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VOLUME CLV. NUMBER TWENTY-FIVE

DETROIT, DECEMBER 18, 1920

CURRENT COMMENT

Farm Bureau Policies

THE Michigan State Farm Bureau has made wonderful progress during its first year. Its officers and directors are to be congratulated on the constructive work which they have accomplished. In addition to a phenomenal membership campaign much constructive work has been done along other lines, including the formation of the wool pool, the taking over and extension of the activities of the seed department, the organization of an efficient traffic department, the inauguration of a purchasing service for county organizations, the establishment of an elevator exchange as a department of the bureau, the extension of good offices in an effort to secure an equitable adjustment of the sugar beet controversy, etc. That these activities have met with the degree of success which has attended them under the conditions which have prevailed, is a matter for congratulation, not only to the officers of the organization, but to the entire membership as well.

The experience gained in the year's work should be of great value in the future direction of the activities of the bureau along right lines. The ideas of those who have directed its activities during the past year as to the proper future policies of the organization, should be given much greater individual weight than the ideas of members who have not had that experience or borne that responsibility. Fortunately this is insured by the fact that the term of service of only one-third of the directors expire each year, which makes possible a continuity of effort along any lines which may be established. But the officers and directors doubtless will welcome a general expression of opinion on the part of thinking members of the bureau who have the keenest interest in its development along constructive lines.

Conversation with many leading farmers among the rank and file of the bureau's membership reveals two separate and quite distinct schools of thought regarding the general policies which the organization should pursue in its future work. One of these ideas, and one quite prevalent among leaders of agricultural thought, is that the bureau should be the connecting business link between local cooperative organizations developed along commodity production lines or along the line of strictly local community service, since cooperative effort has reached its highest development along these lines in our own state as well as the world over. This rather generally advocated policy would result in the affiliation of existing cooperative organizations with

the bureau for the rendering of service which the central organization could best accomplish, leaving the local phases of the work to local management, and the further promotion of increased organization activities along special production and local community service lines. One of the arguments generally advanced in support of this policy is that it would be conducive to the financing of cooperative enterprises on a sounder and more substantial basis and would tend to the creation and maintenance of more general interest by keeping the direction of local activities in the hands of local memberships. Those who favor the adoption of such a policy on the part of the bureau point out that the strength of the bureau would be materially enhanced by the affiliation of the many strong cooperative organizations in the state not now connected with it, and that this plan would afford ample scope for centralized business activities without hampering the desirable influence of the central organization along other lines.

On the other hand there are many who believe in the centralization of all possible business activities in the state and county organizations under centralized direction for service along geographical rather than production or strictly community service lines. Those who favor this policy reason that the farm bureau member who is not now affiliated with any cooperative organization is entitled to the same measure of business service as is his neighbor who belongs to such an organization, and that it is the bureau's business to render it. Inversely this line of reasoning implies that the member of a cooperative organization which is affiliated with the bureau, as in the case of the elevator exchange, but who has not signed up as a farm bureau member, is not entitled to any measure of farm bureau service.

Another apparent division of opinion, and along almost the same personal lines, relates to the purchasing activities of the organization, which the one class of leaders believe should be left to local cooperation, except in a few generally used bulk commodities which can be handled in carload units, while another class champions a much more extreme and complicated buying program.

The economic business success of the farm bureau would seem to depend not a little on the wise solution of these problems. Quite probably, as is generally the case, the best solution lies somewhere midway between the extremes of thought regarding them. The most constructive program is always one which encourages the best teamwork in the attainment of the desirable end of accomplishing the greatest good for the greatest number.

Farm bureau members should think over these problems and discuss them, to the end that intelligent opinion may be so crystallized as to aid the responsible heads of the organization in their decisions regarding future policies. Do not put all the responsibility on the directors and then criticize them if the course they pursue does not coincide with your views.

Farm Book-keeping

IN another column of this issue will be found the first of a series of articles on this general subject by Professor Elliot, of M. A. C. Other articles of this series will treat on "Credit and Cash Transactions;" "Records of Dairy Cattle;" "Methods of Keeping Feed Records;" "Crop Records;" "Cost of Tractors and Other Farm Equipment;" and "Balancing a Farm Business." As the reader will note, the subject of farm book-keeping will be treated in this series of articles from the standpoint of an aid to good farm management rather than as a mere record of farm

transactions. Viewed from this standpoint, every progressive farmer will have a deep interest in the subject under present conditions, when it is even more important than ever before that an accurate check be kept on the several departments of a farm-business from the profit or loss standpoint, hence we bespeak for these articles a careful reading by every subscriber.

As a means of further aiding interested farmers in this direction the extension department of the college has planned for county or community schools for the study of farm book-keeping as related to farm management. Farmers who desire to avail themselves of this service should so advise their county agent. When twenty-five or more farmers in any county have signified their interest, Mr. Eliot will arrange to hold a brief-school of instruction for their benefit, explaining the nature and purpose of the records which have been prepared by the department of farm management for that purpose. This practical application of farm records should meet with general appreciation and cooperation on the part of the farmers of the entire state.

Farmers' Clubs Annual Meeting

THE annual meeting of the Michigan State Association of Farmers' Clubs convened in the Senate Chamber at Lansing, December 7-8. The annual banquet served by the Home Economics Department of the Agricultural College under the direction of Miss May Person, was exquisite and unexcelled. President Kedzie and faculty members, including Professors Shaw, Edwards, McCool, Eliot and others as hosts to the assembled club members were good mixers.

The Reverend Willets, of Lansing, spoke for the church at the banquet. He painted a picture of a rural community in one of the newer states which saved not itself financially, but educated its young and coupled with religious training placed a large number of its succeeding generation in places of honor and trust. The Reverend Cutler, of Grass Lake, plead for a centralized rural community with church and school as the binding tie.

President Alfred Allen, in his annual address, spoke for an agricultural program that would stabilize prices for farm products. Miss Person, of the Michigan Agricultural College, described the growth of the Home Economics Department, and impressed the necessity of a new building for carrying on the work. It is scarcely realized by many what a great woman's college has developed on the campus at the M. A. C.

Hon. James N. McBride spoke of the acute economic crisis that had come to the farmer by the decline in prices, and outlined the causes as indifference to agriculture by the present administration and no organization of agriculture to cushion the fall as is the case with other industries. Farm prices were thirty per cent above pre-war, while industrial prices were one hundred per cent above. Other industries like steel and iron, had leadership to make and meet prices, while agriculture had no outposts or guides of an economic character. An outline of plans for a national marketing association with a dozen or more warehouses and a centralized selling agency was given.

Professor Henderson, of the Department of Teaching of the University of Michigan, made a strong appeal for the county unit of schools, and stated that the city boy or girl had about two years the start of the country child in an educational way. Different communities showed varying costs of centralized schools. At best, however, the few extra dollars where such was the case, required in a consolidated school,

was a good investment. The arguments for consolidated schools were most convincing.

In the absence of several speakers scheduled for the program, Mr. McBride discussed the wool situation, showing how the difference in exchange allowed the purchase of nearly three pounds of wool in Australia with one dollar, where the same money would buy only two pounds of our wool. There is now no tariff duty on wool, and the difference in exchange acts as a bounty on imports. The release of two billion pounds of wool held by the British government had allowed continental Europe to manufacture woolen products at wages of about one-fifth of the American schedule, when exchange is considered.

Samples of blankets were shown by Mr. McBride which with ten pounds of wool in the grease plus five dollars for manufacturing, would make a pair of superb woolen blankets or an exceptional auto robe at about one-half the present retail price. Under present conditions and a new wool crop coming on, the solution of the wool-marketing problem is extremely acute.

L. Whitney Watkins described the necessity of farming being put on a business basis, and of the farmer becoming a real business man. A. B. Cook, of Shiawassee county, presented a plan of a non-partisan primary. Entry could be made by petition, a very small number of names being required. If any one candidate for governor received a majority of all the votes cast, he was then declared elected, not merely nominated. If there was no one having a majority, then the two highest candidates at the primary became the sole contestants at the regular November election.

