says that these men have tampered with conscience so long that they cannot think right, cannot see right, and hence cannot act right. Their inner monitor has become so twisted that they do not recognize right when they see it. First, they would not see. Then, they could not.

A gnat is a tiny insect, about the size of a mosquito. It does not look very much like a camel. But Christ says that the Pharisee's sense of right and wrong is so warped that he cannot tell a gnat from a camel. The Pharisee has moral astigmatism. Going still further, Jesus uses a modern illustration. He says the Pharisee's soul is like a metal dish, highly polished on the outside, but on the inside it is septic, foul, putrid. And the tragic side of it is, the Pharisee is utterly unconscious of all this. He regards himself as quite the model of what a man ought to be, in morals and religion.

Now, how can a man get into such a perverted state? How can he develop such a combination of contradictions? How can he become such a blue ribbon hypocrite? It is not hard. It comes on unconsciously. You can see it in Germany. Germany did not think she was particularly bad, when she said that God had called upon her to impose her kultur on Europe and the world. She excused her practices by saying, "War is War." Intelligent people can be found who will argue by the hour for the saloons, and will enlarge on the benefits of liquor. While the populace of Petrograd is dying this winter, and people are falling over dead in the streets from cold and hunger, Trotsky and Lenine state that they are the heralds of a new age, which will surpass all previous ages, as the modern dwelling surpasses the cave. Preachers in the south used to preach sermons two hours long on slavery, in which they proved to their perfect satisfaction that the Bible upheld slavery, and it was a divine institution.

Tennyson represents in the "Lotus-Eaters" a company of men and women on an island who were anxious to get back to the mainland, where their families lived. Before embarking, they ate of the lotus-tree, which has the fabled power to put its victims into a dreamy half-sleep, and takes away all energy. From that time, the lotus-eaters make no efforts to leave the tropic isle, where they are marooned. They are content with a half life.

NOW if all this is true, about the soul getting into a state where it is asleep or blind, until it gets insects mixed with camels, what about the conscience? Is not that a guide? How many times I have had men say, "Well, I do what my conscience tells me and that is religion enough for me." To obey conscience is a great thing, and happy the man who really does so. But what are you going to do when conscience is warped? What if your guide is blind? The German leaders we spoke of were perfectly sincere. Many saloonists were sincere. The African chief who kills all the wives of a leading man when he dies, so that they may accompany their husband into the other world, is also sincere. No, conscience alone is not sufficient. Conscience requires education, or it is an unsafe guide. It needs the correcting power of daily prayer, to keep it attuned to God, who is the only standard. Every day at Washington a man sends out the correct time, so that

clocks everywhere in the Union, and aboard ships hundreds of miles at sea, may be corrected to the second. The best and most elaborate timepieces require correction. In a certain public building in London, there is a yardstick of metal, embedded in the floor. It is exactly a yard long, to the one-thousandth part of an inch. It is the standard yard of the British Empire. And the soul requires a standard. When we measure ourselves by ourselves, it is easy to get far away from the yardstick, and ere we know it, we will be counting thirty-four inches as thirty-six. When we set our spiritual clocks by other people's clocks, instead of God's clock, it is not surprising we get sadly mixed, in our soul-time. It is easy to become blind.

Young people are often blind. A young man will grow up in a rural community, goes to college, and makes for the city. He does not ask himself whether the community that gave him birth may not need him, and whether, in fact, he may not do as well there, as in the city. A young man of the writer's acquaintance went back to the ancestral farm. Today he has a large family, and is a much consulted member of the community where he lives.

After all, it is selfishness that blinds. We are liberated as we are enabled to forget self and despatch duty without asking how it will affect our pocket-books or our prospects.

Sunshine Hollow Items

By Rube Rubicon

Myra Kinsting says she guesses the Lord would have given us wings if he had meant us to fly. Patrick McDoogle told her he guessed the Lord would have put rubber tires on his feet instead of corns if he had meant him to ride in an auto. Pat likes aviation ever since a friend, who is a newspaper reporter got him a ride on a comp. They were up fifteen minutes and Pat's got a picture of himself wearing a leather hat, taken just before they started. He don't like Myra on account of her knocking aviation.

When Uncle Oziah Filkins stopped off at the junction on the way to the fair he went in the restaurant and ordered a piece of blackberry pie. The waiter said "shoo" and the pie was custard. Oziah says he don't like the restaurant business. He sold some broilers to one of them, three-pounders at thirty-two cents a pound. Then he went down there for lunch and got soaked seventy-five cents for a hip and a piece of neck. Oziah says he wonders how much the whole carcass brought, but supposes somebody's got to pay for the pretty store front, homely cashier, wobbly stools and fly paper in the window. He says its fierce to have to be an ultimate consumer of anything.

Michael Palmer sold his Durham cow, named Betsey, to the stock buyer. When Betsey was taken off down the road, peeking through the bars of the stock wagon, Mike came in the house and cried for the first time in ten years. He and Betsey had been good friends for twelve years, ever since she was a young heifer. Some folks have thought Mike a tough old codger to deal with, but he has a good heart and thinks heaps of all his live stock and takes good care of them.

Stephen McCann says that it is the little things of life that count big and really should get a lot of attention. Stephen saved his vacation money for two years in order to go to Niagara Falls. But he didn't have a good time ard. Every day at Washington a man on the trip because his underwear sends out the correct time, so that

The Voice of the Pack

(Continued from page 234).

But he is certainly an unknown quantity today. The cry sets in vibration curious memory chords, and for a moment the listener sees in his mind's eye his ancient home in an ancient world—Darkness and Fear and Eyes shining about the cave. It carries him back, and he knows the wilderness as it really is; and to have such knowledge dries up all inclination to talk, as a sponge dries water. Of course, the picture isn't entirely plain. It is more a thing guessed at, a photograph in some dark part of an under-consciousness that has constantly grown more dim as the centuries have passed. Possibly sometime it will fade out altogether; and then a man may continue to discuss the weather while the Song from the ridge shudders in at the windows. But the world will be quite cold by then, and no longer particularly interesting. And possibly even the wolves themselves will then be tamed to play dead and speak pieces—which means the wilderness itself will be tamed. For as long as the wild lasts, the pack will run through it in the winter. They were here in the beginning, and in spite of constant war and constant hatred on the part of men, they will be here in the end. The reason is just that they are the symbol of the wilderness itself, and the idea of it continuing to exist without them is stranger than that of a nation without a flag.

It wasn't quite the same song that Dan had listened to in the first days of fall. It had been triumphant then, and proud with the wilderness pride. Of course it had been sad then, too, but it was more sad now. And it was stranger, too, and crept farther into the souls of its listeners. It was the song of strength that couldn't avail against the snow, possibly of cold and the despair and courage of starvation. These three that heard it were inured to the wilderness; but a moment was always needed after its last note had died to regain their gaiety.

"They're getting lean and they're getting savage," Lennox said one night, stretched on his divan before the fireplace. He was still unable to walk; but the fractures were knitting slowly and the doctor had promised that the summer would find him well. "If we had a dog, I wouldn't offer much for his life. One of these days we'll find 'em in a big circle around the house—and then we'll have to open up with the rifles."

But this picture appalled neither of his two young listeners. No wolf pack can stand against three marksmen, armed with rifles and behind oaken walls.

Christmas came and passed, and January brought clear days and an ineffective sun shining on the snow. These were the best days of all. Every afternoon Dan and Snowbird would go out on their skis or on snowshoes, unarmed except for the pistol that Snowbird carried in the deep pocket of her mackinaw. "But why not?" Dan replied to Lennox's objection. "She could kill five wolves with five shots, or pretty near it, and you know well enough that that would hold 'em off till we got home. They'd stop to eat the five. I have had enough time keeping up with her as it is, without carrying a rifle." And Lennox was content. In the first place, the wolf pack has to be desperate indeed before it will even threaten human beings; and knowing the coward that the wolf is in the other three seasons, he couldn't bring himself to believe that this point was reached. In the second, Dan had told the truth when he said that five deaths, or even fewer, would repel the attack of any wolf pack he had ever seen. There was just one troubling thought. He had heard, long ago, and he had

forgotten who told him, that in the most severe winters the wolves gather in particularly large packs; and a quality in the song that they had heard at night seemed to bear it out. The chorus had been exceptionally loud and strong, and he had been unable to pick out individual voices.

The snow was perfect for skiing. Previously their sport had been many times interrupted either by the fall of fresh snow or a thaw that had softened the snow crust; but now every afternoon was too perfect to remain indoors. They shouted and romped in the silences, and they did not dream but that they had the wilderness all to themselves. The fact that one night Lennox's keen eyes had seen what looked like the glow of a camp fire in the distance didn't affect this belief of theirs at all. It was evidently just the phosphorus glowing in a rotten log from which the winds had blown the snow.

Once or twice they caught glimpses of wild life: once a grouse that had buried in the snow flushed from their path and blew the snow-dust from its wings; and once or twice they saw snowshoe rabbits bounding away on flat feet over the drifts. But just one day they caught sight of a wolf. They were on snowshoes on a particularly brilliant afternoon late in January.

He was a lone male, evidently a straggler from the pack, and he leaped from the top of a tall thicket that had remained above the snow. The man and the girl had entirely different reactions. Dan's first impression was amazement at the animal's condition. It seemed to be in the last stages of starvation: unbelievably gaunt, with rib bones showing plainly even through the furry hide. Ordinarily the heavily furred animals do not show signs of famine; but even an inexperienced eye could not make a mistake in this case. The eyes were red, and they carried Dan back to his first adventure in the Oregon forest—the day he had shot the mad coyote. Snowbird thought of the beast only as an enemy. The wolves killed her father's stock; they were brigands of the worst order; and she shared the hatred of them that is a common trait of all primitive peoples. Her hand whipped back, seized the pistol, and she fired twice at the fleeing figure.

The second shot was a hit: both of them saw the wolf go to its side, then spring up and race on. Shouting, both of them sped after him.

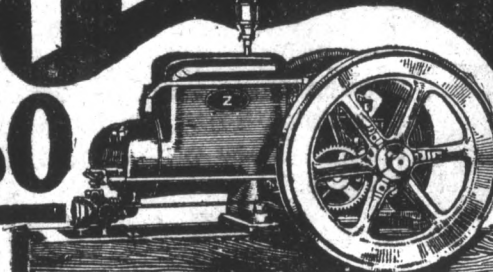
In a few moments he was out of sight among the distant trees, but they found the blood-trail and rushed over the ridge. They expected at any moment to find him lying dead; but the track led them on clear down the next canyon. And now they cared not at all whether they found him: it was simply a tramp in the out-of-doors; and both of them were young with red blood in their veins.

But all a once Dan stopped in his tracks. The girl sped on for six paces before she missed the sound of his snowshoes; then she turned to find him standing, wholly motionless, with eyes fixed upon her.

It startled her, and she didn't know why. A companion abruptly freezing in his path, his muscles inert, and his eyes filling with speculations is always startling. When this occurs, it means simply that a thought so compelling and engrossing that even the half-unconscious physical functions, such as walking, cannot continue, has come into his mind. And it is part of the old creed of self-preservation to dislike greatly to be left out on any such thought as this. If danger is present, the sooner it is identified the better.

"What is it?" she demanded.

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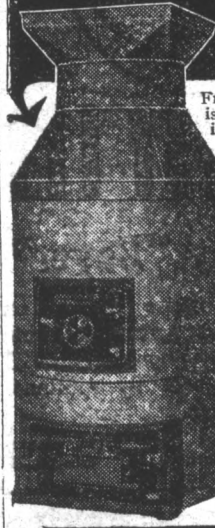
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He turned to her, curiously intent. "How many shells have you in that pistol?"

She took one breath and answered him. "It holds five, and I shot twice. I haven't any others."

"And I don't suppose it ever occurred to you to carry extra ones in your pocket?"

"Father is always telling me to—and several times I have. But I'd shoot them away at target practice and forget to take any more. There was never any danger—except that night with a cougar. I did intend to—but what does it matter now?"

"We're a couple of wise ones, going after that wolf with only three shots to our name. Of course by himself he's harmless—but he's likely enough to lead us straight toward the pack. And Snowbird—I didn't like his looks. He's too gaunt, and he's too hungry—and I haven't a bit of doubt he waited in that brush for us to come, intending to attack us—and lost his nerve the last thing. That shows he's desperate. I don't like him, and I wouldn't like his pack. And a whole pack might not lose its nerve."

"Then you think we'd better turn back?"

"Yes, I do, and not come out any more without a whole pocket of shells. I'm going to carry my rifle, too, just as Lennox has always advised. He's only got a flesh-wound. You saw what you did with two cartridges—got in one flesh-wound. Three of 'em against a pack wouldn't be a great deal of aid. I don't mean to say you can't shoot, but a jumping, lively wolf is worse than a bird in the air. We've gone over three miles; and he'd lead us ten miles farther—even if he didn't go to the pack. Let's go back."

"If you say so. But I don't think there's the least bit of danger. We can always climb a tree."

"And have 'em make a beautiful circle under it. They've got more patience than we have—and we'd have to come down sometime. Your father can't come to our help, you know. It's the sign of the tenderfoot not to think there's any danger—and I'm not going to think that way any more."

They turned back and munched in silence a long time.

"I suppose you'll think I'm a coward," Dan asked her humbly.

"Only prudent, Dan," she answered, smiling. Whether she meant it, he did not know. "I'm just beginning to understand that you—living here only a few months—really know and understand all this better than I do." She stretched her arms wide to the wilderness. "I guess it's your instincts."

"And I do understand," he told her earnestly. "I sensed danger back there just as sure as I can see your face. That pack—and it's a big one—is close; and it's terribly hungry. And you know—you can't help but know—that the wolves are not to be trusted in famine times."

"I know it only too well," she said. Then she paused and asked him about a strange grayness, like snow blown by the wind, on the sky over the ridge.

CHAPTER XIII.

BERT CRANSTON waited in a clump of exposed thicket on the hillside until he saw two black dots, that he knew were Dan and Snowbird, leave the Lennox home. He lay very still as they circled up the ridge, noticing that except for the pistol that he knew Snowbird always carried, they were unarmed. There was no particular reason why he should be interested in that point. It was just the mountain way always to look for weapons; and it is rather difficult to trace the mental processes behind this impulse. Perhaps it can be laid to the fact that many mountain families are often at feud with one another, and anything in the way of violence may happen before the

morning.

The two passed out of his sight, and after a long time he heard the crack of Snowbird's pistol. He guessed that she had either shot at some wild creature, or else was merely at target practice—rather a common proceeding for the two when they were on the hills together. Thus it is to be seen that Cranston knew their habits fairly well. And since he had kept a close watch upon them for several days, this was to be expected.

He had no intention of being interrupted in this work he was about to do. He had planned it all very well. At first the intermittent snow-storms and the thaws between had delayed him. He needed a perfect snow crust for the long tramp over the ridge; and at last the bright days and the icy dawns had made it. The elder Lennox was still helpless. He had noticed that when Dan and Snowbird went out, they were usually gone from two to four hours; and that gave him plenty of time for his undertaking. The moment had come at last to make a thorough search of Lennox's house for those incriminating documents that Dan had found near the body of Landy Hildreth.

The only really dangerous part of his undertaking was his approach. If by any chance Lennox were looking out of the window, he might be found waiting with a rifle across his arms. It would be quite like the old mountaineer to have his gun beside him, and to shoot it quick and exceptionally straight, without asking questions, at any stealing figure in the snow. Yet Cranston felt fairly sure that Lennox was still too helpless to raise a gun to a shooting position.

He had observed that the mountaineer spent his time either on the fireplace divan or on his own bed. Neither of these places was available to the rear windows of the house. So, very wisely, he made his attack from the rear.

He came stealing across the snow—a musher of the first degree. Very silently and swiftly he slipped off his snowshoes at the door. The door itself was unlocked, just as he had supposed. In an instant more he was tiptoeing, a dark, silent figure, through the corridors of the house. He held his rifle ready in his hands.

He peered into Lennox's bedroom first. The room was unoccupied. Then the floor of the corridor creaked beneath his step; and he knew nothing further was to be gained by waiting. If Lennox suspected his presence, he might be waiting with aimed rifle as he opened the door of the living-room.

He glided faster. He halted once more—a moment at the living-room door to see if Lennox had been disturbed. He was lying still, however, so Cranston pushed through.

Lennox glanced up from his magazine to find that unmistakable thing, the barrel of a rifle, pointed at his breast. Cranston was one of those rare marksmen who shoots with both eyes open—and that meant that he kept his full visual powers to the last instant before the hammer fell.

"I can't raise my arms," Lennox said simply. "One of 'em won't work at all—besides, against the doctor's orders."