The following officers were elected for the ensuing year: President, Alfred Allen, Mason; vice-president, Lee S. Noble, Oxford; secretary-treasurer, Mrs. I. R. Johnson, Rushton, corresponding secretary, Mrs. C. A. Taggett, Fairgrove; new directors, Mrs. J. S. Brown, Howell, and C. E. Bond, Carson City.

News of the Week

Wednesday, December 8.

THE state department concludes that Armenia needs a credit of \$25,000,000.—General Semenov, former leader of the anti-Bolshevik forces in Siberia is seeking refuge in Manchuria.—The chief secretary of Ireland declares in the British House of Commons that there can be no truce until the extreme leaders of the Irish republican army have surrendered.

Thursday, December 9.

SECRETARY HOUSTON urges the passage by congress of an income tax measure carrying a higher rate.—The Greek government addresses a note to former king Constantine asking him to abdicate in favor of the crown prince.—The immediate formation of \$100,000,000 export trade corporation is being urged by bankers, public officials, manufacturers and agricultural leaders at a meeting in Chicago.—Federal Commissioner of Education states that we lack eighty-thousand teachers in the United States.

Friday, December 10.

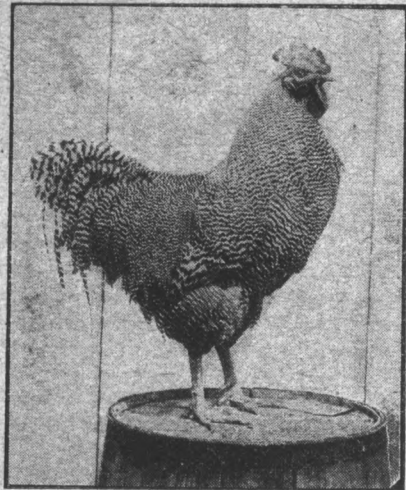
THE League of Nations votes to admit Bulgaria as a member of the League.—Desperate attempts are being made to save the International Court of Justice project.—Dr. A. Hainisch, socialist, is elected president of Austria by the national assembly.—An embargo on wool and sheep importation is urged before house and senate committee at Washington.—The car situation has so improved that there need be little apprehension as to the ability of the roads to move commodities.—London wool sales are light with a slightly improved demand for medium grades.

Saturday, December 11.

HORACE E. DODGE, auto manufacturer, dies at Palm Beach Florida.—Secretary Daniels states that the United States will probably have the largest navy in the world by 1923.—Railway traffic between Belgium and Germany has been suspended, presumably (Continued on page 779).

Breeding Poultry for Practical Utility

A Heavy Investment in Fine Buildings and Breeding Stock is Not Necessary



The American Class of Poultry Include the Plymouth Rocks.

THE fact that less than ten per cent of the specialized poultry farms in the country have been in operation more than eight years, while during the past seventy-five years the combined value of the poultry and poultry products on general farms has increased from twenty-five million to one and one-quarter billion dollars, is proof sufficient that the farm hen is as inseparable from profitable agriculture as the land upon which the crops are grown. The success of the average farm flock in converting the waste feeds into the most wholesome food products in such liberal quantities suggests almost unlimited possibilities for the farmers who will develop the business along intelligent and conservative lines. Complete success, however, will only come as a result of the use of better breeding stock, the generous use of a good variety of suitable feedstuffs and the most unremitting devotion to detail in housing and handling. The small farm flock of from two hundred to four hundred hens, well bred, well fed and well tended, will certainly coin money for those who are willing to give it a sufficiently prominent place in their farming to make the effort worth while.

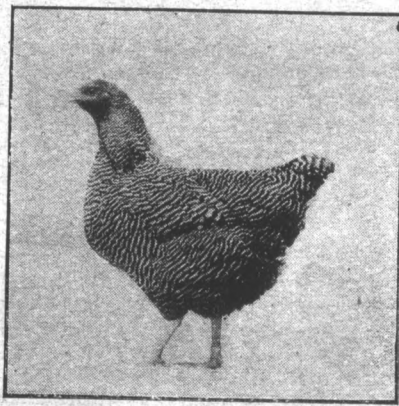
In discussing the problem of breeding for practical utility I want to make it clear at the beginning of this series of articles that I am not advocating breeding for general utility. General utility means breeding for both egg and meat production. Practical utility means breeding for a definite purpose and improving the birds along lines which shall add to their commercial value. Breeding for practical utility should be the aim of the farmer regardless of whether the flock is kept for the production of market products or the sale of breeding stock. Breeding along lines that add commercially to the value of the flock in no sense involves the formation of new principles and theories, but the direct application of those already understood and thoroughly approved. No one breed of fowls possesses all of the good and essential qualities that meet the demands of the markets at a low cost of production, yet the fowls that most nearly meet the general demands in both market and the cost of production are found within the breeds that have been bred for years to conform to a well recognized standard of excellence.

The first object in breeding pure-bred poultry is to produce products that will meet the demands of an exacting trade. The person who crosses or mongrelizes a flock of poultry for the purpose of increasing egg yields or meat production is breeding backward and intensifying the bad qualities of the birds used in the breeding

pens. Not only this, but he is failing to take advantage of his marketing opportunities and producing a grade of products fit only for the general trade.

A flock of cross-bred, mongrel fowls may serve as an ideal background for the study of "Origin of Species," but life is too short and breeding problems too complex for anyone, other than a scientist, to attempt to work the theory of evolution out backwards. One obsessed with the "57" variety idea will find pickle manufacturing more profitable than poultry keeping.

The leading breeds of poultry have been produced for the purpose of meeting the requirements of the poultry-keeper and supplying the demands of the market which he is furnishing with eggs and meat. Experiments at a number of the leading stations indicate that when other conditions are equal the pure-bred flock will produce eggs and meat at a lower cost per unit,



All American Breeds Lay Brown-shelled Eggs.

and that these more uniform products will command from ten to twenty per cent premium in any large market.

It is a difficult problem to convince the average farmer that pure-bred fowls possess an advantage over mixed birds for egg or meat production. He believes—and many times experience has shown him—that a pure-bred flock is more susceptible to disease, possesses less vitality and produces fewer eggs than mongrels he has kept for years. When such an experience is true it is the result of some unfortunate experience with pure-bred birds that possessed inferior constitutional vigor.

It is possible, however, to interest the farmer in a straight business proposition that will add from ten to twenty per cent more income without adding to the cost of production. This is the angle from which we must work to convince farmers of the superior merits of the pure-bred flock over birds of mixed breeding. It requires no long argument to convince the farmer that there are several ways of marketing standard-bred poultry. A man who has a good flock of Rhode Island Reds or White Plymouth Rocks, can sell eggs for a private family trade, a few settings for hatching under hens at \$1.00 for fifteen, eggs for incubating purposes baby chicks for market and for breeders, mature stock for breeders, for exhibition purposes and for the general market. The man with a mongrel flock has opportunity to sell eggs for the general market only, and must dispose of his surplus stock at the going market prices. Of course, he can always find a good market for good eggs, but even then eggs of uniform size, color and quality always command a premium of several cents per dozen.

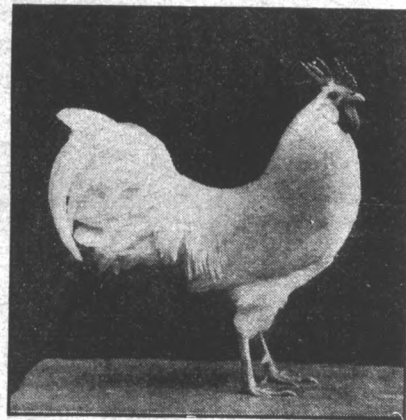
Probably the greatest drawback to the improvement of farm flocks today is the fact that mongrel and cross-bred birds will pay some profit. Even the

mongrel flock will produce quite a few eggs under general conditions on the farm—eggs that represent clear gain, since expenses and amount of capital invested are so small as to be practically nothing. And as long as a small flock of mongrels are kept and pay some profit it is easy to understand why fully eighty per cent of the farm poultry is still made up of mongrel and mixed breeding.

The remarkable success of the small farm flock has prompted many good farmers to build new poultry houses and plan to make poultry-keeping a regular branch of their farming. There is no question but that the farm affords an ideal environment for successful poultry-keeping, but when the farmer begins to devote more time and capital to poultry, he is sure to see the necessity of figuring production costs and producing a grade of eggs and meat that will command the best market prices.

The average lay of eighty eggs per hen must be doubled and the quality of the products greatly improved if modern methods of breeding, feeding and housing are practiced to the extent that is practical under general farm conditions. A heavy investment in fine buildings and breeding stock is not necessary to put the farm flock on a money-making basis, but one must have a clear understanding of the business and a willingness to give the flock painstaking care and study the results of his practice.

To dispose of the mixed flock, in vest in high-priced pure-bred stock and expensive buildings is no sane way for the farmer to embark in the poultry business. A definite plan of action is necessary in the formulating of which many things must be given proper consideration. Many poultry experts ad



Single-comb White Leghorn Cockerel.

Out of a hen which laid 230 eggs in her pullet year, and eight of her sisters and half-sisters produced as follows in their pullet year: 180, 187, 195, 196, 198, 208, 235 and 240 eggs. The sire of this cockerel is the son of a hen which laid 213 eggs in her pullet year and 536 eggs in three years. The grandsire on the sire's side, is a son of a hen whose picture accompanies this article and who laid 214 eggs in her pullet year and 654 eggs in four years.

Advise the farmer to start in a small way and gradually work into the business. The writer has made a careful study of methods best suited to developing a poultry business in connection with general farming. One of the reasons so many farmers fail with poultry is because they never get far enough into it so that they give it a regular place in their general scheme of farming. For that reason it is desirable in many ways that one start large enough to make that branch of farming of sufficient importance to give it the attention which is necessary to make the venture a success. Of course, if the farmer knows but little about poultry and feels the need of experience it

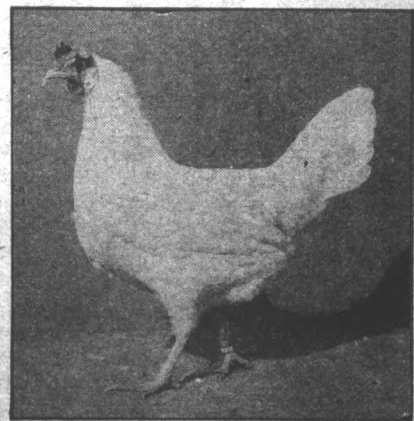
may pay to keep a small flock for a year, but that is another matter. A small flock of hens that have free range of a farm is sure to give one a rather hazy idea of the proper care of the flock, as well as of the profits one may reasonably expect from a larger business. The sooner the flock reaches the two hundred-layer mark the better the farmer who is planning to make it a profitable branch of general farming.

The experience of the writer in keeping poultry on two farms within a few miles of large cities, is that the two hundred-layer flock is the minimum that can be kept at a maximum profit. The smaller flock requires too much time per unit of production to make it worth while to give it proper attention, and when more than four hundred layers are kept it is necessary to invest too heavily in special equipment and spend too much time looking after the management to give due attention to other activities of the farm. Then, too, range problems are greatly complicated and one must spend more time looking after the sanitary surroundings if too many birds are kept on the natural range.

The breed and strain of birds does not matter unless one is catering to a special market. In some sections the white-shelled eggs command a premium of five or ten cents per dozen. Some other markets prefer eggs with brown shells. The majority of poultrymen prefer White Leghorns for producing white eggs as they readily adapt themselves to routine feeding, mature early and they certainly can lay. That there is no one best breed for egg production has been clearly demonstrated by numerous experiments. Reports from hundreds of egg-laying contests show that it is within the capacity of any of the popular breeds to make a remarkable showing. Wyandottes, Black Langshans, Rhode Island Reds, Leghorns and Plymouth Rocks have won the honors in different contests. Such results are sufficiently convincing to demonstrate that high egg production depends as much upon the man and his methods as it does upon his choice of a breed. The same thing holds good in the production of market poultry with any of the breeds possessing the necessary size and meat-making form. The small Mediterranean and other fancy breeds should not be grown for heavy table food.

When one decides to improve the quality of the poultry on his farm, the cost of the new birds frequently causes him to hesitate about making the change. Not long ago a farmer living near an agricultural college became interested in keeping better poultry, sold his flock of one hundred and twenty hens and bought forty-six pure-bred utility Barred Rocks. The small flock

(Continued on page 774).



Single-comb White Leghorn Hen which Laid 214 Eggs in Her Pullet Year and 654 Eggs in Four Years.

Congress Begins a Busy Session

Many Bills Promising Help to Agriculture, Presented—By E. E. Reynolds

THE sixty-sixth congress convened December 6, for its final session, with the senate galleries packed in anticipation of the appearance of President-elect Harding on the floor. "We are facing no easy task," said the President-elect in a brief address to the senate. "We have our full part in the readjustment of human affairs after the world tumult. We have our tasks at home, we have our part in the inevitable work of the civilized world. I am sure that the necessity of wise solution will inspire us to work together, to take common counsel, to be tolerant of one another and give the best which is in all of us to attain the ends which become our republic at home, and will maintain its high place among the nations of the earth. With propriety I cannot venture upon any suggestions now, even though I am speaking as a member of this body. Three months of the present administration remain, and I would have the house and senate join cordially in making them fruitful rather than wasted months."

Both the senate and house were prepared for an unusually busy session, with agricultural relief legislation in the forefront. For nearly a week before congress convened, daily conferences on the farming situation were held in the senate office building. All phases of remedial legislation were discussed at these conferences. The outstanding features were the testimonies of Secretary of the Treasury Houston and Governor W. P. G. Harding, of the Federal Reserve Board.

Secretary Houston said he expressed the view soon after the armistice that there would be a recession of prices, and in the January following he made a statement warning farmers and all others to prepare for just such a situation as we now have. He does not know of any feasible means that the treasury can adopt to relieve the situation that would not create a worse condition. "The facts show," he said, "that there has been no contraction of credits, also that there has been a great increase in exports during the present year."

REPLYING to Senator Norris, of Nebraska, as to how foreign countries could be financed so they could buy more American farm products, Secretary Houston said he doubted if the War Finance Corporation would help. The law says this corporation shall make loans to firms engaged in exporting. When the corporation was functioning, only a few concerns were in a position to take advantage of the aid provided, and these are the people who would get most of the benefit now by the rehabilitation of the War Finance Corporation, unless exporting firms handling farm products are organized. The \$12,000,000 exporting company in the south and the \$100,000,000 corporation now being organized in Chicago, also the \$22,000,000 live stock pool, were mentioned as being a movement in the right direction.

The secretary of the treasury did not think that the government should make loans to foreign countries on security that business would not accept. He added that nothing more fateful could happen to the nation than to embark on an unknown financial policy. "If we were to undertake some of the schemes suggested we would go to a condition with which other nations are confronted."

Governor Harding, of the Federal Reserve Board, declared farmers need have no fear that the banks would not

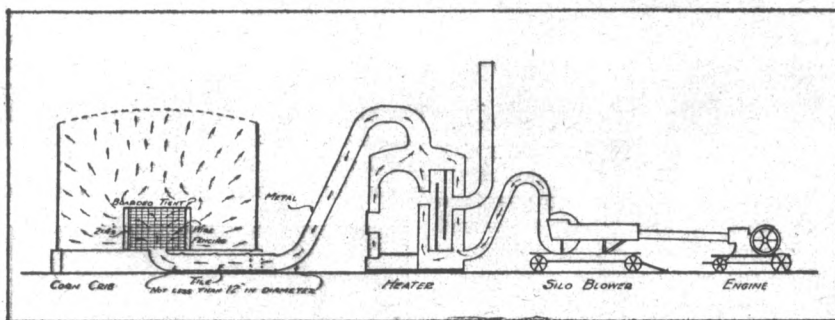
do their part and carry over loans on staple crops for which there is no market, provided the farmers would make a fair statement of their condition to the bankers. He quoted figures showing there had been no restriction on discounts of agricultural paper. The present situation on the farms was compared to a crop failure which is seriously felt, but leads to no general bankruptcy.

"Would it not be the best policy," Governor Harding asked, "for a farmer to sell a portion of his products, and hold the balance?" He could repeat this process, gradually marketing his crops. "It is impossible to do business with Germany," he said, "because her reparations had not been fixed. Germany merely signed a blank check that had not been filled in."