Cranston stole over toward him, looking closely for weapons. He pulled aside the woolen blanket that Lennox had drawn up over his body, and he pushed his hand into the cushions of the couch. A few deft pats, holding his rifle through the fork of his arm, finger coiled into the trigger guard, assured him that Lennox was not "heeled" at all. Then he laughed and went to work.

"I thought I told you once," Lennox began with perfect coldness, "that the doors of my house were no longer open to you."

(Continued next week.)

MICHIGAN'S ROUND-UP LEADS.

ANYONE who attended the farmers' round-up meetings at M. A. C. two weeks ago must have been impressed by the new spirit of unity and strength manifested by the agricultural interests of Michigan, a spirit which characterized every gathering and seemed to pervade the place.

Farmers' Week as now held in this state is typical of the development of agriculture along cooperative lines, in the opinion of college leaders and notable agricultural men who were speakers during the week.

Never before in so many cases did John leave the chores to be done by his neighbor and trek with Mary to East Lansing. There were between five thousand and eight thousand persons in attendance, according to final estimates. Registration figures were close to five thousand, and thousands of others failed to register.

Unusually keen interest was manifested in the general speakers, such as Charles Brand, marketing specialist; Dean Eugene Davenport, of the University of Illinois; A. F. Lever, expert in agricultural finance, and others. The exhibits, more plentiful and attractive than ever before, combined with the entertainment features to chase away monotony in the short intervals between meetings.

Farmers' Week in its present status is not very old. It is only since the Smith-Lever act in 1914 that the big gathering has been possible. Before that date local farmers' institutes were held in the various counties and once a year an institute round-up was held, either at M. A. C. or at some other point in the state.

The fact that it is now the farmer's own week is pointed out by Robert J. Baldwin, extension director, at M. A. C., as the chief development since 1914. "In the old days the round-up was simply an educational conference," said Mr. Baldwin, "at which members of the college faculty set forth their ideas. Now some fifteen agricultural associations hold their annual meetings in connection with farmers' week. These control their own programs and the college merely coordinates the whole, procures speakers of prominence from outside, and plans the exhibits and entertainment."

Farmers' Week as now held has an important effect in causing the whole college, engineering and home economics divisions, as well as agricultural, to focus its attention upon the practical problems of the farmer, in the opinion of Ashley M. Berridge, chairman of the Farmers' Week committee. This in turn reacts upon Michigan agriculture in many indirect ways through the experiment station and extension department.

One reason for the success of the round-up in covering the vital farm issues of the day is the fact that the committee decides upon the keynote long in advance and proceeds to build all plans around it. This year the keynote was cooperative marketing. For next year it is, of course, still uncertain, but it is expected to be farm credit and finance. Already plans are under way for next year's gathering.

Mr. Berridge was at Cornell this week attending the New York state round-up for purposes of comparison and to gain any new ideas that may be useful. Several of the speakers from other states who addressed Michigan farmers expressed themselves as favorably impressed and declared that Michigan's round-up is now second to none in the country, not even excepting those of New York, Ohio and Wisconsin, formerly held to be the best.

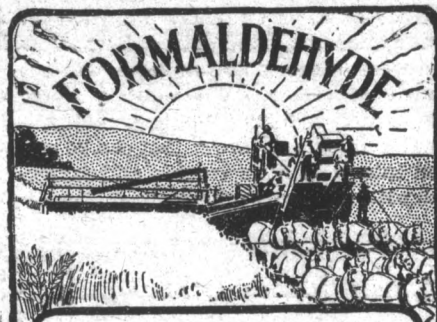
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Woman's Interests



The 1921 Women's Congress

PROBABLY no woman's congress has been packed so full of worthwhile things as the 1921 congress, just closed. There were the two new women leaders at the college to be heard, Dean Mary Sweeney, the new head of home economics, and Mrs. Louise Campbell, leader in Home Demonstration work in the extension department, both big women in their chosen field. There were daily conferences in all lines of farm and home work, movies, plays, and teas, and last—that is, it came to a head on the last day—the burning question of a successor to Mrs. Cora Ketcham, on the board of the farm bureau. The election of Mrs. Edith Wagar to that position settled the question to the complete and lasting satisfaction of every woman who knows Mrs. Wagar.

To those who do not know her, let it be said that Mrs. Wagar is a "sure-nuff" farm woman, living today on the farm to which she went with her husband when they were first married. She knows the needs of the farm woman—and incidentally, the farm man—and her middle name is Common Sense. Mrs. Wagar's talk on "Why I Want a Home Demonstration Agent in my County," was one of the features of the congress.

"My husband and I started as partners on a small farm, with poor buildings and equipment, and there we determined to build our home for life. We agreed that we would not stay on the farm just long enough to grub what we could out of the soil and then 'retire' to a nearby village, but we would live as we went along; we would build a home for the ages, and spend our life always with the things for which we had worked and which had become a part of our life. Only the farmers who do this know the joy of living. That is one of the reasons I want a home agent. We must have a leader who can change the thought of the woman who thinks her lot is the hardest on earth. She must be taught how to lighten labor, how to make farm home life more worth while. We must improve conditions on the farm so that women will be content to stay in the country. We need a few extra women there to call upon for additional help. How many women in Michigan dare not have a baby because they know of no one who would come in and do the extra work while they are helpless? We need someone to teach us food values, to teach us the necessity of consuming more milk. Monroe is a dairy county, and it is distressing to consider how much oleo is used in our farm homes, to think of the pitiful lack of milk on the family table."

The opening day was given over to clothing. Miss Ada Blanchard, of Boston, director of Clothing Facts Bureau, gave an interesting talk on the findings of her bureau; Miss Winifred S. Gettemy, head of the household art department, spoke on "Standardizing of Textiles." Miss Cecil Van Steenburg, assistant professor of household arts, gave a talk on "Shoes," which will be published in these columns in the near future.

Dean Mary Sweeney, who was introduced to the congress by Mrs. Ketcham, is very small, but she has some

mighty big ideas for Michigan girls and women, which those who heard her feel quite sure she will carry through.

"I thought it was a wonderful thing to vote," she said, "and when I first went out to earn a living I thought that was wonderful, too. But the most wonderful thing which has happened was when home-making became a profession. The home is the most vital factor in civilization, for men are molded not by schools and religion, but by homes and women. Here at Michigan Agricultural College we are going to

go. We want them to have everything to make work easier which they can afford to buy. We want to help them in gardening, poultry and dairy work, for to make any headway in nutritional work we must have the foods to feed. We want a standardized dress for high school girls. You know we used to wear underwear and shirtwaists. Now we wear 'blouses' and lingerie, without much of either. We want a Peter Thompson suit for girls, or a middy, a neat comfortable dress that can be gotten into with little trouble and fastened with one or two hooks."

terested in sewing. They are working on remodeling garments, learning the use of sewing machine attachments and commercial patterns, and how to make dress forms. As a part of the work in food, Miss Pratt is conducting diet squads at the Soo where the children are learning to drink milk and like it.

Miss Stimson, in Dickinson county, also has a large foreign element. She has visited every community and practically every school and found in many that the children were drinking no milk at all. She has started milk crusades in the rural districts, and this winter while snow in the upper peninsula makes it almost impossible to get into the country, she is conducting sewing clubs in the cities.

Miss Richardson, of Gogebic county, found that in spite of the extreme winters, very few schools were serving hot lunches. She is starting this work, has a squad of fifty children drinking a quart of milk a day, and as a side line is helping various groups of women make their new spring hats.

Miss Clark, of Kalamazoo county, is carrying on all phases of the work. Nutrition work has been requested by so many that she has started a series of classes with a course of fifteen lessons. Investigation has revealed that the average amount of milk consumed in her county amounts to only one and two-fifths cups per day.

Miss Pennell, of Manistee county, is just commencing her work. She plans to concentrate on starting babies right.

Miss Carrett, of Oakland county, is also new in her county. She is working on nutrition, especially with school children, and has helped make a number of fireless cookers and dress forms.

Miss Rogers, of Wayne county, finds her big field in nutrition, especially in milk campaigns. She is working, too, for more home conveniences, and for a larger social life. The women in her nutrition class invited their husbands to one meeting, and have been politely requested by the men to let them come right along.

The need of a new home economics building was urged by Mrs. Dora Stockman, woman member of the board of agriculture.

"Michigan Agricultural College had the first home economics course in the United States," she said, "but we must go forward into larger fields. And to progress we must have room for laboratories for research work. We want to learn what to feed the babies, and know our formulas are right. We want to know why so many mothers cannot feed their own babies. We want a place out here where we can bring babies and let our girls actually take care of them. When the home is put back in its rightful place, when home-making is again considered the most important occupation for women, then many of our moral and industrial problems will cease."

Miss Alma Binzell, of the University of Minnesota, was the feature of the Friday morning session, and her talk on "Making Children More Worth while," was full of suggestions to the thinking parent.

"You must determine in the beginning that there are certain principles to be obeyed, and follow out those

Activities Among Michigan Farm Women

MRS. EDITH WAGAR, of Monroe county, was elected member of the Farm Bureau's state board of directors, to succeed Mrs. Cora Ketcham.

One home demonstration agent, Miss Clark, of Kalamazoo county, culled seven thousand hens from flocks and saved the owners \$5,000 a year.

Ten counties sent a woman to represent their county at Farmers' Week.

Michigan is the fourth state in the Union in home demonstration work.

Rural nutritional clinics are being established by the home extension department of the college.

Five hundred and fifty-eight of the six hundred and thirty-six young women graduates of the Michigan Agricultural College have married.

train the girls to be home-makers and mothers. It is twelve times as dangerous to be a baby under one year old as it is to be a soldier. We are going to change that, for it is largely ignorance that kills three hundred thousand babies a year."

Mrs. Campbell, home demonstration leader, explained how money to finance extension work is secured and urged the women to go home and work for an agent in their county. There are now twelve agents in Michigan, and it is hoped to increase that number to twenty-five this year.

"There are so many things the extension department are working on," she said. "We want to start a 'paring knife' campaign. We want every woman to have an egg-beater that won't stutter, you know the kind you turn twice ahead and once back to make it

Mrs. Campbell called on the home agents for two-minute reports of their work. Miss Aurelia Potts, assistant leader, reported for Miss McIlhenny, of Houghton county, who was unable to be present. The work in that county is largely among foreign women, who must be visited personally. Miss McIlhenny gained their confidence two years ago during the flu epidemic when she took charge of the situation and turned the town hall into a hospital and herself into a hospital corps.

Miss Woodworth, of Allegan county, devised a caucus and convention system to find the things the women wanted most to take up. The decision was nutrition, clothing, including the making of dress forms, and poultry.

Miss Pratt, of Chippewa county, found the order reversed in her county, where the women seemed most in-



The Home Demonstration Agent Responds to All Calls for Help from the Farm Women in Her County. These Women Asked for Instruction in Making a Fireless Cooker.

leadings. Do not take the attitude with the child, 'You must do this because I say so.' Explain to him, rather, the fundamental law back of your request, and invariably he will obey willingly. The law of health demands that he eat certain foods. Explain this to him, and he won't refuse them. No parent has the right to allow his child to become the victim of physical whims. Love for parents is not a sufficient reason for securing obedience. Suppose the parents should both die? The child must have an underlying principle."

Miss Binzell stressed the fact that the first five years are the formative years; that training should begin the moment of birth, and that a child could be permanently ruined by the fourth year through mismanagement. She gave figures to show that those churches which train children early have as low a proportion as one in 4,250 in penal institutions, while in those churches where religious education is deferred until later the rate runs as high as one in seven hundred and fifty.

Mrs. W. R. Alvord, of Detroit, state president of the State Federation of Women's Clubs, had some pertinent thoughts for the other half of the voters.

"I want to have the boys taught to be fathers," she said. "I want them taught food values. If they knew this most important thing mother wouldn't be told to give up to Johnny when he doesn't want to eat his lettuce or drink his milk. In our manual training classes I want our boys taught things that really count. I want them to learn how to hang screens and look after faucets and balky furnaces."

Interesting exhibits of shoes, stockings and clothing on the second floor of the women's building attracted crowds of both men and women all

through the week. Properly fitting shoes for every period, "From Infancy to a Cornless Old Age," showed what sort of footwear to select, and exhibits of poorly made and poorly fitted shoes conveyed a horrible warning. The advantages of seamless or seamed stockings were illustrated, and the profit of properly caring for one's hose showed up in the exhibit. Easily made children's aprons and play suits and women's house dresses had hundreds of admirers. At a table students illustrated easy tests for textiles, and many women learned how to decide whether they are buying what they pay for.

The food and library exhibits were in the agricultural building. The food exhibit stressed the fact that most families serve twice as much meat and eggs as necessary, and only about half as much fruit and vegetables. A proper diet was suggested.

Mrs. Linda E. Landon has planned a package library for farmers and out-in-the-state readers, and with the help of her efficient assistant, Miss Feldkamp, has the library ready. The idea is to clip from magazines and newspapers articles on subjects of wide interest, and arrange the clippings in convenient packages for mailing. The subjects chosen for clipping are various, but a few of interest to farm folks are Cooperative Marketing, Tractors, Farm Leases, Land Clearing, Cost of Sugar Beet Production, Milk Production, Poultry Production, Potato Production, etc. For the farmer's scrap book Mrs. Landon's exhibit suggested the use of manilla envelopes with the topic written on the outside. Into these envelopes the farmer puts his clippings, all related under the one head. If six months later a clipping has been proven worthless, it may be easily removed and burned.

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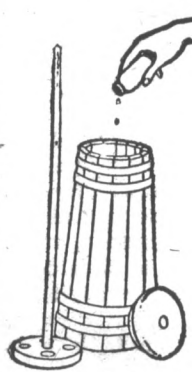
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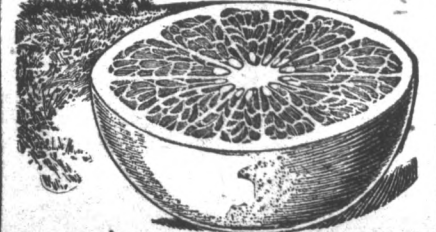
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Our Boys' and Girls' Department

Saved by an Air Hole—By J. M. Merrill

I AM going to the city tomorrow and I think your Uncle John ought to know it," said Mr. Davidson to his son Fred as the two were at the barn doing the chores.

The farmer raised his eyes to the skies, assuming a debating attitude. The sun was setting in a sort of red glory that was pleasing to the man, since there had been almost daily rains and sleet during the past week.

"Why do you wish Uncle John to know of your going to the city, father?"

"Because, you see, he has a lot of unsold furs on his hands, a full winter's catch, and the sooner he gets them to market the more money he will get out of them. Indications are that the fur market is in for a sharp decline. I wish John knew—"

"I'll go tell him if you want me to, Father," said the son, who evidently was not averse to a trip down the river to his uncle's home some half score of miles distant.

"You might go, Fred," mused the farmer, "but for the fact that old Doll has cast a shoe, and has gone lame. There's not another horse I would trust you to ride so far at night. You know we have tested her more than once."

"Truly," exclaimed Fred. "Old Doll's true blue every time; but there's another way to get to Uncle John's and back tonight. The sleighing must be about used up from the spring rains, but there's the river, you know."

"The river, son?"

The eyes of the speaker fell from contemplating the western sky to a contemplation of a long, smooth expanse of ice that sped away as far as the eye could reach toward the distant horizon.

"It's nearer to Uncle John's by the river, father, and my skates are freshly sharpened. I'd as soon go as not."

Mr. Davidson sat down on the milking stool and reflected.

"I ought to have thought of this sooner," he commended. "It is imperative for me to get to Great Rapids tomorrow before night. I have to meet Jake Campeau there with furs of my own. I guess we'll have to put it off one day longer."

"Do you think a single day will make much difference in the price of furs, father?" asked Fred.

"I am afraid so—"

"Then Uncle John's furs shall be here to go with you tomorrow morning!" declared Fred, springing from his own stool, swinging his pail nearly full of frothing warm milk about his head. I'll go and get ready at once."

Twenty minutes later boy and man came out of the house, the boy carrying a folded strap in his right hand, a pair of skates swinging from his left. They walked down to the river whose surface was still covered with its winter coating of ice.

"I don't know if it is really safe, Fred," said the father hesitatingly. "If your mother was home she might—"

"Suggest that I stay strictly on land," laughed the boy. "Mother is so very easily worried. I'm glad she's away, for now I can go to Uncle John's without giving her a single pang of worry. I'll be back by midnight with Uncle John's pack of furs strapped to my back, never fear."

Mr. Davidson sat on a log near shore while his son strapped on his skates.

Never was there a boy of Fred's years a better skater. The farmer had no fears for his son if the ice were only safe. It was now the latter part of February, and no thaws had come to

soften the white field over the river's bosom save within the last few days. It did not seem possible there was real danger. The moon was already risen giving promise of a cool, bright night.

Fred skated away, sending back a farewell shout as his parent straightened up to send a farewell wave of his hand to the boy gliding over the steely surface of the river.