Referring to Senator Hitchcock's proposed bill for the relief of the cattle raisers, Governor Harding said the cattle business stands on a different basis from anything else, and demanded relief which would benefit everybody in the nation. Senator Hitchcock's bill provides for the enlargement of the powers of the farm loan banks to enable them to make direct loans running as long as two years to cattle men. This would result in great good and would relieve the banking situation.

Governor Harding opposed the plan

and blackboard and put out of business thousands of bucketshops, by making it impossible for gamblers to deal on boards of trades. The bill imposes a tax of ten per cent of the value of the property covered by such contract upon all contracts for future delivery except when made by farmers, dealers or manufacturers who are buying and selling for actual delivery. Records must be kept of all transactions and a report made by both buyer and seller to the collector of internal revenue. Persons making such contracts must also register with the internal revenue collector for the district in which he has his place of business. A penalty equal to fifty per cent of the tax levied and in addition a fine not exceeding \$10,000 or imprisonment for not more than one year, is imposed upon violators of the act. Senator Capper says, "there is not the slightest doubt that the gigantic raid made by the bears on the Chicago Board of Trade was the chief cause of the recent disastrous slump in the price of farm products. The farmers have already lost more than a billion dollars by the bear raid. Brokers and commission houses have cleaned up over forty millions in margins and commissions alone. The lambs who play the market have lost more than one hundred million dollars in the last ninety days in speculating on cotton and wheat."



Iowa's Plan for Curing Soft Corn is to Force Heated Air into the Bottom of the Crib by Means of Silo Blower and Furnace.

of issuing certificates on wheat in warehouses. He argued that the rate per bushel loaned would set the price for the wheat or other products; that the loan value and commodity value of a product are inseparable. In answer to the charge of profiteering by the Federal Reserve Banks, Governor Harding gave figures showing that these banks had earned 6.9 per cent on their capital stock of \$100,000,000 and the reserve balances of banks amounting to \$1,800,000,000.

While Secretary Houston and Governor Harding professed sympathy for the farmer in his present plight, it was plainly evident that the farmers need not expect any remedial action on the part of the federal treasury or the Federal Reserve Board. Congress will undertake to pass several bills aiming to help the farmers in securing financial aid and marketing their products, but there is little expectation that any measure which will in any way change the present financial policy of the administration will receive the sanction of the executive department.

SENATOR Capper's bill providing for the levying, collection and payment of taxes upon contracts for the future delivery of grain, grain products and cotton, and options for such contracts, will stop gambling in wheat, corn, cotton and other farm products by making use of the taxing power of congress. It will eliminate the wheat pit

Every city and town in the United States has its victims. The pure function of boards of trade is valuable, but when gambling becomes not merely an incident of such trading, but the main part of the business on the boards of trade as we find it now, it is time for the government to take a hand. These exchanges must be placed upon an honest basis and compelled to contribute to the security of business and the welfare of the country. I find all grain and cotton dealers, millers, and spinners recognize the evils of the present system and are anxious to stop gambling in farm products." Senator Capper introduced his bill in the senate on the second day of the session, and a similar bill was introduced in the house by Congressman Robert E. Evans, of Nebraska.

Representative T. H. Caraway, of Arkansas, has introduced a bill in the house to eliminate gambling which he claims has an advantage over Senator Capper's bill in that it would not be necessary to maintain a large number of officials to enforce it. His bill denies the use of the mails and all other means of communication to persons gambling in farm futures. Violations of the proposed law would be punishable by a fine of \$10,000 and imprisonment from six months to two years. The Caraway bill prohibits any transactions in farm futures except where a farmer desires to sell his crop standing in the field. And this transaction

is restricted so that both the seller and purchaser must contemplate the actual delivery and acceptance of the crop itself.

Notwithstanding the opposition of Secretary of the Treasury Houston and Governor Harding to the rehabilitation of the War Finance Corporation, the joint senate and house committee investigating the agricultural situation has ordered a favorable report on the concurrent resolution of Senator Norris, of Nebraska, directing the secretary of the treasury to revive the activities of the War Finance Corporation, and that said corporation be at once rehabilitated with the view of assisting in the financing of the exportation of agricultural products to foreign markets. The Federal Reserve Board is also directed to take such action as may be necessary to permit the member banks of the federal reserve system, in accordance with law and consistent with sound banking, to grant liberal extension of credit to the farmers of the country upon the security of the agricultural products now held by them by permitting the rediscounting of such notes of extension, at the lowest possible rates of interest.

Two bills were introduced by Senator A. B. Cummins, of Iowa, relating to the agricultural situation. One amends the farm loan act so as to permit the extension of short-term loans to farmers on agricultural products. The other requires the department of commerce to make immediately available reports from commercial attaches as to agricultural conditions in foreign countries.

A BILL imposing tariff duties of forty-five cents a bushel on imports of wheat, and \$1.80 a bushel on flour, was introduced in the house by Representative Tincher, of Kansas, and a similar bill was introduced in the senate by Senator Capper. Representative Steenerson, of Minnesota, has a bill in the house imposing a tariff of thirty cents a bushel on wheat, \$1.35 a barrel on flour, and thirty per cent advalorem on other wheat products. Congressman Steenerson also introduced a resolution in which he calls upon the Federal Trade Commission to investigate alleged violations of the anti-trust laws through the operations of foreign governments in the grain markets. "One of the causes for the recent slump in the price of wheat," according to Representative Steenerson, "was the dumping upon our markets of millions of bushels of Canadian wheat and several million barrels of Canadian flour free of duty. On account of the difference in exchange this gave the Canadians a bonus of fifteen to thirty cents on \$2.00 wheat. It is a clear case of manipulating the market by artificial means and the Underwood law which allows wheat and flour to come in free, has been used as an instrument in this manipulation."

Senator Smoot, of Utah, has introduced a bill placing an embargo on wool, and Representative Sinnott, of Oregon, has a bill putting an embargo on wool, including retroactive duty from December 6, 1920. If Senator Smoot's bill becomes a law, sections of the act of October 3, 1913, levying duties upon articles manufactured from wool and admitting the importation of wool and wool waste free of duty, will be suspended and the importation of wool, manufactures of wool, wool wastes and wool on the pelt will be prohibited until such time as the act shall be repealed.

Feed Prices Uneasy at New Low Levels

Just How These Markets Stand is Told by Sanders Sosland

FEEDSTUFFS are cheap, but markets are not yet firm at the extremely low levels, largely because of a lack of credit for making purchases. It is true that many feedstuffs are selling below the cost of production, but even this does not mean that the bottom has been reached on markets in view of the powerful financial deterrent confronting buyers and the consuming trade generally. Only when banks are in a position to lend more freely and when they are not facing so generally as at present the necessity for liquidation of loans, will feed markets develop a stronger tone. Money, in other words, is the dominating factor in the trade in feedstuffs.

Practically every feed was carried down in the depression in prices of the past month. As the pressure of new crop offerings increased in the country, corn fell to the level prevailing at this season in the year which marked the opening of the world war, around a cent a pound at middle west terminals. Millfeeds declined around \$4.00 to \$5.00 a ton, cottonseed cake and meal are off about \$10 from the quotations of a month ago, linseed feed is down \$6.00 to \$7.00 a ton, alfalfa meal and alfalfa molasses feeds are off more than \$5.00 a ton. In the market for alfalfa, tame and other varieties of hay, quotations are only slightly lower than a month ago, having shared a small upturn before the renewed depression set in. The forage trade, however, is doubtless in a weaker position than other feedstuffs.

The strained financial situation is probably being felt most by the forced liquidation of cattle and other live stock to meet maturing obligations. On some middle west markets recently the glut of cattle has been so serious that appeals have been made to country shippers temporarily to check any further loadings. And, despite the enormous supply of various feeds available in the country, there is a remarkable absence of an active demand for stocker and feeder cattle, due, of course, to inability of producers to obtain funds with which to purchase stock. This necessarily is forcing a contraction in the demand for feeds. There is also strong pressure to force the sale of corn, oats, hay and other feeds from farms to meet loans. Cottonseed crushers who normally would now be accumulating large stocks of cake and meal for the spring and summer trade and for possible advance in prices, also are forcing their products on the market as rapidly as possible. With few exceptions, the crushers have not the credit facilities to permit tying up thousands of dollars in stocks. Every branch of the feedstuffs trade, including the manufacture of commercial feeds, is affected by the strained credit situation in the United States.

WITH country dealers bidding farmers only thirty-five to forty cents a bushel and as low as twenty-five to thirty cents a bushel at some distant interior middle west points, and the prices on markets down to a cent a pound, the trade is naturally reluctant to express bearish convictions on corn. Of course, the coarse grain already is at a surprisingly low level, but it is not so cheap that still further declines cannot be recorded. Some of the observers of trade conditions who still manifest a bearish attitude toward the corn market recall that during previous periods of business depression and industrial readjustment corn sold well below the level prevailing today. But hogs at that

time were far below the present basis, cost of production was considerably less and the purchasing power of the dollar was much greater than today.

Most attention in the corn trade centers around the probable extent of the sales by farmers. Certainly the market will break further if a normal heavy winter run of corn is witnessed. There is a serious lack of absorptive power on terminals, particularly for corn. Practically no important consuming section in the country is short of feed, at least markets have not yet discovered a board outlet in any section, either in the east, southeast, south or in other territories. Even the export outlook is not promising. But farmers are not manifesting any eagerness in disposing of their surplus production on the basis of the current prices; in fact, the purchases by country elevators since the completion of harvest have been of an extremely light volume. Whether the farm selling will continue of a small volume is doubtful, however. Farmers are be-

lieving rather than a bulge upward in corn. Even the coarse grain may go down further, but the feeder will probably make no mistake in buying his needs of the cereal around a cent a pound.

The trend of prices for oats hinges almost entirely on the fluctuations in corn. The grain can now be bought as low as forty cents a bushel on some middle west markets, with the quotations in Chicago at the present writing between forty-five and fifty cents. Reluctance of farmers to dispose of their products at current prices is being reflected by the small oats movement to markets, but demand for the grain is of such a small volume that the scant arrivals fail to impart any strength to the trade. The exceptionally mild weather over most of the country has materially reduced the demand for oats, and cheaper feeds are being substituted as much as possible. A marked change in weather conditions, which may be expected at this season, would tend to further restrict the movement from the country and at the

as possible and substituting cheaper products. For this reason, interior mills have shared a light demand from feeders in their own community, thus pressing greater stocks upon the market, and, in the face of the small output over the country as a whole, the jobbing trade has reported quite liberal supplies available.

Bran is selling in Minneapolis around \$27 to \$28 a ton, sacked, for carlots on prompt shipment orders, and as low as \$25 for December and January. In Kansas City, another important millfeed center in the west, the lighter offal is bringing between \$26 and \$27 a ton for prompt shipment, \$25 to \$25.50 for December, and down to \$24 for January delivery, basis that market. Chicago quotes a range of \$30 to \$31 a ton, and in St. Louis the range of prices is between \$30 and \$32 a ton for both hard and soft winter supplies. The market on bran is off about \$3.00 to \$4.00 a ton between the two wheat feeds, the smallest in the past two or three years. Indicative of the extreme weakness in shorts is the offering of the brown or standard middlings at an actual discount under bran, while a premium of as much as \$15 a ton has prevailed on the cheaper grade of shorts in the last few months. Minneapolis quotes brown shorts around \$25 to \$26.50, and in Kansas City around \$26 to \$27. The heavier offal is around \$35 to \$36 a ton in the northwest, \$37 to \$39 in Chicago, \$34 to \$35 in St. Louis and \$31 to \$32 in Kansas City.

MILLFEEDS are in a rather peculiar position. The stocks in mill hands and in consuming channels are not large, and a moderate demand, which now is lacking, might easily cause a turn in prices. Still, dairymen and other users of the offals apparently have sufficient stocks on hand to meet their current requirements and will probably not lend any strong absorptive power to the market. Speculative operators as a rule are seeking to force prices down to a parity with feeds as a whole, and they will be successful in such a venture so long as the real consuming trade is holding off. The prospects are not bright for a further increase in the demand for flour, therefore production will remain light.

Cottonseed cake and meal are at the lowest level in more than five years, well under half the quotations at the high point of the crop year and hardly a third of the level at this time a year ago. Even at the current extremely low prices, it is difficult to gather any enthusiasm for the bull side after a study of the influences surrounding the trade. Rangemen and other cattle operators are buying very sparingly, the occasional spasmodic improvement in demand failing to hold for more than a very brief period. Manufacturers of commercial fertilizer and mixed feed interests also are buying on a very small scale, the sharp contraction in demand for both the fertilizer and various mixed feeds forcing a curtailment in the purchases. Exporters, who before the war provided the principal outlet for cottonseed cake and meal, are today buying on an insignificant scale, with the few inquiries showing bids far below the market.

On the Memphis market cottonseed cake and meal of thirty-six per cent protein content is selling around \$29 to \$30 a ton. At Little Rock where both prices and freight rates are on a better basis for the Michigan and surrounding trade, offerings of forty-three per cent protein prime cake and

Purdue's Team Wins at 1920 International



Bottom Row, Left to Right.—(Regular Team): M. P. Mitchell, H. R. Hofford, P. J. Brown, R. G. Fordice, G. L. Fisher. Top Row, Left to Right.—Prof. W. W. Smith, Coach J. M. Lilly, and Alternates, G. G. Buford and A. K. Mackey.

beginning to realize that they will have a large surplus on hand and rather than carry loans, pay tax and allow the grain to deteriorate and shrink, many are placing their corn in commercial channels. Inability to buy cattle and hogs for fattening purposes, increasing the surplus of corn to be available for markets, will have a tendency to stimulate the movement.

ONE of the strongest arguments in favor of a maintenance of corn values or even higher prices is the fact that the coarse grain is far under a parity with other feeds and too low compared with wheat. Bran and shorts are selling above corn, an abnormal situation, and even some grades of alfalfa and tame hay are considerably above the leading feed grain. Wheat is more than twice as high as corn, though normally the differential is about a third to a half greater. Before the price pendulum halts, such a disparity must disappear, but it can be accomplished by a further readjustment downward of other commodities

same time broaden the consuming outlets. Other feeds, of course, would share in a stiffening of prices on this account.

Buyers rather than sellers, or demand rather than supply, are the governing force in the bran and shorts market. There is no doubt but that production has not in recent years been of such light volume as now being experienced, due, of course, to the chaotic and panicky condition in the flour trade and the extremely light demand for the breadstuffs product. Small output of the offal has been the only factor which permitted prices to be so well sustained during a period of depression in other feeds. Not a few producers of hogs in Michigan and surrounding states have paid within the past month around \$40 a ton for gray shorts and at the same time were unable to dispose of their new crop corn at more than \$20 a ton. This is a ridiculous disparity, and explains why consumers have been so reluctant to buy both bran and shorts, feeding the wheat feeds on as small a scale

meal can be had at \$30 to \$31 a ton. The Texas market ranges down to \$27 a ton, and \$29 a ton in Oklahoma, a full decline of about \$10 a ton the past month. Quotations are below \$40 a ton in the important feeding sections in the middle west. Usually at this season of the year crushers accumulate stocks of cottonseed feed for next spring and summer requirements, during which season mills seldom are operated owing to cleanup of seed holdings. This year, however, mills almost generally over the south are making no effort to accumulate cake and meal, but are forcing their production on the market as rapidly as possible. While due in a measure to lack of credit facilities, the action of crushers reflects bearishness on the part of the trade. There is an extensive long interest in the market for the high pro-

tein feeds, and without an outlet to consumers, the speculative trade is in a tight position, which explains in a measure the weak tone in prices.

LINSEED feed is also weak, nor has it reached bottom. Restricted production in the northwest, and the absence of pressure on markets by mills have served to sustain prices more or less, but this has merely prolonged the period of declining prices. Prices are holding around \$47 to \$48 a ton at Minneapolis and on about the same basis at Buffalo, showing a loss of about \$6.00 a ton in a month. Linseed feed still is out of line with cottonseed cake and meal, a strong competitive feed, and the price of oil meal is far, far out of line with corn and oats. The product should not now be accumulated; in fact, it seems wise to substitute

other feedstuffs for oil cake and meal so far as possible. A \$40 market for linseed feed at Minneapolis is more than a possibility.