"Good boy, good son," mused the farmer as he went back to the house. "He'll be home again by midnight. It's all right of course."

It would have been as the father believed had not circumstances over which neither father or son had any control. The ice was an even glare, the worst hummocks having been planed out level by the recent rains. The surface of the river was like glass, the weather having sufficiently cooled to freeze the surface water completely.

Half a mile down the stream and a dark object shot from the shore of the river and set out in pursuit of Fred Davidson. The farmer's son recognized his pursuer as one Abner Blot, a shingle weaver's son, who, though several years Fred's junior, yet still believed himself superior on a pair of skates.

"Where you going, Fred?" called small Abner as he sped down the glittering surface of the river as if shot from a bow.

"To Uncle John's," yelled Fred.

"Good, I'll go along!"

Soon the smaller boy skated up alongside of the other. Abner was curious and wanted to know why his friend was going so far so late in the day. After Fred had explained, small Abner suddenly swerved to the side of the former, grasping his arm, saying in a sharp voice:

"You can't make it, Fred. There's a big air-hole four miles down, at Fiddler's Elbow. You'll run into that and drown! Let's go back."

"Take your hand off me," called Fred. "Go home if you want to. Nobody asked you to go. I can manage that airhole. I knew it was there, but I'll land and walk around it—that's easy."

Abner did not return. Instead he wheeled slightly aside and continued

to skate parallel with Fred. Zim-zim-zim-zitt! the keen steel runners of the boys' skates cut and sang across the hard ice. A mile, two miles, almost three, and then—

What was that echoing down between the banks of the narrowing stream. The howl of dogs? Ah, no! Too well the older boy knew that sound, the howl of gray timber wolves!

It had been a hard winter, and the wolves had been bothersome to the settlers. Many a night had Fred been kept awake along about midwinter by the mournful howl of these beasts as they gathered for their prey, usually a deer separated from its mates, fleeing for its very life.

"Crackee!" exclaimed Abner. "What is that noise, Fred?"

"Can't you guess?"

"Taint wolves, Fred!"

There was a perceptible quaver in the small boy's voice.

"I expect it's that same," assured the older boy. "You can't go home now, Abner. You'll have to keep on with me. They're not chasing us. We can outrun 'em anyhow. Keep close to me, Abner."

The small lad needed no second bidding. The two boys, urged by the wolf howls into greater speed, were apparently outdistancing their enemies, when Fred's companion, in jumping over a small tree imbedded in the ice, fell prostrate with a cry of pain.

Fred circled about, coming back to his friend almost instantly.

He snatched Abner by the arm and drew him to his feet. A sharp cry from the lips of the small boy shocked the other.

"I—I can't go a step, Fred. I've sprained my ankle!" wailed Abner.

"Quick then!" uttered the larger boy, "climb on my back!"

Fred squatted down, and when the other clasped both hands about his neck he rose to his feet, feeling considerably burdened as you may imagine. At the same time the howls of the wolves grew more distinct, and up the moonlit glare of ice, dark forms were seen running like immense shadows in a mirror.

The smaller boy breathed hard as Fred struck out across the white expanse of ice with all the powers of his muscular young legs.

"Hang on tight!" breathed he, "but don't choke me that way."

Fred Davidson knew now that the

wolves were actually pursuing him, since they came directly down the river in his direction, uttering horrid yelps at every jump. It soon resolved itself into a skate for life.

The farmer's son never felt the need of keeping his strength more fully than at this moment. What if a skate strap snapped! Or if he should sprain an ankle as Abner had done, the two of them would be lost!

On with increased speed swept the boy skater with that black bunch of humanity, Abner Bolt, clinging like grim death to his perch, his lame foot dangling, whipping against his friend's jacket with a frosty clicking, at the same time paining him exquisitely.

"If I only had a gun," breathed little Abner.

Fred said nothing. He felt that he needed all his strength to guide his skated feet on their flight for life. Presently a long dark streak met the boy's strained vision in the distance. As he drew nearer Fred realized the truth—it was the airhole!

"Oh, Fred!" screamed Abner, in a muffled voice, "there's the airhole now!" Yes, there it was, wide and rippling near the center of the river, narrowing toward the shore, then widening again till the free water ran clear in the moonlight. And our boys were gliding directly to their doom. The thoughts of Fred worked rapidly. It seemed to him at first that the only hope of safety lay in a dash for the shore, where among the willows which bent low along the margin, he might be able to hide from the wolves.

Turning his head as far as possible Fred saw that the gray timber wolves were gaining upon him at every jump. He could not make the shore if he so desired. His only hope lay in keeping straight on, and that was not really a hope, as he was sure to plunge into the open river and go under the ice!

Abner hugged all the tighter, breathing hard, not seeming able to make any further suggestions.

Nor did Fred need any just then. His lips drew tightly across his strong white teeth. His every effort was at a terrible strain as he faced toward the narrowest point of open water, the hard breathing of panting pursuers reaching his ears from the rear. The wolves were so close Fred feared they would be upon him before the airhole was reached. Better death in the river than at the jaws of timber wolves!

At the near edge of the narrowest point of open water Fred made a desperate leap high in the air. It took all his strength to make the spring, burdened as he was with little Abner. The great speed at which he was going, carried him much farther than he had dared to expect. His skates touched the far edge of ice just beyond that awful opening, cut and cracked the feathery fringe of ice where the water plunged beneath it, and glided on to a broad expanse of solid ice. Even as this took place Abner gave a tilt at Fred's throat completely shutting off his breath.

Another instant and the two boys fell prostrate, sliding a few yards across the glittering surface of frozen water!

A groan from Fred. Abner rolled free some feet away. The larger boy crawled quickly to his knees, his ears saluted with a terrific howl, the splash



Mr. Gladden and the Keweenaw Bay Pig Club Boys. Mr. Gladden (Baraga County Banker), Financed \$300 to these Boys and also Gave them \$15 in Pig Club Prizes.

of water, crackling of ice, then the silence of death.

It proved death indeed to the half dozen timber wolves that pursued our two boys. The momentum of their swift race sent them sliding into the opening which Fred Davidson had so miraculously spanned in his desperate leap for life. Every wolf drowned but one, that one crawling out upon the ice, only to speed from the spot, genuinely frightened out of his wits by the unexpected catastrophe.

Fred crouched on the ice, clasping his hands together till they ached. At length he laughed softly, then began to cry. The reaction from the tremendous strain he had undergone completely deprived him of strength for the time being.

"Where are they, Fred?" finally gurgled little Abner as he began to crawl toward his friend.

"Drowned, I guess," returned the larger boy.

Half an hour later the two boys arrived at the home of Uncle John, completely fagged with the night's adventure, quite willing to rest and partake of some refreshment set out by the good uncle's wife.

John Davidson listened to the story told by the boys, and gave them both high praise for the way they had out-generated the ravenous timber wolves.

STATE CLUB WINNERS ARE ANNOUNCED.

OF great interest to all boys and girls throughout the state is the announcing annually of the state champions in the various club projects. Since the state club leaders are not able to do this until Farmers' Week each year the news of the awards reaches the club folks a little late. Everyone who attended the big event at M. A. C. this year were shown the importance of this junior project work.

Just last week Mr. Turner, State Club Leader, announced the state champions in the three leading crop clubs, namely, potato, corn and bean clubs. An award of a large loving cup will be presented to each state champion. Starting in 1916 the Michigan Bankers' Association presented the State Corn Club Champion with the large cup. This was won last year by Floyd Bergey, of Caledonia, Kent county. In order to keep the cup permanently some club member must win it three consecutive years. Otherwise it is retained only for one year.

Other cups were offered last year for the state champion in the bean and potato projects. The Michigan Bean Jobbers' Association presented the one trophy while the Michigan Potato Growers' Association gave the other. This year the cup offered for the best crop of beans went to Lester Weaver, of Chesaning, Saginaw county, and the one for corn to Forrest Beddell, of Flint, Genesee county.

There was great interest this year in the potato club project. The northern part of the state carried away high honors again and the silver cup was presented to Theodore Stenson, of Covington, Baraga county. Theodore was state potato club champion last year also, and now has but one more year to win before he can keep the cup permanently. In his story below he says: "I hate to lose it, I'm used to it now." We predict he will make a comeback if possible.

Theodore planted a quarter of an acre of Green Mountain potatoes and had a total of one hundred bushels, or at the rate of four hundred bushels per acre. His exhibit at the college last week showed remarkable skill in selecting tubers for an exhibit. A story of his work was included in his exhibit as the placings of all club members is determined on the four-point basis.

MY 1920 POTATO CROP.

THIS is my third year in club work. I have planted a quarter-acre of potatoes every year. My first crop was one hundred and ten bushels. My second crop was one hundred and five bushels. I do not know what my potato crop will be this year as I have not harvested it yet.

The first year I bought a heifer, pure-bred Holstein. I bought her at the Newberry State Farm. Her name is Princess Longfield Segis. I did not have enough money so I borrowed some from my dad. The second year I finished paying for her. The rest of the money helped pay for my expenses at the Menominee Agricultural School.

I was potato club champion at the county fair last year. Later I entered an exhibit at the three-county fair at Houghton, competing with the farmers. I received a prize there which my dad had taken for several years before. I believe the reason for this is that I selected my exhibit more carefully than he did.

Last winter I sent an exhibit down to the Potato Growers' Association and was made state champion. I received a silver loving cup which I must win two more years before I may keep it. "I hate to lose it, I'm used to it now."

Our potatoes are under the pure seed inspection by potato specialists. These plots have frequent visits by Mr. Benjamin, county agent, Mr. Weston, head of county agents of the upper peninsula, and Mr. Kotila, potato specialist.

Mr. Weston and I worked all day staking blacklegs. My princess takes great interest in my potato plot also. She feels that it is necessary to pay a fashionable call occasionally.

THEODORE STENSON.

TIMELY POULTRY NOTES.

Get rid of the egg-eaters and the feather-pullers if you have some in your flock, or they will soon teach the habit to others.

Crowded chickens won't pay any better than anything else that is overcrowded. It pays to have quarters that are perfectly commodious and comfortable.

The droppings are one of the important adjuncts of the poultry business on the farm, if carefully mixed with dry earth and kept as fertilizer. No manure is richer than hen droppings.

It never pays to expect two-hundred-egg pullets from one-hundred-egg hens. Remember that "like begets like."

Improve the quality of your flocks by purchasing some good fowls or eggs from a heavy-laying strain of pure-breds. It will be money well spent.

The farmer who says chickens don't pay is the one who neglects them or does not keep an account, and hence does not know how much revenue the fowls really do bring in.

Keep the drinking vessels of both the chicks and the old fowls scrupulously clean. Wash them out every evening and scald them out at least once a week. Replenish the water supply several times a day. Don't pour fresh water into the vessels, but throw out all the stale water and then put in the fresh water.

The way to break up a hen that wants to sit is to begin the first time she is found to be sitting. Put her in a cage with a slatted bottom, which is a few inches off the ground. Usually a day or two in such a cage cools off the sitting fever.—BRIANT SANDO.

White Wyandotte Eggs for Hatching. Pen No. 1, 20c each egg. Pen No. 2, 15c each egg. Pen No. 3, 10c each egg. Pen No. 4, 5c each egg. Pen No. 5, 1c each egg. Pen No. 6, 1c each egg. Pen No. 7, 1c each egg. Pen No. 8, 1c each egg. Pen No. 9, 1c each egg. Pen No. 10, 1c each egg. Pen No. 11, 1c each egg. Pen No. 12, 1c each egg. Pen No. 13, 1c each egg. Pen No. 14, 1c each egg. Pen No. 15, 1c each egg. Pen No. 16, 1c each egg. Pen No. 17, 1c each egg. Pen No. 18, 1c each egg. Pen No. 19, 1c each egg. Pen No. 20, 1c each egg. Pen No. 21, 1c each egg. Pen No. 22, 1c each egg. Pen No. 23, 1c each egg. Pen No. 24, 1c each egg. Pen No. 25, 1c each egg. Pen No. 26, 1c each egg. Pen No. 27, 1c each egg. Pen No. 28, 1c each egg. Pen No. 29, 1c each egg. Pen No. 30, 1c each egg. Pen No. 31, 1c each egg. Pen No. 32, 1c each egg. Pen No. 33, 1c each egg. Pen No. 34, 1c each egg. Pen No. 35, 1c each egg. Pen No. 36, 1c each egg. Pen No. 37, 1c each egg. Pen No. 38, 1c each egg. 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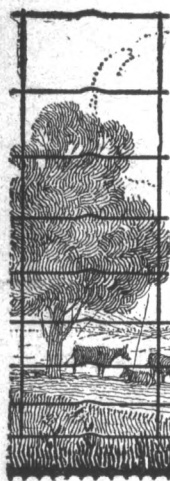
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Single Comb White Leghorns a Specialty

We are not running a hatchery but have the largest most up-to-date poultry plant in Michigan. All the eggs that go into our incubators are produced on our own farm from our high producing winter layers.

We cull our flocks 3 times, 1st in early fall, 2nd just before winter sets in and again before the breeding season.

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Macatawa White Leghorn Co., Inc.
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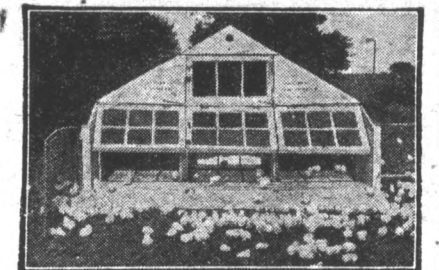
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That's what you'll get with a Champion Belle City Hatching Outfit. My Free Book "Hatching Facts" tells how—gives newest ideas and quickest ways to make poultry pay big with my **\$15.95 140-Egg Champion Belle City Incubator**

Double Walls Fibre Board—Hot-Water Copper Tank—Self-Regulated Safety Lamp—Thermometer & Holder—Egg Tester—Deep Nursery. \$9.95 buys 140-Chick Hot-Water Double-Walled Brooder \$23.95 **Express Prepaid East of Rockies**

I ship quick from Buffalo, Minneapolis, Kansas City or Racine. With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating you can make a big income. You can also easily share in my **\$1000 in Gold**

Without cost or obligation. Save time—Order Now—or write today for my Free Book, "Hatching Facts". It tells the whole story. **Jim Rohan, Pres. Belle City Incubator Co., Box 14 Racine, Wis.**



THE WORLD FAMOUS STAUFFER AUTOMATIC BROODING EQUIPMENT
America's Five Greatest Poultrymen pronounce it the Greatest and Most Wonderful Equipment ever invented. An outdoor portable brooder for winter or summer for chicks, turkeys, ducks, ostrich and all young fowl. Has an absolute temperature regulating instrument. Ten positions adapt it to every condition. No wicks, worry or sleepless nights. Pays for itself with one brood. No more labor. We can help you succeed. Write for descriptive circular. Agents wanted. **Stauffer Products Co., Div. M, Wakarusa, Ind.**



"BABIE" CHICK FEEDER
Made entirely of Galvanized Steel. Rust and vermin proof. Accommodates 30 to 40 chicks at one feeding. Protects against all chick enemies. Saves Chicks and Feed. Will pay for itself in feed saved on one brood. Special introductory offer. Circulars free. **The CYCLONE MFG. CO. Box L, URBANA, INDIANA**

DAY OLD CHICKS

and hatching eggs from select heavy producing stock. Delivery guaranteed. Wh. Leghorns, Bar. Rocks, W. Wyand., S. C. Reds, B. Orp. Cat. free. **GOSHEN POULTRY FARMS, R-19 Goshen, Ind.**

Championship Poultry Show

Exhibits Were Best Ever Shown at M. A. C.

By Prof. C. H. Burgess

ANOTHER show has come and gone at the college, and as the clouds rise and the atmosphere clears, we are ready to state that it was one of the best, as well as one of the biggest, ever held at the college. Every year shows a marked improvement in the breeding quality of the birds on exhibition. The show was staged in the new laboratory and was visited by more than six thousand of the leading farmers of the state. For the first time ducks, geese, and pigeons were shown along with other poultry.

Judges W. H. Card and D. E. Hale, placed the ribbons. Many of our exhibitors were fearful that the interpretation of the standard of the mid-west and the far-east judges would be widely different. This was one of the reasons why Judge Card, of Connecticut, and Judge Hale, of Chicago, were chosen as judges. So far as I have been told, both men agreed upon the interpretation of the standard. The Rhode Island Reds and the Barred Rocks that won at the grand championship show would be in the winning, whether they were shown in Chicago or Boston.

An educational feature was held on February 2-3. The lecture room was crowded to the limit at each lecture and demonstration. In fact, we had to change the original room for one that would handle a crowd four times the size and then there was only standing room to be offered in limited amount. Both judges participated in discussions and demonstrations. The chalk talk of Judge Card, on the evening of February 2, was not only instructive, but very entertaining as well. His pictures were finished in color. On the evening of February 3, the poultry department gave an informal reception and luncheon, where elbow touched elbow.