HAY prices have yet to strike a bottom. There is an enormous surplus of hay, particularly alfalfa, in the country, which has been further increased by the excellent late fall weather and use of wheat fields for pasturing stock. The south would now be a willing buyer of alfalfa and tame hay, at least so far as her own stocks are concerned, but the cotton planter is discouraged over the radical depression in his staple and is unwilling to pay virtually the same price for hay as a year ago. Even the central states feeder is buying alfalfa and other hay sparingly, using more corn and fodder, owing to the saving. Never before

has there been such a wide disparity between the price of hay and corn, the forage being actually higher than the feed grain. On the largest market, Kansas City, fancy alfalfa is selling up to \$27 a ton and about \$17 to \$20 for ordinary shipping alfalfa. Kansas City quotes prairie hay at an extreme range of \$7.00 to \$15 a ton, while in Chicago timothy is bringing up to \$32 and the cheaper grades down to \$23. Alfalfa in Chicago is selling around \$25 to \$34 a ton. Before the close of the crop year, and possibly before the feeder enters the spring season it is possible and even probable that some grades of hay will be selling at \$5.00 to \$8.00 a ton lower than the current quotations. Producers who have surplus hay will profit by selling as quickly as possible. The prospective buyer, on the other hand, will profit by holding off.

American Farm Bureau Federation

Proceedings of Meeting at Indianapolis—(Continued from last week)

THE second annual meeting of the American Farm Bureau Federation, held at Indianapolis, December 6-8, was numerically and dynamically an epoch maker. This gathering of more than one thousand representative farmers, with perhaps one hundred farm women, from all parts of the United States recalled that other period of constructive agricultural organization following the Civil War, when something big had to be done to preserve American agriculture on a basis of opportunity equal to other vocations. In that previous period there started those great American agricultural projects, the Grange and the Farmers' Union, which have had such a far-reaching influence. These agencies prepared the way for this new conception of one great national farmers' organization to be the medium for joint action of diversified agricultural groups.

President Howard's Address.

The ovation that greeted President J. R. Howard, of Iowa, the head of the organization, as he opened the meeting and again as he delivered his annual address, showed the high esteem in which his service in directing the development of this movement is held throughout the whole American agricultural world. Mr. Howard said that one of the important achievements of the organization has been winning the confidence of other interests. Another is the reduction of the railroads' twenty-billion-dollar valuation of their property, on which they asked a guaranteed dividend of six per cent, so that it saved farmers over \$100,000,000 in rate increases. Another achievement was more favorable rulings, regarding farmers' income tax returns, and United States treasury approval of the use of a farmers' account which enables farmers readily to determine the necessary data for making their income tax returns. Mr. Howard suggested that the American Farm Bureau Federation should take steps to provide a cooperative or marketing secretary with an able corps of assistants to give especial attention to working out marketing problems. He said that the executive committee is ready to start this work at once. He reported that the farm bureau executive committee recommends having an agency in every foreign agricultural nation for obtaining reliable data in regard to world supply of crops and agricultural conditions which would affect American agriculture. A director of organization is a new feature proposed for the farm bureau.

Speaking of the losses of American farmers by the slump in prices, he said that corn growers had lost over four billion dollars in the last year, grain farmers in all had lost over sev-

en billions, while the losses of wool and cotton growers also mount into the billions each. Last week three-eighths wool sold in Chicago for twelve cents a pound, where last year it brought sixty-three to sixty-five cents a pound. And two thousand fat sheep, that cost \$10 a head to bring through the winter, netted their owners at their sale in Chicago last week only thirty-four cents a head.

Banks loan to farmers for the production season and require payment when the harvest is over, regardless of whether the grower can market his

so much an agricultural policy as we need a national policy that will enable agriculture to articulate fairly with the policy of every other industry."

Railroad Rates.

Clifford Thorne, the expert employed by the American Farm Bureau Federation to investigate the transportation problem, presented an elaborate report and recounted the experience in securing the reduction of railroad valuation mentioned by President Howard. Mr. Thorne reported that the findings showed that the earnings of the railroads in the three-year period

agricultural counties cannot afford to pay their share of through roads which the state and federal government should pay. No state should receive federal aid until it has met the amount fifty-fifty. He urged the American Farm Bureau Federation to assist with its counsel and advised definite suggestions in letters to congressmen.

Plan of Action.

Dean Davenport, University of Illinois, declared that at the outset the one big job of the organization would be to choose the wise, broad road and not try to shoulder every petty burden that everybody would try to load onto it. A big business deserves a broad view. He declared that all of the farmers' problems are not going to be worked out by the dirt farmer. The problems of agriculture touch all lines of enterprise and must be worked out in conference with them, but the interest of the dirt farmer must always be kept plainly in view. What we need is steadiness in prices rather than high prices. Agriculture can stand heavy losses provided they are properly distributed. Those who have their farms paid for can stand such losses as in recent months, but those who are still in debt are compelled to suffer. The American Farm Bureau Federation has been wise in paying attention to selling and not so much to buying; to reaching the world's markets rather than reaching the consumer. The business of distribution is a distinct line of effort and farmers cannot operate it, but they can bring influences to help control it. The business of producing must not suffer in order to share in distribution.

Looking Ahead.

Milo D. Campbell, of Michigan, commented on world conditions and the heavy immigration from other lands that is now imminent. He declared that American farmers are beginning to study economics. They knew the greatly increased demand for their products and wonder if it is not time to speak for themselves, not through the medium of a political party, but through the political media already provided. The literary test for immigrants was branded as a failure inasmuch as the most adroit criminals are naturally the best equipped mentally. He urged thorough methods of Americanization. There is no surer way of making an American of a foreigner than through his children. He urged liberal support of the public schools, urged all farmers' organizations to get together and cooperate in the interest of agriculture and that especially the membership should support the officers in their work.

County Agents.

Mr. M. L. Mosher, president of the (Continued on page 756).



President Howard.



Gray Silver.

crops or not. Then the banks take the money that they have called in from the farmers and loan it out to city interests which are thus enabled to hold the farm crops they bought on a glutted market, for high prices at the expense of both the producer and the consumer. The remedy for this is some method of financing farmers so that they can hold their crops themselves and sell them in an orderly manner.

Mr. Howard pointed out the failure of the federal reserve banking system as an aid in this respect. He says it is fine for bankers and commercial interests but not a farmers' aid. Less than one-tenth of one per cent of the discounts through the federal reserve system are agricultural paper, though the Chicago branch did run about seven per cent, most of which was, however, farmers' pay for implements re-discounted by manufacturers. The federal reserve bank law must be amended to give farmers equal consideration with other business. Otherwise farmers must organize a banking institution of their own.

Mr. Howard said that the agricultural policy of our country has been to protect industry and educate the farmer. "Let's reverse it," he added tersely. "I do not believe that we need

ending 1919 were greater than in any previous three-year period in the history of the country. It was these findings which secured reduction of the railroads' own estimate of their capitalized value.

Deep Waterways.

Governor W. L. Harding, of Iowa, who has been actively interested in this proposition, asserted that the completion of a waterway for ocean vessels, from the Great Lakes to the ocean by way of the St. Lawrence River is of tremendous importance to both producers and consumers. It will get inland products to our eastern seaboard far cheaper than by rail, will afford a direct route for middle west products to world markets, and will relieve railroad congestion. He said that the undertaking would cost approximately \$300,000,000, which should be borne jointly by the United States and Canada. He argued that this waterway can be made a revenue producer by development of hydro-electric projects.

Highways.

Henry Shirley, secretary of Federal Highway Council, stated that three groups were fighting, each for its favorite plan of road improvement. He said we are wearing roads out faster than we are building them. Many ag-

Present Status of Dairying

*The Industry Suffering from Over-stimulation
During the Period of the War*

SINCE the recent decline in prices of farm products the financial status of the dairy farmer has changed. He has managed to ride the stormy sea with smaller losses than feeders of beef cattle, sheep and hogs. Because the dairy cow can return an immediate income, the dairy farmer has cashed in on his high-priced grain feeds and a portion of the labor charges required to care for and produce the supply of food crops for his herd before prices for dairy products hit the toboggan.