As stated above, the exhibit was of very high order. Two hundred and thirty-five birds constituted the entry. Fifty-six exhibits were made in number. Seventeen counties were represented. Bay, two exhibits; Berrien, four; Calhoun, three; Cass, three; Eaton, two; Ingham, ten; Ionia, three; Jackson, one; Lenawee, one; Macomb, one; Oakland, nine; Ottawa, two; Saginaw, three; Shiawassee, one; Tuscola, one; Washtenaw, five; Wayne, five. The most popular breeds in the way of number in exhibit were Rhode Island Reds and Barred Rocks. Some of the finest quality stock in both breeds were offered. The Orpingtons were especially high-classed, so also the White Plymouth Rock. The finish and condition of the White Rocks, the White Leghorns, along with their standard type, made them winners in the silver and the gold and diamond classes. Time and space will not permit the discussion of each exhibit, but let the writer say that every exhibit was high-class.

S. C. Ancona.—E. S. Tray, Jackson, first cockerel, first pullet; W. E. West & Son, East Lansing, first and second cock, first hen, first pullet.

R. C. Ancona.—W. E. West & Son, first cockerel, first pullet; B. H. McComb, Caro, first cock.

Buff Cochins.—Vern Eckhart, Vermontville, first young pen. Buttercups.—Charles M. Hewer, Plymouth, first cockerel, first pullet; Wm. Kamienski, Vermontville, second cockerel, second pullet.

Dark Cornish.—Wm. Whittaker, Detroit, first cock, first hen, first cockerel, first pullet.

Houdan.—Wm. Beadle, Marcellus, first cock, first hen, first cockerel, first pullet.

S. C. White Leghorns.—A. D. Isbell, Stockbridge, first cock, first hen, first and second cockerel, second pullet, first old pen; F. J. Kueffner, Saginaw, third cock, second hen; W. T. Shuttleworth, Ypsilanti, second cock, third hen, third cockerel, first pullet, first young pen.

Black Langshans.—Harvey Rial, Holland, first cock, second hen; Dr. Chas.

W. Simpson, Webberville, second cock, first hen, first cockerel, first pullet, first young pen.

White Langshan.—Dr. Charles W. Simpson, first cockerel, first hen.

S. C. Black Minorca.—Paradise Poultry Yards, Halfway, second cockerel, first old pen; J. J. Desmond, Ann Arbor, first cockerel, first hen, first pullet.

S. C. Black Orpington.—John Miller, Farmington, first cockerel, first pullet.

S. C. Buff Orpington.—Wm. Allan & Son, Detroit, first cock, second hen, second cockerel, second pullet; H. A. Jackson, Clawson, second cock, first hen, first cockerel, first pullet, first old pen.

White Crested Black Polish.—H. S. Lisle, Ann Arbor, first cockerel, first, second, third and fourth pullet.

S. C. R. I. Reds.—J. S. Moores, Stockbridge, second cockerel; Grove Carpenter Concord, first and third pullet, fourth cockerel, fourth young hen; J. Toynton, Pontiac, third cockerel; Joseph A. Menard, Detroit, third cock; S. J. Arnold, Lansing, first and second cock, second hen, first and fifth cockerel, second and fourth pullet, second young pen.

R. C. R. R. Reds.—A. N. Walker, Battle Creek, all awards.

Dark Barred Rocks.—H. E. Powell & Son, Ionia, fifth cock, third hen, fourth and fifth cockerel, first pullet, first old pen; Chas. H. Wright, Jones, second cock, first cockerel, second hen, third pullet, first young pen; Rosemary Farms, Williamston, fourth cock; Dean W. Thrasher, Drayton Plains, second cockerel; Joseph Toynton, first cock, first hen; Vern Jipson, Lansing, third cockerel, second pullet; Douglas V. Bow, Saginaw, third cock.

Light Barred Rock.—C. H. Wright, Jones, first cock, first cockerel; Vern M. Jipson, Lansing, second cockerel.

White Plymouth Rocks.—Fred J. Kueffner, Saginaw, third cock, third hen, second cockerel; A. E. Fuller, Northville, first cock, first hen, first cockerel, first pullet, first old pen, first young pen; Allan & Douglas, Pontiac, second cock, second hen, second pullet.

Partridge Rocks.—H. G. Lewis, Athens, all awards.

Silver Laced Wyandottes.—C. B. Browning, Courtland, all awards.

Golden Laced Wyandottes.—C. B. Browning, all awards.

White Wyandottes.—Henry Van Hoven, Zeeland, first cock, first cockerel, first hen, second pullet; Wm. H. Forster, Royal Oak, first pullet.

Light Brahma.—Allan & Douglas, Pontiac, first cock, first hen; Harold Frank, Bay City, first cockerel, first pullet.

Silver Campine.—A. Campbell, Clinton, all awards.

Buff Rocks.—Irvin Shepard, Chesaning, first hen, first pullet; W. T. Shuttleworth, Ypsilanti, first cock, first cockerel, second hen, second pullet.

Silver Spangled Hamburg.—Frank Fritsch, Galien, all awards.

R. C. Black Bantams.—Frank J. Fritsch, all awards.

Golden Sebright.—Frank J. Fritsch, all awards.

Buff Wyandotte.—B. Hazelton Smith, Niles, all awards.

Columbian Wyandotte.—Hayhow Bros., Royal Oak, all awards.

Buff Cochins.—John Carroll, Jr., Bay City, all awards.

R. C. Brown Leghorns.—F. Mitchell, East Lansing, all awards.

S. C. Brown Leghorns.—Douglas V. Bow, Saginaw, all awards.

Pekin Ducks.—W. T. Shuttleworth, Ypsilanti, all awards.

Toulouse Geese.—W. T. Shuttleworth, all awards.

Medals were awarded as follows: In order to win a bronze medal two in each class must compete.

Winners of Bronze Medals.

A. D. Isbell, S. C. White Leghorn, on cock and hen, and cockerel; W. T. Shuttleworth, S. C. White Leghorn, on pullet; Harvey Rial, Black Langshan, best cock; Dr. Charles W. Simpson, Black Langshan, best hen; J. J. Desmond, S. C. Black Minorca, best cockerel; Wm. Allan & Son, S. C. Buff Orpington, first cock; H. A. Jackson, S. C. Buff Orpington, best hen, best cockerel, best pullet; H. S. Lisle, White Crested Black Polish, best pullet; Grove Carpenter, S. C. R. I. Red, best hen, best pullet; S. J. Arnold, S. C. R. I. Red, best cock, best cockerel; H. E. Powell & Son, Dk. Barred Rock, best pullet; Charles H. Wright, Dk. Barred Rock, best cockerel; Joseph Toynton, Dk. Barred Rock, best cock, best hen;

You Take No Risk With An Ironclad Incubator

Both For
\$19.75
FREIGHT PAID
EAST OF
ROCKIES

When you buy an Ironclad Incubator and Brooder you take no risk. You get machines which have been on the market for years. Machines made of the very best material—by expert workmen—machines that give high percentage hatches and stand up for years. You simply can't go wrong by buying Ironclads. We give 30 days' trial. Money back if not satisfied, and we pay return freight charges.

150-Egg Incubator 150-Chick Brooder

Incubator made of genuine California Redwood, covered with heavy galvanized iron, triple walls, asbestos lining, deep chick nursery, hot water heat, copper tanks and boiler, self-regulating. Type of thermometer, glass in door, everything complete and built to last. Shipped set in all ready to use. Ten years guarantee. Call for order direct from this ad. You take no risk.

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FOR SALE Cauden Mammoth Incubator. Beef Scraps, \$5.00 per 100 lbs. TYRONE POULTRY FARM, Fenton, Mich.

POULTRY



Chicks

White Leg.	15c
Eng. Leg.	16c
Brown Leg.	16c
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Sent Prepaid by Parcel Post

Special price on 1,000 lots. Get your order in for some of these high grade chicks, hatched from selected bred-to-lay breeders, kept on free range.

WE GUARANTEE SAFE DELIVERY

WYNGARDEN'S HATCHERY

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Stop! Look! Listen! Chicks, Quality Chicks

S. C. W. Leghorns, \$15.00 per 100; S. C. B. Leghorns, \$17.00 per 100; English S. C. W. Leghorns \$17.00 per 100; S. C. Anconas \$17.00 per 100; S. C. Barred Rocks \$18.00.

Send Your Order to the

City Limits Hatchery and Poultry Yard,

R. 5, Holland, Mich.



OVIE'S BABY CHICKS

High Quality—Moderate Prices

You can pay more and get less in quality but you can't get a bigger value for the same money. That's why once a customer always a customer.

25,000 Husky Chix Weekly

from free range, carefully selected stock, hatched by experts in a real up-to-date hatchery. We specialize in 14 leading breeds. Safe delivery guaranteed by P.P. prepaid. Write for catalog.

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DAY-OLD CHICKS HOMESTEAD FARMS

It will pay you in selecting Chicks for the coming season to consider the quality of our

Pure Breed Practical Poultry

We will send you our new spring Catalog, which explains this breeding. Also the catalog tells how to brood your Chicks successfully; it describes our

High Class Egg Leghorns
And All Standard Breeds

Both Chicks and Hatching Eggs from all breeds guaranteed, and delivered post paid.

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Crescent Strain S. C. White Leghorns, Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Plymouth Rocks, (also White), Wyandottes, (Silver laced and White) and Mottled Anconas. WE HATCH eggs from flocks on range on separate farm. Send for booklet, containing much of value to poultry raisers. CRESCENT EGG COMPANY, Allegan, Mich.

Anconas Bred-to-Lay and Exhibit, baby chicks and hatching eggs. Send for mailing list. Manning's Ancona Farm, Coldwater, Mich.

Baby Chicks from fine stock, to produce eggs, at utility prices. Catalogue FREE. Lee's Poultry Farm & Hatchery, Edison, O.

A. E. Fuller, White Rock, best cock, best hen, best cockerel, best pullet; Wm. H. Forster, White Wyandotte, best pullet; Irvin Shepard, Buff Rocks, best hen, best pullet; Frank Mitchell, R. C. Brown Leghorn, best cockerel, best hen.

Winners of Silver Medals.

Four silver medals were awarded on the best pen in each of the following classes, American, English, Mediterranean, Asiatic. A. E. Fuller won the silver medal on the best pen in the American class, White Plymouth Rocks; H. A. Jackson, Clawson, best pen in the English class, S. C. Buff Orpingtons; A. D. Isbell, Stockbridge, best pen in the Mediterranean class, S. C. White Leghorns; Dr. Charles W. Simpson, Webberville, best pen in the Asiatic class, Black Langshans.

One Gold Medal Awarded.

A solid gold medal was awarded the best pen, all breeds competing, in the show room. A. E. Fuller, Northville, was the winner, White Plymouth Rocks.

Two Diamond-set Medals.

Two diamond-set medals were awarded as follows: For the best cockerel and the best pullet in the show room all breeds competing. A. D. Isbell won best cockerel, S. C. White Leghorns; A. E. Fuller, best pullet, White Plymouth Rock.

POULTRY ASSOCIATION MEETS.

(Continued from page 226).

coop and number of birds in the house. It is no test to caponize fowls and then kill them at six or eight months of age. They should be held a longer time. Good luck is reported in catching hawks with a trap on a pole ten or twelve feet high placed near the poultry range.

Culling by Burgess.

In the last talk by Professor Burgess he gave a practical demonstration of culling illustrated with good and bad birds from the college plant. Such demonstrations help the breeder to form the image of good hens in his mind and the writer believes that it pays to attend such exhibitions whenever possible. Professor Burgess states that he does not believe the two-hundred-egg flock will be prevalent on the farm. When a hen passes the one-hundred mark she can make a profit. One hundred to one hundred and twenty egg averages are good. A one hundred and forty-egg flock has a fine egg average. No three hundred-egg hens have been produced at the college poultry plant.

He says that Michigan breeders have good stock and it is not necessary to go hundreds of miles away in order to obtain good hatching eggs or breeding stock. Last year one million hens were culled in Michigan and more culling work was done by the county agents of Michigan than was done in any other state in the Union. The good producing hen has an intelligent appearance, while the slacker is not intelligent looking. The heavy layer moults rapidly. Slow-maturing fowls are not good layers. At the college plant the cost of artificial lights is one cent per night for sixty hens.

In addition to the program of lectures the college staged a poultry show which brought out many beautiful specimens of our standard breeds. Many farmers not particularly interested in poultry still had time from other lectures to visit this show and note the progress made during the last year. The awards are published elsewhere in this issue.

The nests for laying hens should be overhauled and renewed two or three times during the season, the boxes being painted with coal oil to kill lice, while fresh nesting material should be abundantly supplied. The nests for sitting hens should be renewed every time a fresh batch of eggs is set.

Fowls do not need to be continually "doped" with stimulating food or drugs. Pure food, exercise and good care are the main requirements.

One of the best formulas for feeding fowls runs something like this: Feed a little of everything. Feed enough, but not too much. Feed regularly.

Michigan's Largest Pedigree Poultry Farm Lakewood's Peerless Layers

The quality of chicks depend upon the records of their ancestors. Official records from 200 in 9 months to 310 eggs in one year. Write for Catalogue.

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Lakewood, Farm, Box B, Holland, Mich.

Hubers Reliable Chicks—700,000 For 1921.

By Parcel Post Prepaid. By Special Delivery. Guarantee Live Delivery. Eggs for Hatching by Setting or 100.



We have installed the most modern features of the Hatching Industry, which will insure chicks as strong as Hen Hatched Chicks and full of pep. This is our 12th season. With the great increasing demand for our chicks and the fine Testimonials, Photos, Show Reports and Wonderful Egg Records we receive from our customers proves that our chicks from stock of Good Quality, Bred for Heavy Egg Production and that they are Properly Hatched. To insure success buy our Reliable Chicks. We hatch all our chicks from pure bred, free range farm stock. S. C. White and Brown Leghorns, S. C. Anconas, Barred Rocks, R. C. and S. C. Reds, S. C. and R. C. Buff Orpingtons, S. C. Black Minorcas and White Wyandottes. Special combination offer on chicks and brooder stoves. Before buying elsewhere send for illustrated catalog and prices. Place order at once and avoid disappointment in the rush of the season.

Hubers Reliable Hatchery, East High St., Fostoria, Ohio.



LOOK! 1,000,000 for 1921.

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. Book your order NOW for early spring delivery. Catalogue free. stamps appreciated. NABOB HATCHERIES, Gambier, Ohio.

Barred Plymouth Rock Cockerels

Big boned, Rock type, well barred, bred to lay birds, with lots of pep. \$4.00 and \$5.00. CHAS. H. WRIGHT, Jones, Cass Co., Mich.

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

BEST Breeds Chickens, Ducks, Geese, Turkeys, Guineas, Hares, Dogs. Stock for sale. Write your wants. Catalog free. H. A. Souder, Box 94, Sellersville, Pa.

Baby Chicks Good big, healthy chicks of show room quality at utility prices. Catalogue free. Sycamore Hatchery, Sycamore, Ohio.

Barred Rock Chicks Booking orders now for early hatches, 100% safe delivery. Circulars and prices on application. H. H. Pierce, Jerome, Mich.

BABY CHICKS

Hatched from free range stock. Quality and live delivery guaranteed. Write for catalogue. STILLWATER HATCHERY, Covington, Ohio.

BARRED Plymouth Rock cockerels for sale, some Balce thirty birds from prize winning stock \$4 and \$5. George H. Campbell, R. 3, Box 70, Ypsilanti, Mich.

Baby Chicks and Eggs for Hatching

Barron's White Leghorns, Barred Rocks and R. I. Reds. Big sturdy chicks from free range stock with high egg records. Interesting catalogue free. BRUMMERS POULTRY FARM, Holland, Mich.

CHICKS English Strain White Leghorns. Bred to lay Brown Leghorns 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.

Cockerels and Hens: Leghorns, Minorcas, Reds, Rocks, Orpingtons, Wyandottes, Houdans. Tyrona Poultry Farm, Fenton, Mich.

BABY CHICKS

Pure Bred in all the leading breeds. The most moderate method of hatching. Delivered Parcel post prepaid to you. Best prices. Circular free, do not delay.

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Dept. M, Gibsonburg, Ohio.

Crystal Poultry Farms
HIGH QUALITY
Baby chicks, eggs from heavy laying strains. Prize winners at 1920 New York and Ohio State Fairs. 35 Leading breeds. Prices reasonable. Safe arrival guaranteed. Circular free. Shepard Strong, Crystal Poultry Farms, 7901 Franklin Ave., Cleveland, O.