The fact that the modern dairy cow produces a steady income and gives quicker returns for her supply of feed than other kinds of live stock is causing many farmers to look upon her from an altogether new angle, more especially those who have fed other kinds of animals with a view of selling them during the present period of slumping prices.

Likewise the farmers who depend upon the sale of grain, hay and special crops for their income are finding it difficult to meet the present situation without serious losses. On the other hand, the farmer with a herd of good dairy cows and young stock coming on is in a position to conduct his business along conservative lines for a few months until feed and labor prices adjust themselves to the new order, and then go ahead as though nothing serious had happened. Farming is a business that cannot avoid the assumption of financial risks, but the thoughtful farmer can so plan his crop growing and live stock feeding methods that a severe slump in prices at any one season of the year will not result in severe losses for the entire year's business. Any system of farming adapted to the present economic conditions should be elastic enough to permit of certain changes that will enable the owner to avoid these periodical depressions in prices and make it possible to regulate the business so that one may go ahead with increased production when the markets will take care of the surplus. This is a phase of dairy farm management that should be given careful consideration by all persons who are anxious to stabilize markets and prevent a small surplus from reducing prices below the cost of production.

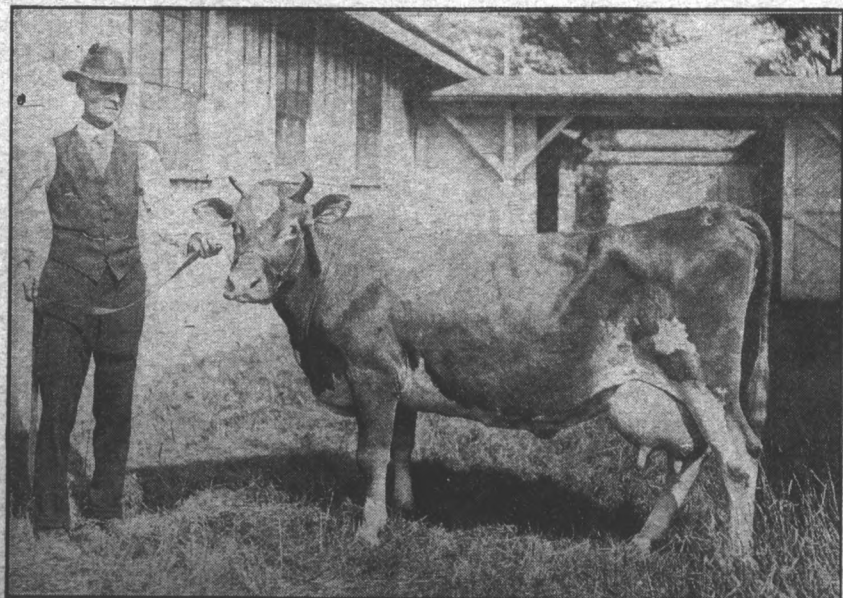
It is not the purpose of the writer to defend the interests that are back of the movement to club down prices of farm products, but rather to point out some of the advantages of dairy farming and a mixed system of crop production over those that depend upon selling the products of the soil and

feedyards at certain seasons of the year when other interests are bearing the market.

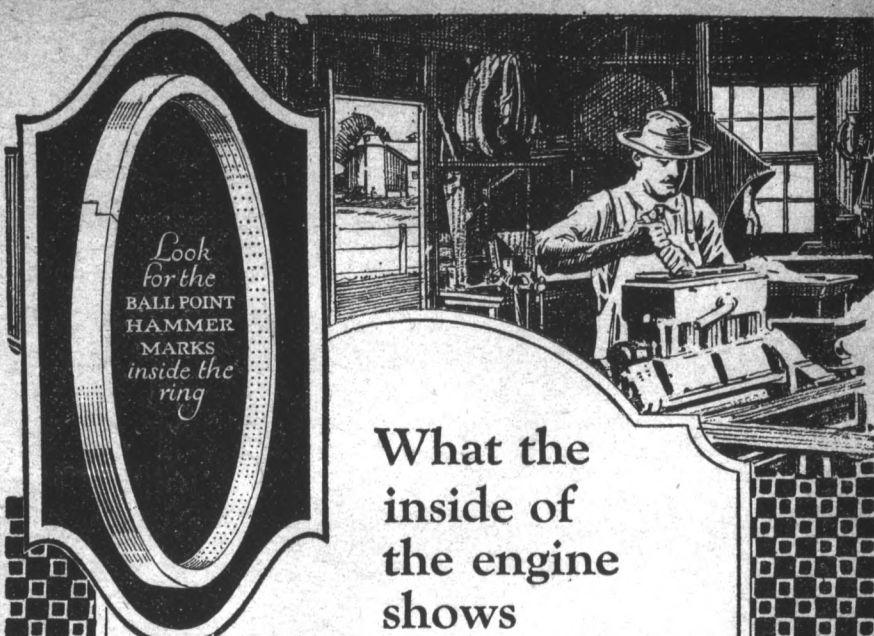
THE present time affords a fine opportunity for dairy farmers to cull out some of their unprofitable cows and raise a few good heifer calves to replace the min the milking herds. With condensaries closed, and the demand for whole milk lighter than at any time within the past three or four years, one can dispose of every inferior cow to good advantage and use sufficient whole milk and skim-milk to raise good calves at a lower cost than has been possible at any time since the beginning of the war. And by the time these heifers come into production the demand for dairy products will be sufficient to take care of the supply at profitable prices. By replacing all of the low producers in the herd with young cows from better producing dams and pure-bred dairy sires an increase of one thousand pounds of milk per cow per year can easily be made from the same quantity of feed. Such a movement on the part of dairy farmers in general would lower production costs and put the industry on a more substantial business basis. The dairy farmer who keeps a lot of inferior cows and depends upon his milk producers' organization to hold up prices sufficiently for him to realize the cost of production plus a profit, has little reason to complain if his hired men shirk, or if labor unions demand shorter hours and more pay.

During the present period of low prices many dairy farmers could avoid certain losses through feeding more legume hay and corn silage, and cutting down on the amount of grain feeds. Unless the price of milk and cream is sufficient to yield immediate returns in the milk check it will rarely pay one to feed more than enough grain feed to carry the cows along in good, thrifty condition. Grain prices are sure to come down unless milk and meat prices advance, and it will pay the dairy farmer to wait for these prices to resume their normal relationship before feeding his cows for maximum production. He is in a better position to cut down on his grain rations than the feeder of beef cattle, sheep and hogs.

By cutting down the number of cows in the milking herd and growing more heifer calves the labor problem will automatically solve itself at a time when the herd is being developed for more profitable milk yields. Along the same lines more land in meadows and pastures would enable the dairy farmer



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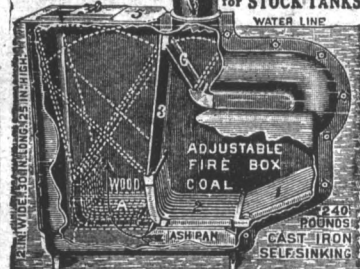
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to carry his young stock at reduced costs and give some of the fields an opportunity to recover from the heavy cropping of the past few years. Clover and alfalfa seed is cheaper than at any time within the past few years and there is absolutely no excuse for neglecting to seed these soil improving crops on fields where their beneficial effects are needed to restore the land to its former state of productivity.

ANOTHER question worthy of the consideration of many dairy farmers is that of producing one or more special cash crops that may be grown with the several crops grown in the rotation to furnish food for the cows. In many instances the growing of these special crops will aid in cutting down labor charges against the dairy herd and add substantially to the net income from the farm. In other cases the profits from the farm may be augmented by adding a flock of good sheep or poultry without materially increasing operating costs. At the present

prices for dairy products but few farmers can show sufficient net income from the dairy herd to meet operating costs and leave a satisfactory net income.

Naturally the dairy farmer feels that he has as much cause for complaint in the recent slump in prices as the live stock feeder or grain grower. He was encouraged to keep more cows and increase production at a time when the propagandists were urging people to use dairy substitutes and conserve food for the allied armies and starving people of Europe. Everybody told him there would be a tremendous demand for his products from abroad; that there was no danger of declining prices so long as the people of Europe were starving. Having responded to the appeal he now finds himself without a sufficient demand for the products he has produced. How can he plan his business so as to reduce losses to a minimum?