BABY CHICKS R. I. Red, Barred Rocks, White Wyandottes, White Leghorns. Selected healthy chicks. Order early, have winter layers. First hatch Feb. 25th. Write for price list and circular. DERR & ADAMS, Litchfield, Mich.

Baby Chicks

FREE delivery. Superlative quality from select high-producing stock. All popular varieties. Reasonable prices. Write for catalog at once. AERDALE POULTRY FARM, Springfield, Ohio.

Big 5lb. Barron White Leghorns

Real winter layers, 703 eggs from 50 pullets in Dec. Free catalog describes them, gives feeding methods, a new way to cull hens and much valuable information. Send for it. A. WAUCHEK, Gobleville, Mich.

BABY CHICKS Single Comb White Leghorns (Tom Barron Strain) White and Barred Plymouth Rock, S. C. R. I. Red, Anconas, White Wyandottes and Brown Leghorns 25 for \$6.25, 50 for \$11.00 and 100 for \$20.00. Ross Wade, Meadow Brook Chicken Hatchery, Mt. Morris, Mich.

Baby Chicks Anconas 1/2c, Rocks 2/3c, B. Leghorns 1/2c, W. Leghorns 1/2c. All S. C. 5% Dis. in lots of 1000 or more. Parcel Post Paid and safe delivery guaranteed. Catalog free. (KNOLLS HATCHERY, R. 3, Holland, Mich.)

Barred Plymouth Rock cockerels large birds from a prizewinning laying strain \$5.00 each. J. A. BARNUM, Union City, Mich.

Barred Plymouth Rock Cockerels, M. A. C. Strain \$5 and \$8 or 2 for \$15. Mrs. JESSE F. BALL, R. 3, Charlotte, Mich.

Barred P. R. Cockerels for sale. M. A. C. heavy laying strain. Sired by 1st pen cockerels at Detroit Show 1920. Rosemary Farms, Williamston, Mich.

CHICKS We ship thousands each season. Send for prices and testimonials. FREEPORT HATCHERY, Box 12, Freeport, Mich.

DAY OLD CHICKS S. C. White Leghorns, trap-nested stock where every hen must produce 60 eggs in four winter months. One hundred big thrifty chicks for \$25.00. MACALWHITE POULTRY YARDS, Alex. MacVittie, Proprietor, Caro, Mich.

BABY CHICKS Eight imitations at lowest possible prices. A trial order will convince you of their superior quality. Catalogue free. Ohio Poultry Yards and Hatchery, Marion, Ohio.

BABY CHICKS Hatching eggs, Barred Rocks, Norman strain, trap-nested, bred-to-lay, expertly tested for many generations, large illustrated catalogue 35c, stamps for circular. Norman Poultry Plant, Chatsworth, Ill.

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

BRED-TO-LAY S. C. White Leghorns from pedigreed Bmales mated with hens selected by M. A. C. expert as extra heavy layers. Selected cockerels at a bargain. Pullets. The Ferguson Co., R. 6, Ann Arbor, Mich.

White Wyandottes Official records, five hens 1974 eggs. Eggs \$5, \$8.00 and \$10.00, 100, \$15.00. Catalog free. G. W. SCHOTTMANN, Montrose, Ill.

100 March hatched, Barron strain, S. C. White Leghorn cockerels. Large, vigorous, pure white birds \$3 and \$5 each. R. E. McInerney, R. 1, Frankenthum, Mich.

Broad View Farm Big Type S. C. White bodied birds. Heavy layers of big white eggs. Exhibition type eggs \$2.50, 100 \$3.50. Fowler's. E. B. MCKERCHER, Hillsdale, Mich.

CHICKS CHICKS

Shipped safely everywhere by mail. S. C. White Leghorns and S. C. Mottled Anconas, the great egg machines. Strong, sturdy chicks guaranteed to satisfy. Order now for spring delivery. 18th season. Free catalogue. W. Van Appledorn, R. 7, Holland, Mich.

CHICKS Pure-bred S. C. White and laying strains. Parcel-post brings them up to your door. Safe arrival guaranteed, \$15.25 per 100 post-paid. Catalogue free. Royal Hatchery, R. 2, Zeeland, Mich.

CHICKS! Standard bred White Leghorns and Brown Leghorns. Bred to lay, large white eggs. 50 chicks \$7.50, 100, \$15.00 and 500, \$72.50. Safe arrival guaranteed. Parcel post brings them to your door. Catalog free. Wolverine Hatchery, R. 2, Zeeland, Mich.

CHICKS Bred-to-lay S. C. W. Leghorn and Barred Rock quality chicks that please, guaranteed full count and to arrive to you "all ready made" in first class condition by parcel post paid. Leghorns \$18 per 100, Rocks \$20 per 100. Special prices on 500 to 1000. Circular. Sunnybrook Poultry Farm, Hillsdale, Mich.

CHICKS English Strain White Leghorns the heavy laying strain at only \$15 per 100; prepaid by mail safe arrival guaranteed send cash with order special rates on 500 or more. JAMESTOWN HATCHERY, Jamestown, Mich.

DAY-OLD CHICKS

\$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 ranged fowls: Chickens, Geese, Ducks, Turkeys and Guineas. Price list and circular free. Plenty of nice breeding stock. Book now for early spring delivery. WILMINGTON HATCHERY & POULTRY CO., Wilmington, Ohio.

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Strong, vigorous fellows, the kind that live and grow. Carefully selected, open range, purebred utility stock. Price reasonable. Circular free. SUNBEAM HATCHERY, 2433 S. Main St., Findlay, Ohio.

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JOHN'S Big Beautiful Barred Rocks are hen hatched quick growers, good layers, sold on approval \$4 to \$8. Circulars photos. John Northon, Clare, Mich.

LOOK [Best Grade] CHICKS
Our Hi-Grade profit paying Bred-to-Lay, M. A. C. tested and exhibition chicks, at reasonable prices. Hatching eggs, 8 varieties, Circular FREE. Lawrence Poultry Farm, R. 7, Grand Rapids, Mich.

Additional Poultry Ads. on Page 243

Belgium Imported — Duty Free Melotte

Save \$10.00

We have just received a large cargo of Melotte Separators and when remitting to Belgium, the exchange was so favorable that we were able to save \$10.00 per separator. We are giving this to you as long as the cargo lasts. This is your gain if you take advantage of it at once. But you must act at once in order to save \$10.00.

No Money Down

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You, who have wanted the world's greatest separator, write for catalog right away. Find out why 500,000 Melotte Separators are in use today. Before buying any separator find out how the Melotte has won 264 Grand and International Prizes and every important European contest. Mail the coupon now for our great offer.

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You are not to send a cent until you have used this Great Belgian Melotte for 30 days on your own farm and thoroughly made up your mind that it is the separator you want to buy. Then after you have satisfied yourself pay \$7.50 and the balance in small monthly payments.

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Self-Balancing Bowl

Positively cannot get out of balance. No vibration, therefore cream cannot remix with milk. Always skims with uniform efficiency, proven by owners of Melottes after fifteen years use. These are reasons why the Melotte Self-Balancing Bowl is called the secret of perfect skimming. Send for catalog showing details of the Melotte Self-Balancing bowl; also many other features.

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warm in winter and cool in summer. Moisture does not condense on these walls as on other forms of masonry. And the smooth glazed surface of Natco walls is easy to disinfect—it affords no hiding-place for germs or vermin.

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Section showing foundation

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I pay the freight and save you 25% to 40%. Over 150 styles. Also Gates, Barb Wire. Write for Bargain Book today. [8] The Brown Fence & Wire Co., Dept. 249 Cleveland, O.

Dairying at Farmers' Week

Visitors Compliment College on Dairy Exhibit.

IT has been brought to the attention of the writer through visitors at the college during Farmers' Week that of all the many wonderful exhibits and problems shown pertaining to agriculture, that of dairying should be rated among the best.

Isolated and divided as it was, it possessed that quality of purpose which so appealed to the educational and aesthetic senses, that of the myriads of exhibits of the various departments and mystifying amounts of scientific applications, the dairy exhibits so stood out that its four divided groups could easily be associated in the minds of the dairymen.

In reality from the dairy manufacturers' standpoint, Farmers' Week started the week before, when exhibits were arranged for, the assembling of creamery men from all over the state for a four days' study of the new cream grading problem so as to produce quality of product. These meetings were addressed by such men as Professor Bouska, of Chicago, and Mr. W. B. Liverance, of New York. The exhibits prepared for this group were added to the following week until the entire east section of the dairy building was given over to a splendid display of dairy products, showing the major problems of the dairy industry from the manufacturing standpoint.

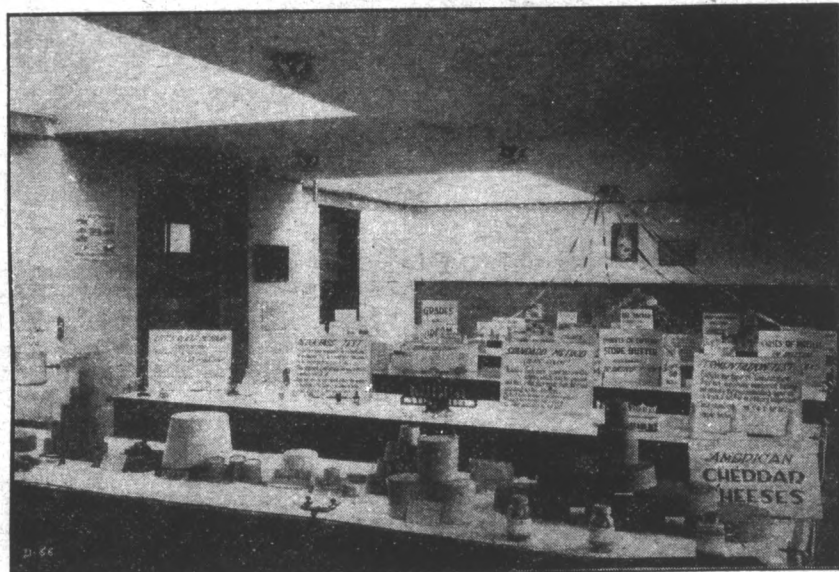
The Farmers' Week visitors were first introduced to dairying upon entering the general exhibit in the pavilion

exhibit in methods of handling dairy products. Because of classes the market milk, cheese, ice cream and butter rooms were closed for periods in the day. The separator room was given over to problems pertaining to care of milk and cream on the farm. It also showed twelve different separators in action.

The east side of the second floor of the building was given over to the dairy products exhibits. It was divided about equally between cheese, butter, ice cream and market milk and their problems pertaining to marketing. Some of the problems shown were cream grading, the value of quality of product, difference in price between processor and consumer, marketing value of attractive packages, effect of moisture content on marketing, relation of butter-fat in milk to the amount of cheese produced, amount of different score butter necessary to bring \$5.00, and many others of equal importance, in all covering approximately nine hundred square feet of table space.

Opposite this exhibit on the west side of the building was the dairy lunch where around eight hundred people were served each day, thus asserting the fact that dairy products are not necessarily consumed for their food value alone, but to satisfy the taste as well.

The magnitude of the work to improve dairying in the state as carried



One Corner of the Dairy Exhibit.

of the agricultural building where supplementing the domestic science exhibit a booth was prepared to dispense liberally dairy products so highly recommended by that department as life necessities. Also the farmer was here invited to visit the major exhibits prepared in the dairy barn and the dairy building.

Upon visiting these it was easy to see why the dairy industry of Michigan is the largest and best organized branch of agriculture. From the bull barn, placarded to tell of the progenitors of breeding experiments, to the tops of the dairy building where the finished product in the form of dainty cheese sandwiches or hot oyster stew was served, was presented the major problems pertaining to dairying from producer to consumer. The main dairy barn, besides its many breeds of dairy cattle found on Michigan farms, showed the results of such problems; as, the third cross of a pure-bred Guernsey bull on a scrub cow and her descendants, self-feeders for calves, cows tested for milk records, calf-feeding as conducted by students of the college, fair prize winners, leaders in production, etc.

The entire dairy building was given over to visitors and in itself was an

one banner carried in the parade, stating "We Represent Seventy-five Official and Association Cow Testers."

It has long been conceded that the scales and Babcock test were the only true measure for determining the profitability of dairy cows, and this effort alone, that requires seventy-five cow-testers, puts dairying in Michigan far in the lead of any other class of agriculture in regard to efforts being made for improvement.

ROAD WORK TO BE PUSHED.

NEXT spring work on the new "Baraga Trunk-Line" road which will connect Marquette with the head of Huron Bay and thus open up a new, scenic route to the copper country, and which also affords a second route between Marquette and Negaunee, will be resumed. The plan calls for the concrete surfacing, next spring, of the Marquette-Negaunee branch, the foundation work for which has been carried out during the past season, and the gravelling of section "D" towards Baraga county. This new route eliminates railroad crossings between Marquette and Negaunee, and greatly reduces the curvature of the roadway.

THE CONDENSED MILK MARKET.

WHILE conditions affecting the condensed milk industry have changed very little during the past month, there is some revival of faith in the industry at the present time. While there have been no large orders of late, domestic consumption has been at least normal and shipments have been going regularly to fill foreign orders. Stocks are gradually melting away and some of the plants which closed early in the fall are again operating and others will undoubtedly open with the advent of spring. One of the large corporations which closed practically all its plants in October will open several of them in the near future. The great concern of that corporation is whether or not it can again secure the patronage of the farmers who formerly supplied it with milk, in view of the fact that its former patrons are now well organized and the company refuses to deal with the organization.

There has been some reduction in the asking price of some of the well advertised brands of case goods. In addition, demand for powdered milk is at low ebb, which is responsible for a material decline in the price of that product. On the other hand, bulk quantities of fresh-made sweetened whole condensed milk has shown a slight advance in price. The fact remains, nevertheless, that conditions have improved very little and that demand will be but nominal during the months to come as there is no factor operating at the present time to stimulate the consumption of condensed milk products. Without doubt, there will be a greater demand for bulk goods during the ice cream season, but that demand will be seasonal and will have no permanent effect on the industry in general.—L.

AGRICULTURAL CLUB ENTERTAINS SPEAKERS.

THE Agricultural Club of the College entertained several of the speakers at a banquet during the noon hour Wednesday, of Farmers' Week, following which informal talks were given by several of the guests.

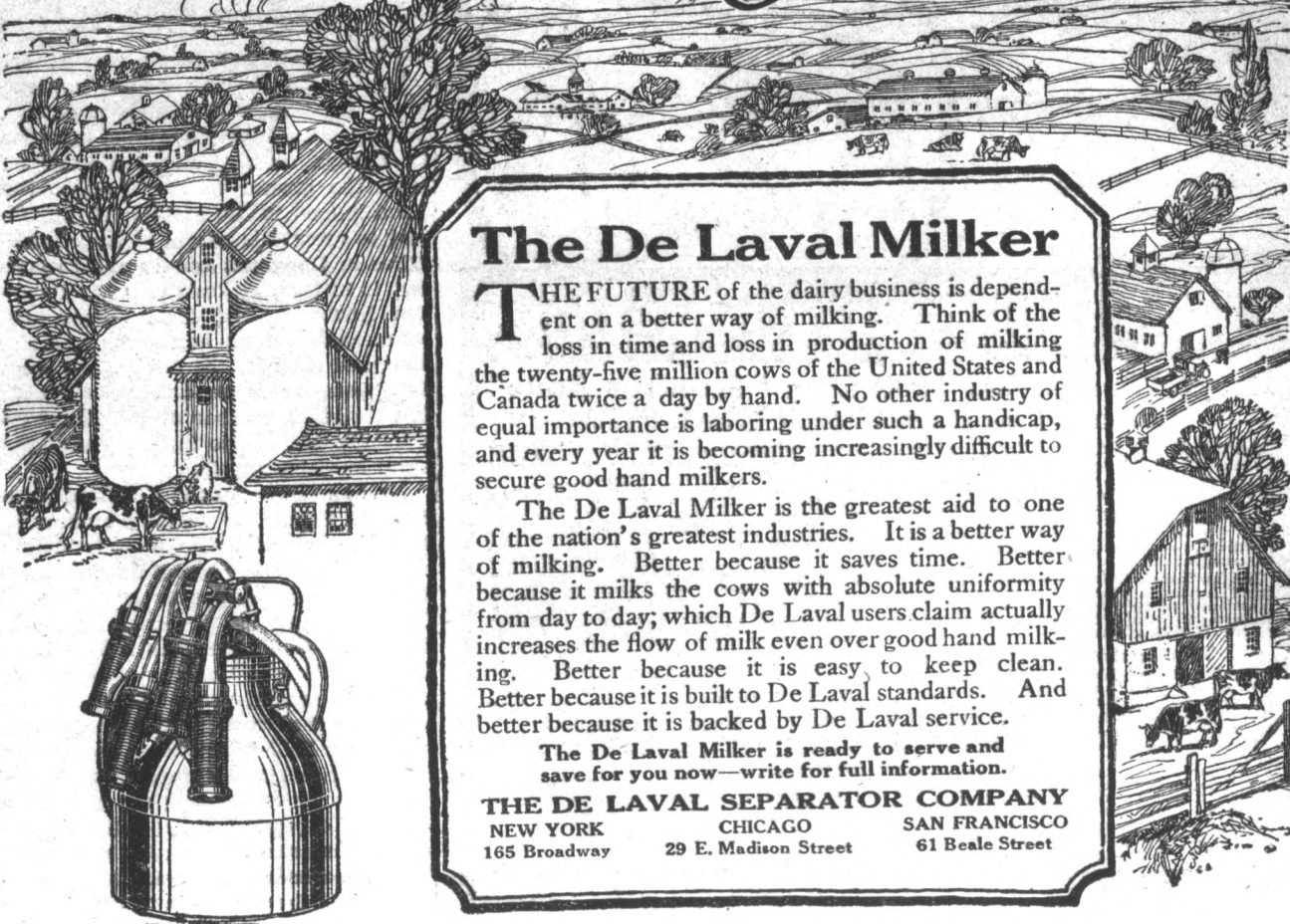
Eugene Davenport who was first called upon advised that young people should disregard the manufacture of those things which cannot be consumed. He touched upon the question of taxation for educational purposes stating that the amount that each individual pays for this purpose is small indeed compared with what we thoughtlessly spend in other ways.

Former Congressman Lever stated that agriculture now needs farm leadership. If the men who are in the colleges training for agricultural work live up to their opportunities they will undoubtedly be the ones from whom the leaders of agriculture of the future will be chosen. Mr. Lever explained the Lever bill, food control act and other important legislative matters. Do not be misled by the rabid, he continued, but keep your feet upon the ground. And further, do not expect the government to solve all your problems for the real solution must come through self help. It should be our ambition to leave some heritage to future generations.

Mr. Roberts, of New York, stated that the nation is now suffering from over-urbanism. The country supplies the life blood to our cities. That supply is now threatened and it is necessary to conserve the supply by moral and social leadership as well as along economic and technical lines.

H. N. Wentworth, of Chicago, said that the trend of the mind today was too much toward knocking the fellow down when he is up rather than trying to climb up with him. The farm bureau is one of the greatest steps in the development of agriculture.

A Better Way of Milking



The De Laval Milker

THE FUTURE of the dairy business is dependent on a better way of milking. Think of the loss in time and loss in production of milking the twenty-five million cows of the United States and Canada twice a day by hand. No other industry of equal importance is laboring under such a handicap, and every year it is becoming increasingly difficult to secure good hand milkers.

The De Laval Milker is the greatest aid to one of the nation's greatest industries. It is a better way of milking. Better because it saves time. Better because it milks the cows with absolute uniformity from day to day; which De Laval users claim actually increases the flow of milk even over good hand milking. Better because it is easy to keep clean. Better because it is built to De Laval standards. And better because it is backed by De Laval service.

The De Laval Milker is ready to serve and save for you now—write for full information.

THE DE LAVAL SEPARATOR COMPANY
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Sooner or later you will use a De Laval Milker or Cream Separator

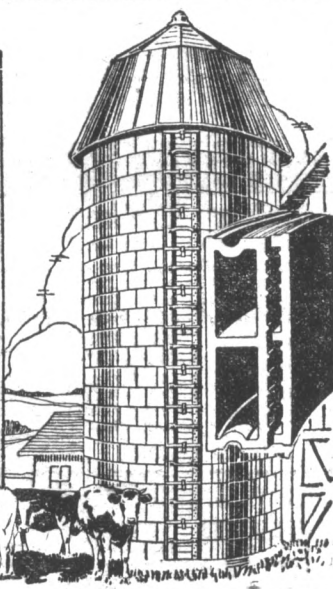
The Silo That Always Stays Sold

When you build with tile, you build but once. First cost is the only cost. Looks better, stays better and keeps better silage. Write for our catalog telling about the

Preston Lansing Vitrified Tile Silo

—the tile silo with the "ship-lap" blocks and twisted steel re-enforcing. Extra strong walls. Blocks all of uniform shade—the silo beautiful that lasts for ages. Fireproof, frostproof, weatherproof and vermin-proof. Steel or tile chute. Steel hip roof gives more silage space. Write for catalog and prices.

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SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

ABSORBINE

will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R. free. ABSORBINE, JR., the anti-septic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price \$1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c.

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Bone Spavin

Even established cases yield to Fleming's Spavin and Ringbone Paste, or money back. \$2.00 a bottle postpaid. Send for FREE Vest-Pocket Veterinary Adviser. Describes Spavins and 200 other horse and cattle ailments.

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Tag your stock—best and cheapest means of identification for Hogs, Sheep and Cattle. Name, address and number stamped on tags. Catalog mailed free on request.

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Special Number just out containing 1 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm land where farmers grow rich, send at once for this special number of LANDOLOGY. It is free on request. Address

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Agricultural Lime

High calcium hydrated lime in 50 lb. paper bags. In car lots of 50 tons or more. Delivered, price promptly quoted on request.

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FOREMOST AMONG BETTER GRINDERS
 Crush and grind all the grains that grow; fine for hogs or coarser for cattle feeding. Corn in husk, Head Kafira, and all small grains.

Strength, Durability and Service radiate from every line of these Masterful Grinders. Simple but effective in adjustment.

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CONE-SHAPED BURRS

10 sizes—2 to 25 H.P. or more. Also Sweep Mills. It pays well to investigate. Catalog FREE.

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Most economical and satisfactory way of handling your corn crop. No delay, no extra help. Do it in your own spare time. Two sizes for individual use, 6 to 15 h. p. Also make two larger sizes for custom work. Over 20 years in the field. Write for catalog and prices. State h. p. of your engine.

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Also Makers of Feed Cutters and Silo Fillers

"More Potatoes"

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

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

BUY FENCE POSTS

direct from forest. Prices delivered your station. M. M. care of Michigan Farmer

Trained American

Fox Hounds Rabbit and Skunk dogs all ages. Send stamp.

W. E. LECKY, Holmesville, Ohio



\$279 Profit in a Few Days

How a Woman Paid \$100 for a "Ferocious Brute" and in a Few Days Made it Worth \$379

An actual fact,—this is, Mrs. Louis McCutcheon of Kitchener, Ontario, bought a mare for \$100. The mare absolutely refused to work. Even to harness her was a day's work in itself. She kicked, bit, balked and shied at everything. No one on the farm could do anything with her. Then a neighbor told Mrs. McCutcheon the secret of his own mastery over horses—and how she too could learn it.

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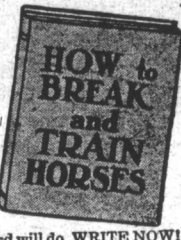
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Upper Peninsula News

By L. A. Chase

THE Calumet News states that L. M. Geismar, county agricultural agent of Houghton county, has located a supply of russet potatoes in Baraga county, and has arranged with the grower to sell seed to the farm bureau in the spring. It is planned to grow this potato in large quantities in Houghton county and to market it under the designation, "Houghton Russet." The farm bureau will give each local one bushel for seed and the yield used for the next year's seed. Mr. Geismar is reported already to have a large number of individual orders for this potato in advance of the farm bureau's supply.

Dr. John Lowe, of the Northern State Normal School, is making studies of heredity in relation to egg production in hens, and has a small flock of thoroughbred Wyandottes as the subject of his investigations. Recently he exhibited some of his hens at the Fox River Poultry Show in Wisconsin and won a first and second prize. Then he took a first at the Northern Wisconsin Poultry Show held in Superior, and a first at the Northern Minnesota Show at Duluth. Dr. Lowe does not pose as a chicken expert. His specialty is fish, and he has served as expert advisor of the Wisconsin Conservation Commission. But the results here noted seem to point to some capacity in another department of biology.

The Dickinson County Fair, to be held at Norway the first week of September, is now being prepared for and assurances are forthcoming that it is to be the best ever. The grounds and buildings are to undergo some renovation. A barbecue for Labor Day, with sports in connection, is on the cards. Horse races will feature this occasion. The Dickinson County Fair Association joined the American Trotting Association, last year, it is stated, and so is in line for superior material for these races. Farm products and live stock are also to feature the fair in a high degree, we are assured. The premium book is now being arranged.

More Good Cows.

The Ontonagon County Farm has two thoroughbred cows with excellent records. One of them produced 618.8 pounds of milk, and 30.48 pounds of butter in seven days. Another animal has a record of 2,012.2 pounds of milk and 94.36 pounds of butter in thirty days, as reported in the Cloverland Press, of Ewen.

The records of the Gogebic County Cow-testing Association contained some pleasing information for farmers of the district at the end of December, says the Ironwood News-Record. One grade Holstein produced 1,915 pounds of milk with a yield of 86.1 pounds of butter-fat. Another cow yielded in January 2,489 pounds of milk, testing five per cent, yielding 124.4 pounds of

butter-fat. The result is regarded as justifying the care that the owners have taken in breeding for production. These cows come from herds where pure-bred sires have been used for twenty years or more. The foregoing seems to show that our Finnish and Swedish farmers are not hopelessly conservative in their agricultural methods. A number of pure-bred Holsteins have recently been added to the herds of Gogebic county.

Gogebic county has ordered two cars of TNT for land clearing. The price is put at ten cents per pound.

Consider Change in County Government.

A committee of the Chippewa county board of supervisors has considered the proposed change in county government, and has approved the proposal that the legislature submit to the voters an amendment permitting, under general laws, that counties should frame their own charters. It is anticipated that some of the rural supervisors will oppose the resolution of the committee, favoring such an amendment to the state constitution, when it again comes before the supervisors at its March meeting, according to The Soo Times.

One sometimes hears it asked how long will the reserves of mineral in the Lake Superior district hold out. The end of the deposits of iron and copper are by no means yet in sight. The Gazette, of Iron Mountain, recently quotes an article in the Iron Trade Review, ascribing to the Lake Superior district a reserve of marketable iron ore of some 2,500,000,000 tons, of which nearly one-third is in Michigan.

Improving Labor Conditions.

An important conference of upper peninsula industrial leaders and business executives will be held in Escanaba on February 22, under the auspices of the Delta District of the Industrial Relations Association. A banquet will be held in the evening at which the principal speaker will be Mr. John Calder, M. E., manager of the Employers' Relations Department of Chicago. The purpose of the gathering is to form an upper peninsula chapter of the Industrial Relations Association national organization, with a view to the extension of the work already going forward in Delta and adjoining counties to the whole upper peninsula. I have already written of this work for The Michigan Farmer. Its idea is much like that of community service but under the direct control of the business managers and their employees. It involves the establishment of community centers and good, healthy entertainment at the outset, Americanization and other work as soon as conditions are ready for it. I have already written of the undertakings of the Northwestern Cooperage Company in this

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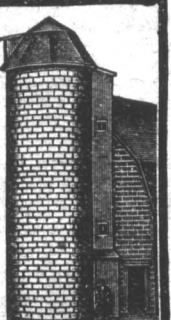
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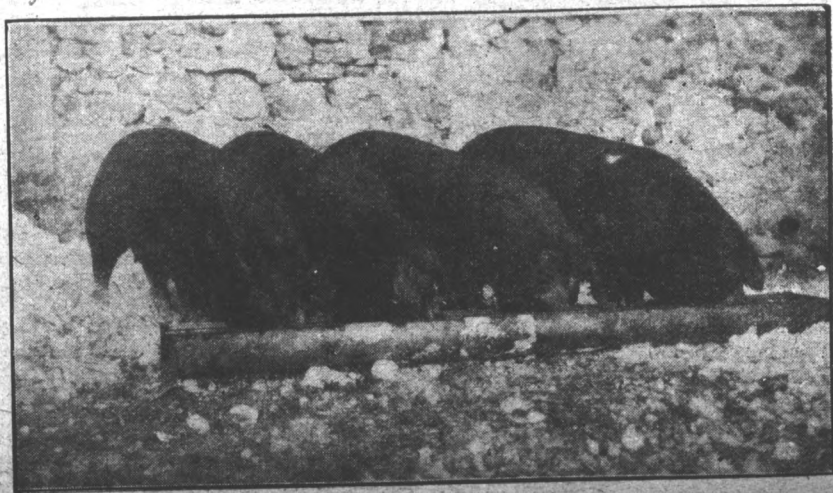
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Standard clincher-joint 6-walled glazed blocks. Cheap as lumber to use. Proof against fire, frost, moisture and vermin. Practically indestructible. Order NOW.

Purchase during winter insures prompt delivery. Send us plans and specifications for your buildings and let us estimate. Permanent improvements add greatly to farm values, save repairs, give best protection for least money. WRITE US TODAY.

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A Group of Tried Sows. Owned by P. P. Pope, of Isabella County.

connection, which is one of the twenty-eight firms already associated in the Delta District Industrial Relations Association. There is no fixed plan of procedure, individual units being left the utmost freedom of action, as I gathered from a conversation with the manager of the association recently. The ultimate principle upon which the work proceeds is good will, mutual frank understanding, give and take. The practical importance of this work is seen in times like these when employers find it necessary to reduce expenses and wage cuts and shut-downs are in order. With the right attitude on both sides, such crises can be passed with much less friction than otherwise might occur. I am told that, when the superintendent of one concern in northern Michigan had presented to him the alternative of reducing wages or closing shop, he was brought to do what for him was an unprecedented thing—call in the men and frankly lay the whole case before his employees telling them of his fears and difficulties. This plant had had a nasty strike some time before and the superintendent was fearful of trouble if wages were reduced. But the work already carried on among his men by the Industrial Relations Association had wholly altered the attitude of employer and employee, and the outcome of the conference was a satisfactory adjustment of the situation involving a lower level of wages but no shutdown of the plant. Now the effort is to be made to interest employers in other upper peninsula districts in this work, and the whole matter will be threshed out at the Escanaba conference. It appears to be necessary to organize the work in a district of somewhat restricted size, and there would seem to be room for separate associations for the Marquette and the Gogebic iron ranges and for the copper country, at least. It is understood that Community Service Incorporated is prepared to relinquish this field to the Industrial Relations Association, when it is ready to undertake the work.

GETTING RID OF WOLVES.

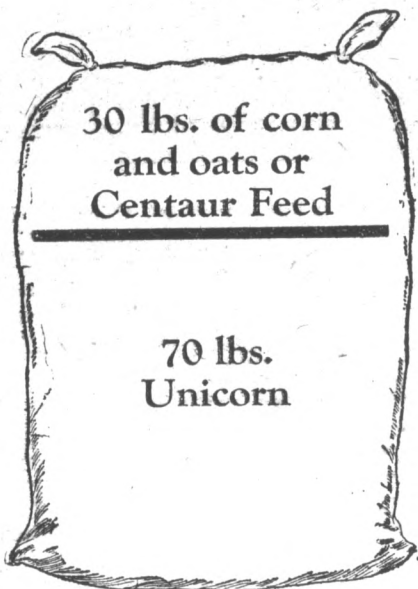
A REPRESENTATIVE of the Biological Survey of the U. S. Department of Agriculture has been working in the district for some time seeking to deal effectively with the wolf problem. Not only here but in many parts of the United States wolves have become more of a nuisance than formerly and the survey has increased its activity in the direction of their extermination. According to the Gazette, of Houghton, Mr. Ligon, of the Biological Survey, has been operating in Houghton and Baraga counties of late. His method is the skillful use of poison (strychnine), and it requires a good deal of skill to outwit this clever beast. Farmers are given instructions as to its proper use. Mr. Ligon regards Michigan's bounty laws as unusually generous, but evidently quite ineffective. According to a deputy game warden of Houghton county, trappers are pursuing their vocation with less eagerness this year, due to the decline in the price of furs, muskrats for instance, now selling as low as forty cents a pelt. Five dollars is said to be a high price for mink.—C.

The South Dakota Farm Bureau Federation tells its members of the immensity of the farm bureau movement in the following manner: "If all the farm bureau members of the United States were to march down the main street of your city at the rate of five thousand a day it would take the line about ten months to pass the post office."

The number of children attending the rural schools of Dickinson county, just given out, is 1,900.

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Average milk . . 1609.5 lbs.
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Those who are not feeding Unicorn say that it is "high-priced."

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A very choice lot of young bulls—sired by Edgar of Dalmeny are, at this time, offered for sale.

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We are offering ten cows bred to either IMP. ELCHO OF HARVESTOWN, or IMP. EDGAR OF DALMENY.

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Cows and Heifers Bred to
Blackcap Brandon of Woodcote 2nd

GEO. HATHAWAY & SON, Ovid, Mich.

Reg. Aberdeen Ang s bulls and heifers from 6 to 18 mos. old of the very best of breeding, also Berkshire Swine, boars ready for service and pigs both sex singles, pairs or trios, will accept Liberty Bonds.

RUSSELL BROTHERS, Merrill, Mich.

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Two young cows and bull not related. All out of Adv. Reg. dams. Other cows with A. R. records up to 600 lbs. fat. Inspection invited.

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Three Guernsey Bulls fourteen months old registered. Five Guernsey Heifers coming two year old and bred grade stock. JOSEPH A. SCHROEDER, Box 71, Merriman Road, Wayne, Mich.

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A bull calf, nearly ready for light service, at a price, you will pay, don't wait long on this fellow.

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

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Born June 2nd, by Maplecrest De Kol Hengerveld. A sire having three sisters each with records of over 1200 pounds of butter in a year, two of them former world champions. Calf's dam by an own brother to Highland Hartog De Kol with a yearly record of 1247.95. This combination of breeding has produced many 1000 to 1200 cows. If prepotency counts, where can you equal it? Priced \$100.00 for quick sale.

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2 Heifer calves sire a 27 lb. son of Maple Crest Korn-dyke Heng. Their dams have 19 lb. 2 yr. old sister and a 27 lb. sire. Terms \$55 down \$50 a year. N. L. McLAULIN, Redford, Mich.

FOR SALE Registered Holstein-Friesian bull calf ready for service extra choice breeding and individuality. King of the Pontiacs breeding. Henry S. Rohlf, R. 1, Akron, Mich.

For Sale \$450.00

Cash or Terms
A show bull from A. R. O. Dam born December 15, 1918. Sired by our Show Bull.

MODEL KING SEGUS GLISTA
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His dam's records are:—
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Butter 7 Days 33.02 lbs.

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Handsomely marked about one third white.

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About 1/2 Scotch

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CRYSTAL SPRING STOCK FARM,
Silver Creek, Allegan County, Michigan.

JERSEY BULLS Ready for Service, Raleigh-Oxford and—Majesty breeding. Meadowland Farm, Waterman & Waterman, Packard Rd., Ann Arbor, Mich.

Lillie Farmstead Jerseys Bull calves from R. of M. cows. COLON C. LILLIE, Coopersville, Mich.

Jersey Bulls from R. of M. dams \$75 to \$150 each. NOTTEN FARM, Grass Lake, Mich.

Jersey bulls for sale: From Marguerite's Premier a grandson of Pops 89th and R. of M. dams, SMITH & PARKER, R. 4, Howell, Mich.

Meridale Interested Owl No. 11131 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

Bloomdale Shorthorns

See our cattle get our prices and breeding before buying. Both bulls and females for sale.

OARR BROS. & CO., Bad Axe, Mich.

BIDWELL SHORTHORNS BUY A BULL

that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio, N. Y. C. R. R.

BIDWELL STOCK FARM, Box D, Tecumseh, Michigan

Stop! Look! Listen!

Have you a catalog of the Shorthorn Sale to be held at M. A. C. Feb. 25th at 1 P. M. We are listing four valuable females and two show bulls.

Richland Farms,

C. H. Prescott & Sons, Tawas City, Mich.

Registered Shorthorns. Bulls and heifers, prices within reach of all. G. R. DeSHETLER, R. 4, Tecumseh, Mich.

Milking Shorthorns, bulls and heifers 5 mo to 1 year old for sale at reduced prices to make room for younger stock. E. H. KURTZ, Mason, Mich.

The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare. In service, bulls for sale.

J. V. WISE, Gobleville, Mich.

Branch County Farm

Breeders of

Polled Shorthorn Cattle

Young Bulls For Sale

Several well bred herd bull prospects.

GEO. E. BURDICK, Mgr., Coldwater, Mich.

VALLEY VIEW FARMS

Choice young Shorthorn cows and heifers for sale at all times, bred or open, or a carload, also a few young bulls strong in Sultan Blood. Write S. H. PANGBORN & SON, Bad Axe, Mich.

MEADOW Hills Shorthorns. Herd headed by Silver King, full brother of Lavender Sultan Pur due University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

Central Michigan Shorthorn Breeders' Association offer for sale 75 head; Both milk and beef breeding, all ages. New list ready Jan. 15. M. E. MILLER, Sec., Greenville, Mich.

Milking Shorthorns. Bull calves \$100.00 each. Federal accredited Herds. Davidson and Hall, Beland and Beland, Tecumseh, Mich.

Reg. Red Polled cattle choice young bulls from 6 to 18 mo. old for sale. FRANK KEBLER, R. 1, Grand Ledge, Mich.

Reg. Red Polled bull calves, from 3 mos. to 1 year old, sired by Famous Charmer, 75% same blood as Charmer 1919 International Grand Champion. Our herd State and Federal tested. Westbrook Bros., Ionia, Mich.

HOGS

Registered Berkshires, Gilts, and Sows, bred for April May and June farrow. A yearling Boar and a few younger Spring pigs. Chase Stock Farm, Mariette, Mich.

Registered Berkshires for sale. Two young boars, ready for service, two young gilts, a sow, and younger ones of either sex. Let me know your wants. JOHN YOUNG, R. 2, Breckenridge, Mich.

DUROC JERSEY SWINE

for sale 2 yr. old herd boars, yearling boars and boar pigs, also bred sows and gilts. Write for pedigrees and prices. Come and see them. THOS. UNDERHILL & SON, Salem, Mich.

DUROC JERSEYS

Bred gilts, service boars and full boar pigs at Bargain prices. Your correspondence or personal inspection is cordially invited. RUSH BROS., Oakwood Farm, Romeo, Mich.

Michigana Durocs Bred gilts and sows for sale at private treaty. Also bred sow sale February 21st. Satisfaction guaranteed. O. F. FOSTER, Mgr., Pavilion, Mich.

Duroc sows and gilts bred to Walts King 29499 who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat and price list. NEWTON BARNHART, St. Johns, Mich.

Duroc Jersey boars from 8 mo. to 1 yr. old. Select young sows mated to maintain size and correct type. Prices reasonable, shipped on approval and guaranteed right. W. E. BARTLEY, Alma, Mich.

Duroc bred sows and gilts for March and April farrow, at prices you can afford to pay. Write W. C. TAYLOR, Milan, Mich.



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

DUROC SALE CIRCUIT

The following well known breeders will sell good registered Duroc Bred Sows on the following dates:

Monday, February 21, 1921
Michigana Farm Ltd., at Pavilion, Mich.
Kalamazoo County

Tuesday, February 22, 1921
Chaslen Farm, at Northville, Mich.
Wayne County

Wednesday, Febr'y 23, 1921
Thos. Underhill & Son, at Salem, Mich.
Washtenaw County

Thursday, February 24, 1921
Newton Barnhart, at St. Johns, Mich.
Clinton County

These sales will be held regardless of weather
Write to the several breeders for catalogues

Following men will handle mail bids. Send bids to them at respective sales in owner's care:

Col. R. M. Clark, Brimfield, Ill., Auctioneer

Joe Havga, Peoria, Illinois
Ass't Sec'y National Duroc Jersey Br. Ass'n

W. M. Kelly
For The Michigan Farmer

Sales will Start at 1 o'clock in the Afternoon

Fellow Breeders & Farmers

This is our 9th bred sow sale, but the first one in Michigan and we brought with us the leading Duroc families of the west.

We believe in this offering we have some sows that will help to improve any pure bred herd, they are mostly Colonel breeding mixed with Giant, Colonel High Model, Sensation, Gold Model Defender and mixed with the top breeds here such as Panama Special 4th and Michigana Demonstrator, as last season we purchased the top sows at any sale we attended and we want to say there is some real show sows in this offering.

Any how we will be glad to see you here on Feb. 22nd if nothing more than to make your acquaintance. Northville is 25 miles from Detroit on the D. U. R. and P. M. R. R. the farm is 3 miles from Northville. Autos will meet all trains on both roads; if you get here the night before go to Ambler House as our guest.

All hogs are double immune from Cholera.

CHASLEN FARMS

C. H. & L. A. YOUNG, Prop.

Colonel M. R. Clark, Auctioneer.

AUCTION

Thurs., February 24, 1921
At 1:00 P. M.

Stock Judging Pavilion, Michigan Agricultural College

27 Registered Percheron
and Belgian MARES **27**
3 STALLIONS **3**

A Few Good Grade Work Horses

Under the Auspices of
Michigan Horse Breeders' Association
For Sale List, Write R. S. Hudson, Secretary-Treasurer
Shorthorn Sale February 25, 1921 Same Place

Combination Dispersion Sale 40--Reg. Holsteins--40

Wednesday, March 2, 1921, at Perry, Mich.

Complete dispersion of the Spalding herd, with consignments by B. E. Smith and H. O. Loomis.

These herds are headed by

SIR VEEMAN HENGERSVELD TRICKSEY

a son of Sir Veeman Hengersveld, from a 28.5 lb. Junior 2-year-old daughter of King Korndyke Sadie Vale, and

MAPLECREST BANOSTINE APPLICATION

a son of Friend Hengersveld DeKol Butter Boy, out of the highest record daughter of Pontiac Aaggie Korndyke.

Several cows with A. R. O. records, including a 26.5-lb. cow, and a 22.6-lb. Junior 4-year-old, and a 20-lb. granddaughter of Pontiac Apollo.

The Spalding and Smith herds have each passed a clean test under supervision.

Sold with 60-90 day retest privilege.

Write for Catalogue to

MICHIGAN HOLSTEIN-FRIESIAN ASSOCIATION

H. W. Norton, Jr., Secretary,
Old State Block, Lansing, Michigan.

JERSEY CATTLE AT AUCTION SALE

Wednesday, February 23, 1921

30 well bred registered and grade Jersey cows giving milk, 6 Jersey heifers and 12 heifer calves and 12 heifers recently bred.

These heifers and calves are daughters of Gold Medal Noble 164784, whose dam has won 12 A. A. C. C. Medals. This good sire and one of his sons, one year old, are included in the sale.

Full dairy equipment, farm implements and tools listed in sale.

Nine head of horses, draft mares, work teams and colts.

Fifteen Chester White hogs. Large quantity of feed.

B. L. K. Milker with piping and power complete.

Sale will be held at the C. E. & M. B. Covell farm at Montague, Muskegon County at 10 o'clock sharp, Wednesday, February 23, 1921.

E. B. MEYERS, Prop.
Montague, Mich.

Sheep Auction 550 Breeding Ewes

Sale Wednesday, February 23rd

At One o'clock Fast Time

At South Rockwood, Mich.

All are in good condition from one to four years old. About 100 of these are Delaine and Ramboulette types. Balance mostly black face, most of them are due to lamb in March and April from Shropshire Rams.

ALMOND B. CHAPMAN, Prop. South Rockwood, Mich.
Farm located (by auto) on Dixie Highway two miles south of Rockwood or 22 miles southwest of Detroit. By street car three quarters of a mile south of Crooks Road.

HOLSTEIN CATTLE SALE

Wednesday, February 23. 1/2 mile south of Ovid. Having sold my farm will sell 7 highly bred registered females, tubercular tested, 2 cows daughters of A. R. O. dams, with other farm stock and implements.

E. C. SMITH, Ovid, Mich.

O. I. C's. Choice, large type gilts, bred to our herd sire Long Boy No. 83964, a winner in seven shows. Young sow pigs, weight about 100 lbs. Boars. Special prices on all February sales. Lone Elm Farm.
EARLE R. MORRIS, R. C. Flint, Mich.

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.

DUROC JERSEYS
Carey U. Edmonds, Hastings, Mich.

40 Head. Duroc Jersey Bred Sow Sale March 5th. Auto's in waiting at Park Hotel, Monroe, also at National Hotel, Dundee, be our guest sale day. F. J. Drott, Monroe, Mich.

DUROC JERSEYS Boars and gilts by Mich. Pathfinder.
E. D. HEYDENBERK, Wayland, Mich.

Special prices in Durocs. Heavy bone, best of breeding and type. Bred gilts, yr sow and fall pigs. Both sex.
A. W. HOWE, Mason, Mich.

Additional Stock Ads on Page 253

LATEST MARKET REPORTS

GRAIN QUOTATIONS

February 15, 1921.

Wheat.

Detroit.—Cash No. 2 red \$1.96; May \$1.89; No. 2 white and No. 2 mixed \$1.94.

Chicago.—No. 2 red \$2.01; No. 3 hard \$1.79@1.80½; March \$1.75.

Corn.

Detroit.—Cash No. 3 yellow 73c; No. 4 yellow 70c.

Chicago.—No. 3 mixed 65@66½c; No. 2 yellow 67¼@67½c.

Oats.

Detroit.—Cash No. 2 white 50c; No. 3 white 48½c; No. 4 white 45½c.

Chicago.—No. 3 white 43¼@45c; No. 4 white 41¼@43c.

Beans.

Detroit.—Immediate and prompt are dull at \$3.90 per cwt.

Chicago.—White beans steady. Hand-picked beans choice to fancy \$4.50@4.75; red kidney beans \$9@9.25 per cwt.

New York.—Market is dull. Choice pea, new \$5.10; do medium at \$5.50@5.75; red kidney \$9.25@9.50 per cwt.

Rye.

Detroit.—Cash No. 2 rye \$1.60.

Seeds.

Detroit.—Prime red clover \$11.25; alsike \$16; timothy \$3.10 per bushel.

Toledo.—Prime red clover, cash and February \$11.10; alsike \$15.50; timothy \$2.95 per bushel.

Hay.

No. 1 timothy \$20@21; standard and light mixed \$19@20; No. 2 timothy \$18@19; No. 1 clover mixed and No. 1 clover \$17@18; rye straw \$12@13; wheat and oat straw \$11@12 per ton in carlots at Detroit.

WHEAT

Immediately after the extreme weakness in the wheat market during the first week in February, marked strength developed which has dominated the behavior of all grain prices during the past week. The advance in wheat amounted to around twenty cents per bushel and was due to fresh export sales, to purchases made by exporters to fill old export sales for advance delivery and to a moderate increase in demand from milling centers. The decline also checked receipts, although the total holds above that of a year ago. The visible supply declined again, the total now standing at 32,250,000 bushels, a decrease of one-third since December 11, and only about one-half the average at this season of the year. As a result of the freight rate increase, smaller interior mills have been buying wheat direct from farmers at relatively low prices and supplying local flour requirements at prices below those on shipments from the big milling centers. This has resulted in the disappearance of the wheat without its showing up in regular trade channels and has also contributed to the slack demand for flour from the larger mills.

CORN

Low prices to producers have checked sales of corn and to some extent of oats. The movement from the interior continued to decline during the past week to a point below that of last year when car shortages and the railroad strikes were factors in transportation. Cash corn has developed greater strength as a result, notwithstanding a slow eastern demand. The visible supply of corn increased over 6,000,000 bushels over the preceding week, and the total is now 20,366,000 bushels. It has practically doubled within two weeks. Export demand remains comparatively slow even though prices are below those of Argentina. The contending factors in the market include the big farm holdings and the grower's need for cash on the one hand, and muddy roads and the higher value for feeding to hogs on the other.

OATS

Oats continue to follow corn. Planting is under way in Texas, Oklahoma and southwestern Kansas, and as far north as southern Kentucky. The season is a week or ten days ahead of normal.

SEEDS

Spring demand for clover seed is not yet of large proportions and the trend of the market is uncertain while await-

ing it. The next two months will tell the story as the demand subsides rapidly after April 10 or 15. The average price paid to producers during a period of years has been highest during April, according to the Department of Agriculture. Whether this will hold true this year depends on the size of the spring demand and the anxiety of producers to dispose of their rather large holdings.

FEEDS

Feedstuffs continued to decline during the past week, bran falling below one cent per pound wholesale in value both at Minneapolis and Kansas City. Minneapolis standard middlings or shorts also reached \$19 a ton wholesale. This is a much lower price than seemed possible a few months ago, and in view of the firmness developing in the grain markets it appears unlikely that prices will sag much lower, although stocks are comparatively heavy. Light production at the larger centers is offset by grinding at smaller interior mills.

HAY

The hay markets continue relatively weak although prices for the better grades of timothy are above prices of corn, oats and even some of the by-product feeds in the same market centers. Stocks in producers' hands are large, and the season of heavy consumption is rapidly passing.

BEANS

The Michigan bean market suffered another setback during the past week, due, it is believed, partly to speculative manipulation. Although the crop is light, stocks are moving into consumptive channels much more slowly than usual. Some of the members of the trade looked for \$5.00 beans, but as a result of general trade dullness and the fact that new green beans from the south will be on the market within sixty days the season of heaviest demand will be over before long.

POTATOES

Potato markets developed a show of firmness toward the close of the week, and prices advanced 5@10c per 100 pounds upon northern white stock. Chicago closed firm at a range of \$1.15@1.35 on both bulk and sacked stock.

Shipments are normal at around 500 cars per day, but indications point to a heavier movement in a week to ten days. As a result of low prices large quantities are being fed to live stock in certain sections, and early reports on the acreage in the extreme south now being planted indicate a reduction of 30 to 75 per cent in various counties. Prices are as follows: Chicago.—Round whites U. S. Grade No. 1 sacked \$1.15@1.25; bulk \$1.20@1.35 per 100 lbs. Pittsburgh.—Michigan round whites U. S. Grade No. 1 \$1.95@2 per 150-lb. sack. Detroit.—Michigan whites \$2@2.25 per 100-lb sack.

EGGS AND POULTRY

After a precipitate decline of almost fifty per cent in value, egg markets scored a moderate reaction at the close of the past week. Production has been favored by weather conditions in practically all sections. There is no prospect of any big advance, even though accumulations are not large, and advances will be of only temporary duration. Poultry prices are showing a seasonal tendency to advance. Latest quotations were as follows: Chicago.—Eggs, fresh firsts 36@36½c; ordinary firsts 33@35c. Poultry, spring chickens 30c; hens, general run 31c; roosters 22c; ducks 28@35c; geese 22@24c; turkeys 43c.

Detroit.—Eggs, fresh candled 30@34c. Live poultry, spring chickens 29@30c; Leghorns 25; heavy hens 32@33c; light hens 30@31c; roosters 20c; geese 27@28c; ducks 35c; turkeys 40@42c.

BUTTER

After reaching a condition almost panicky butter markets staged a sharp recovery toward the close of the past week. Foreign competition and an increase in domestic production were the principal factors in the decline. No new Danish shipments were reported but another cargo is on the way. Danish butter already on hand was held off the market as a result of the low prices prevailing. The surplus of butter was not as large as at first expected, the condensaries are reopening, and removing their butter production from the market supply and the decline in prices should stimulate consumption. Moderately broad demand

for fresh butter is expected to continue. Wholesale prices on 92-score butter on February 11 as reported by the Bureau of Markets were as follows: Chicago 44c; New York 44c; Boston 44c; Philadelphia 45c.

CHEESE

Weakness in butter and egg markets caused some loss of confidence on the part of cheese handlers early in the week, but with the turn for the better in those two commodities a firmer trade developed. The volume of transactions was comparatively large. The eastern markets behaved in a manner similar to Chicago. Receipts declined over 25 per cent at the four markets the biggest change occurring at New York.

CABBAGE

Cabbage shipments were lighter during the past week and prices hardened on old stock but new stock remained weak.

DETROIT CITY MARKET

Supplies are light and movement slow. Apples bring 75c@83c according to quality; cabbage 60@85c; onions 75@80c; parsnips 60@75c; potatoes 70@75c; turnips \$1@1.75 per bu; eggs 45@60c per dozen; poultry 32@40c lb; hogs 13@15c; veal 18@19c. These prices represent sales in wholesale lots.

STATE FARM BUREAU MARKET REPORT.

The market on coarse grains shows considerable improvement. During the past week there has been a sharp advance of about ten cents on wheat and other grains. Millers are buying more freely and the general market undertone is very strong, due to exports. Hay continues dull and draggy with little prospect for improvement before the new crop, as there is a large volume to move and feeding sections are overstocked. Buyers' views are very low and most sales represent loss to shippers. Clover market has declined and importations due soon and much seed in the hands of growers will prevent high market. Alsike and timothy remain firm, with only slight declines. Consignments continue to come to the seed department and large quantities are still on the farms.

NEWS OF THE WEEK.

(Continued from page 216).

ment will determine the strength of the Lloyd-George administration.—The Mongolian city of Urga is reported to have been captured by a force of Russians and Mongols.—Research work at Harvard University has made it possible to secure X-rays of much greater penetrating power than have ever before been obtained in this country.—Envoys of Soviet Russia present their credentials to Mexican communists.

Tuesday, February 15.

THE success attending the use of the chaulmoogra oil treatment for leprosy has occasioned the abandonment of some of the leper colonies.—New York garment makers are returning to work after having been out on strike one week.—President-elect Harding urges the present congress to speed up legislation.—In his address before the fifth session of the thirteenth Canadian parliament, the Duke of Devonshire declares that the principle of protection must be constantly maintained by the Dominion.

COMING LIVE STOCK SALES.

Duroc Jersey Swine.—Tuesday, February 22, Chaslen Farms, Northville, Michigan.
Sheep.—February 23, Almond B. Chapman, South Rockwood, Michigan.
Jerseys.—February 23, E. B. Myers, Montague, Michigan.
Holstein.—February 23, E. C. Smith, Ovid, Michigan.
Percherons.—February 24, The Horse Breeders' Association, M. A. C., East Lansing, Michigan.
Poland Chinas.—February 24, E. J. Matthews, Burr Oak, Michigan.
Shorthorns.—February 25, Michigan Shorthorn Breeders' Association, M. A. C., East Lansing, Michigan.
Holsteins.—March 2, Michigan Holstein-Friesian Association, Perry, Michigan.

Live Stock Market Service

Markets for February 16.

DETROIT

Cattle.

Market opened steady; prospects are lower.

Best heavy steers	7.25@ 8.00
Mixed steers and heifers	6.75@ 7.75
Best handy wt bu steers	6.25@ 7.25
Handy light butchers	5.25@ 6.25
Light butchers	4.75@ 5.75
Best cows	5.25@ 6.00
Butcher cows	4.25@ 4.75
Common cows	3.25@ 3.75
Canners	2.50@ 3.25
Choice bulls	5.75@ 6.00
Bologna bulls	5.00@ 5.25
Stock bulls	4.25@ 4.75
Feeders	6.50@ 7.00
Stockers	5.00@ 6.00
Milkers and springers	5.00@ 9.00

Veal Calves.

Market very dull.

Best	12.00@13.00
Others	4.00@10.00

Hogs.

Pigs steady; mixed hogs are	15@25c
lower.	
Mixed hogs	9.50@ 9.75
Pigs	10.75
Heavy	8.75@ 9.00

Sheep and Lambs.

Market dull.	
Best lambs	8.00
Fair lambs	7.00@ 7.75
Light to common	4.00@ 6.50
Fair to good sheep	3.00@ 3.75
Culls and common	1.00@ 2.50

CHICAGO

Hogs.

Estimated receipts today are 20,000; holdover 12,785. Market 10@25c lower. Bulk of sales \$9@9.75; tops \$10.25 (early); heavy 250 lbs up medium, good and choice \$9@9.30; medium 200 to 250 lbs medium, good and choice \$9.10@9.95; light 150 to 200 lbs common, medium, good and choice \$9.60@10.20;

light lights 130 to 150 lbs common, medium, good and choice at \$9.65@10.20; heavy packing sows 250 lbs up smooth \$7.85@8.75; packing sows 200 lbs up rough \$7.50@7.85; pigs 130 lbs down medium, good and choice \$9@10.10.

Cattle.

Estimated receipts today are 6,000. Market strong to 25c higher; calves weak. Beef steers medium and heavy weight 1100 lbs up choice and prime \$9.90@10.65; do medium and good at \$8.40@9.90; do common \$7.50@8.40; light weight 1100 lbs down good and choice \$9@10.25; do common and medium \$7.25@9; butcher cattle, heifers, common, medium, good and choice at \$5@9; cows common, medium, good and choice \$4@7.50; bulls bologna and beef at \$4.25@6; canners and cutters cows and heifers \$2.50@3.75; do canner steers \$3.50@5; veal calves light and handyweight medium, good and choice \$9@12; feeder steers common, medium, good and choice \$6.75@9.75; stocker steers common, medium, good and choice \$5.50@8; stocker cows and heifers common, medium, good and choice \$3.75@6.

Sheep and Lambs.

Estimated receipts today are 17,000. Market steady. Lambs 84 lbs down, medium, good, choice and prime \$7@8.75; do 85 lbs up medium, good, choice and prime \$6@8.50; do culls and common \$5.50@6.50; spring lambs medium, good, choice and prime \$5@6.25; ewes medium, good and choice \$3.25@4.85; ewes cull and common at \$2@3; yearling wethers medium, good and choice \$6@7.25.

BUFFALO

On this market today heavy hogs are selling at \$9.25@9.75; mediums at \$10.50@11; others at \$11@11.25; lambs bring \$9; calves \$15.50.



To neglect any discomfort of the udder or teats is costly. The slightest soreness or abnormal condition makes the cow restless and reduces the flow of milk.

Cuts, Chaps, Scratches, any congestion or inflammation can be quickly cleared up by using Bag Balm, the great healing ointment for cows. Caked Bag is promptly reduced by this softening remedy. A great aid in treating Bunches and Cow Pox.

Bag Balm, in the liberal 65c package, is inexpensive insurance against serious troubles. Keep a package on hand. Sold by general stores, feed dealers and druggists. Booklet, "Dairy Wrinkles," Free.

DAIRY ASSOCIATION CO.
Lyndonville, Vt.

BAG BALM
MADE BY THE KOW-HARE PEOPLE

Mr. POULTRY FARMER:

We make a specialty of White Henery Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henery Whites—We remit same day shipments arrive. Ship Often—Ship by Express.

GEO. R. ELDRIDGE CO.
2652-2656 18th Street, Detroit, Mich.

Remember! We guarantee your satisfaction with every shipment

HAY Ship to The Old Reliable House
Daniel McCaffrey's Sons,
623-625 Wabash Bldg., Pittsburg, Pa.

HAY Apples, Potatoes Wanted Highest
Prices Paid. Write for circular and prices.
E. L. RICHMOND CO., Detroit, Mich.



BLU-BAR HOG AND CHICK FEEDERS

Hog Houses, Hog and Chick Waterers, Colony Brooder Stoves. Write for circular and prices.
THE BLU-BAR MFG. CO.,
Dept. B., SYCAMORE, O.

NEW CROP TABLE RICE AND SPANISH PEANUTS

100 pounds in double sacks, freight collect. Beautiful whole long grain white rice \$5.00. Choice re-cleaned peanuts \$5.50. Guaranteed to reach you in good condition. J. ED. CABBANISS, Box 162, Katy, Texas.

For Sale--Frost Proof Cabbage Plants
Early Jersey Wakefield, Charleston Wakefield, Succession and Flat Dutch, at \$1.50 per 1000 express collect. Parcel post paid, 100 at \$5c; 500 at \$1.50; 1,000 for \$2.25.
C. J. & C. WHALEY, [Martin's Point P. O., S. C.]

PEDIGREE SEED OATS

Wolverine and College Success seed oats for prices. Apply THE JENNINGS FARMS, Bailey, Mich.

Mammoth Cloverseed fine quality, 1920 crop, home grown. Re-cleaned and graded. Samples \$12.00 bu. bags free. F. A. Follett, Fremont, Ind.

For Sale White Dr. W. Austin Ewalt, Mt. Clemens, Mich. for those beautifully marked Sable and White Scotch Collie Puppies; natural healers from trained stock; pedigrees furnished. Will also buy thoroughbred Collie and Airedale puppies for training.

FARM HELP

Farmer Wanted

Experienced farmer to operate a modern farm near Belleville. A man not afraid of work who knows general farming. Wife must be good housekeeper. Prefer small children. When writing state size of family, age, wages expected and experience during past six years. Milking done by machine. Cash salary monthly. Do not answer unless you are a farmer and wish permanent position. Address replies to O. H. Kiskadden, 46 Davenport Ave., Detroit, Mich.

Wanted Married Man to work farm on shares—200 acres near Davisburg, Oakland Co. Good land and buildings. P. S. WRIGHT, 229 Gratiot Ave., Detroit, Mich.

Man With Family to operate well stocked farm on shares in Oakland County. Address Box B. 219 care of Michigan Farmer, Detroit, Mich.

Young farmer, with wife and two children, wants to work on farm in south Mich. Write JOHN DAVIDSON, R. 1, Elberta, Mich.

HOGS

Brookwater Duroc Jerseys

BOARS—Ready for Service
Bred Sows and Gilts

Write us for Prices and Pedigrees. Mail orders a Specialty. Satisfaction guaranteed.
BROOKWATER FARM, Ann Arbor, Mich.
H. W. Mumford, Owner **J. B. Andrews, Mgr.**

DUROC SOWS and gilts bred to Jacks Cherry Orion King No. 16929 Son of the \$10,000 bear owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply THE JENNINGS FARM, Bailey, Mich.

WOOL

No important developments have occurred in wool markets during the past week. Sales in this country are moderate in volume but American buyers continue to operate in British and Australian markets, most of which report prices as firm. Last week arrivals of foreign wool were very large, probably representing the van of purchases made last fall. Changes in the woolen mill situation are slight but all appear to be for the better. The demand for wool centers upon the fine and fine medium grades which are not abundant. Australian markets were quoted at \$1.15@1.20 clean landed at Boston for choice 60-70's, counting sterling exchange at \$3.85. Some Illinois wool of three-eighths and quarter-blood grade was reported sold at 26@27c, Michigan combing quarter-blood at 26c, and some Ohio fine delaine at 40@41c, or around \$1 on the clean basis. Boston quotes prices as follows; Ohio and Pennsylvania fleeces, delaine unwashed 40@41c; fine unwashed 30@31½c; half-blood combing 33@35c; three-eighths-blood combing 30@31c. Michigan and New York fleeces, delaine unwashed 39@40c; fine unwashed 29@30c; half-blood unwashed 32@34c; three-eighths blood unwashed 29@30c.

LIGHT RUN HELPS CATTLE.

A SHARP reaction in the cattle market was due almost solely to a decline of about twenty per cent in receipts at leading market centers. The dressed beef markets continued on the easy side, although price reductions were not marked. The inception of the Lenten period was partly responsible and this factor in meat demand will continue during the next five or six weeks. Recovery was most marked on the better grades of steers, which advanced seventy-five cents to one dollar at Chicago. There was apparent a slight disposition to hold back unfinished kinds which have flooded the markets for nearly two months, a change which suggests that we are now entering the period when the remaining cattle are in stronger hands, and the market will display greater resiliency. If conception of numbers of cattle on feed should prove to be erroneous, and another avalanche, or even a moderately heavy run arrive, weakness will quickly develop as the dressed beef trade is in no condition to absorb a big supply. All the signs justify the counsel to hold back unfinished steers for another fifty to sixty days. Cows and heifers advanced along with steers, the better grades showing the most strength. Cannery and cutters and bulls were not helped by the advance in the other classes. Veal calves scored a fractional advance in spite of the weakness in the dressed market. This division has two or three weeks of grace before the spring runs from dairy districts.

SOUTHWEST MICHIGAN HOLSTEIN BREEDERS' MEETING.

THE annual meeting of the Southwest Michigan Holstein Breeders' Association was held at the City Club at Niles, Michigan, January 27. The program took the form of a general discussion of plans for furthering the best interests of Holstein breeders and the Black-and-White cow in Southwest Michigan. Secretary Norton, of the state organization, offered a number of suggestions and outlined a plan of constructive work for the coming year, which was adopted by the members. An entirely new board of officers was elected for 1921, as follows: President, Fred Green, Emmanuel Missionary College, Berrien Springs; vice-president, George Franz, Eau Claire; secretary-treasurer, Chester Ball, Dowagiac. The executive committee to consist of the officers, together with S. A. Smith, of Emmanuel Missionary College, Berrien Springs; Walter Dillman, of Dowagiac, and D. H. Beeson, of Three Oaks. Among other things, the secretary will keep an up-to-date list of animals offered at private sale by the members, and the state association office will be kept informed in regard to animals listed.

THE well-known Shorthorn breeders of Bad Axe, Michigan, Messrs. S. H. Pangborn & Son, report the recent sale of two splendid heifers and an outstanding herd sire prospect, sired by Perfection Heir 2nd, to Mr. M. Shupe, a well-known farmer of Elkton, Michigan. The three animals sold for \$3,000. These kind of sales help to strengthen the Shorthorn business here in Michigan.



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O. I. C's Fall pigs by C. C. Big Callaway have size and quality and are priced right. C. J. THOMPSON, Rockford, Mich.

O. I. C. Bred Gilts for Mar. and Apr farrow also a few choice service boars. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C. Gilts bred for April and May farrow. Shipped C. O. D. H. W. MANN, Dansville, Mich.

O. I. C's choice bred gilts for April and May farrow. Fall pigs either sex. Bookings orders for spring pigs. A. J. BARKER & SON, Belmont, Mich.

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70 head of Poland Chinas at private sale. Am offering spring boars from \$40 to \$50 and gilts the same price. Summer and fall pigs \$25 each. The first check will bring you the first choice. **HART, FULTON & CLINE**, Address F. T. Hart, St. Louis, Mich.

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Belgian Stallion for sale good breeder and well-broken for farm work. **W. B. STICKLE**, Three Oaks, Mich.

Belgian Stallions for sale, Imported Chestnut sorrel, age 5, weight 2200, sound; registered sorrel, age 3 sound. **J. Blackman**, Albion, Ind.

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