It is the writer's judgment that the dairy farmer must learn to play the

game as all other business men have learned to play it, or he will get no relief. He must reduce his production for the immediate future, study conditions for himself and plan his business so that he need not feed his cows up to the limit of production every month in the year and take chances on the market. He may not be able to hit the nail on the head every time, but he will come much closer than he ever has in the past. He surely cannot afford to produce up to his limit every year on high-priced feeds and take his chances on the market.

This over-stimulation of the dairy business has been a bad thing for the dairy farmer. In the long run it will prove a bad thing for the consumer. The manufacturer of dairy products can close his plant and hold up the prices for his products. In the meantime the producer is forced to compete with a still greater surplus. Unfortunately he cannot stop production entirely, but he can cut it down suffi-

ciently to minimize some of the losses due to over-production.

The individual dairy farmer, while in a much stronger strategic position than the feeder of beef cattle, sheep and hogs, or the grower of grain and money crops, so far as being forced to market his products at certain seasons is concerned can never accomplish much toward improving marketing conditions in general until he realizes the necessity of getting together and forming a national organization. This will mean putting up money and employing competent men to study into these things for them and then conducting their business according to the results of such studies and investigations, intelligently interpreted. Then they will find it possible to regulate production according to the probable demand. This is the policy which eventually must be followed by producers of all agricultural products if farming is to survive and maintain its place among our leading industries.

W. M. K.

American Farm Bureau Federation—(Continued from page 754)

National Association of County Agents, emphasized the importance of the County Farm Bureau keeping its membership in line with the big movements of the state and national federations. He pointed out the danger of slighting the educational work of the farm bureau to promote commercial work, the overhead cost of which is often overlooked. However, he declared that the farm bureau could develop commercial agencies but when they were on a successful footing they should be turned over to a separate business organization. He urged the value of pursuing definite lines of work of local importance and urged increased facilities for vocational education without overcrowding the state universities.

Washington Office.

Hon. Gray Silver, of West Virginia, in charge of the Washington office of the federation, recounted achievements through that agency. Among them are discouraging the Nolan land tax bill; securing cars for moving crops and otherwise helping to get transportation out of its tangle; developing favor for the collective bargaining, truth-in-fabrics, packer control and other bills bearing upon agricultural welfare. When the railroads were about to borrow of New York bankers operation money at nine per cent, the federation interceded and secured the money at seven per cent, thus saving the American public which would have had to pay the extra per cent, because the railroads were to get their six per cent dividend plus cost, and were not concerned about the rate of interest on operating money.

Rural Credits.

Congressman A. F. Lever, of South Carolina, spoke on rural credits. He stated that for a business representing twenty-five billion dollars the business of agriculture had received too little brain as compared with the brawn devoted to it. He made a special plea for giving farm wives and daughters an opportunity to get out and change their views and get some real joy out of life. The American farmer needs to know more of how to sell his products rather than how to produce more. We must have orderly marketing. The lack of a piece of credit machinery is the great obstacle to such a procedure. The federal reserve act has been a great stabilizer but its first concern is to aid industry and commerce. Section 13, however, makes special recognition of the needs of agriculture in that it offers paper of ninety days' maturity. The federal farm loan act extends as much as forty years' time on farm paper. Its constitutionality has been contested, however, and its activities have now been held up for eight

months. In the present emergency tying up the federal farm loan system is almost a crime. (A voice suggested to leave out the "almost.") He declared most bankers to be progressive and constructive but wished farmers to be not dependent on anyone for credit. Even with the impending court decision the farm loan bonds have suffered less than any other class of securities. If warehouse certificates will sell readily they will furnish ample basis for short-time credit. No system was suggested for live stock financing.

Credits for Export Trade.

Willis H. Booth, of the Guarantee Trust Company, New York, spoke on credits for export. He declared that the banking interests would command respect and support only so long as they deserved. The whole story of foreign credit hangs around the stabilization of exchange. If there is need for neighborhood credit the banks should furnish it. If further credits are needed for foreign trade the federal reserve system should furnish it. England has an extensive system of trade acceptances which has been the mainstay of her foreign finance. It is being used to a reasonable extent in this country. Whatever we do to increase foreign trade nothing must be done to increase exchange margins. Under the plans of the Edge bank act debentures may be sold for ten times the capital, which is one hundred million dollars. Thus at least one billion dollars will be afforded to assist in extending foreign trade. The plan is to move the crops of all sections of the country through this channel. About fifty-five per cent of our export trade is in products of agriculture. In most foreign countries credit is sadly impaired. The debentures of the proposed system will be offered in small denominations and will make good investments. One-third of the board of directors will be farmers.

The credentials committee reported thirty-four member states and thirty-two represented at this meeting by sixty-five delegates.

J. R. Howard was re-elected president of the American Farm Bureau Federation. For vice-president, O. E. Bradefute was elected. He is a successful farmer of Ohio, who is well-known as a specialist in Angus cattle breeding. The members of the executive committee from the middle west district are: Howard Leonard, of Illinois; John Brown, of Indiana, and Charles H. Gray, of Missouri.

Many Resolutions Passed.

Thirty resolutions passed by the sixty-four voting delegates at the Indianapolis convention indicate the needs and wishes of the farmers today and

especially in reference to the credit and market situations, the combination of which is forcing many farmers into bankruptcy. The resolutions committee indicated that the resolutions were in line with the policy of the federation to secure economic justice for the farmers and to promote the interests of the farm bureau members.

The resolutions, in abbreviated form, follow:

The influence of this organization which is a potent factor in our national life will be materially extended and reflect itself over rural America in a more significant manner by the admission of women to membership and they are invited into full participation in the task of advancing the cause of American agriculture.

We favor the construction of a Great Lakes-to-the-Sea Deep Waterway route.

We reiterate our sympathy is with the laboring man and we will do everything in our power to aid him to secure just wages and fair working conditions for efficient services rendered. We are, however, concerned in assuring orderly and lawful protection to every citizen and we are unalterably opposed to organized strikes and sympathetic lock-outs which interfere with the orderly conduct of business.

We invite all other farm organizations to cooperate with us to the fullest extent in our efforts to promote and safeguard farm interests.

We highly commend the good work of the home demonstration and county agricultural agents.

Recommend State Farm Bureaus appoint committees to study taxation questions.

Reiterate unalterable opposition to any kind of daylight saving law.

Request President-elect Harding to appoint as secretary of agriculture a man in full sympathy with agricultural policy advocated publicly by President-elect Harding.

Marketing Matters.

There should be no further delay by the American Farm Bureau Federation in establishing a bureau of research for the purpose of collecting and interpreting facts and figures dealing with the production of farm crops and live stock, and for the fullest inquiry into conditions which influence the law of supply and demand, for information and guidance of members in marketing.

Endorse work of the Farmers' Marketing Committee of Seventeen and approve the demand it has made that the grain exchanges be opened to cooperative commission companies; demand a similar privilege for live stock and cooperative commission firms.

Urge upon congress enactment of legislation prohibiting practice of short selling in agricultural products.

Request congress enact legislation to bring under federal inspection, supervision and control of all inter-state agencies which prepare for consumption meat and grain products.

Declare that the farmer is entitled to compensation for his services equal to cost of efficient production and a reasonable return upon his capital invested.

Request Department of Justice and Federal Trade Commission that no action be taken on any plan for disposal of stock yards until the committee of fifteen has an opportunity to examine all such propositions.

Request no further delay in national legislation assuring farmers full, free and unrestricted right to bargain collectively.

Request congress for appropriations to Department of Agriculture for enlarging service of the Bureau of Crop Estimates.

Demand of congress prompt enactment of law compelling clothing and fabrics containing shoddy or other substitutes for virgin wool to be plainly marked as such.

Request of congress the enactment of a tariff law at once which will give to the farmers of America that measure of protection which may be necessary to equalize the difference between the cost of production of farm products in this country and the cost in competing nations, where land is cheap and living conditions far below the standards which prevail in the United States.

About Credit Situation.

We are opposed to the policy of drastic and precipitated deflation, which seems to have been instituted by our Federal Reserve Board and our treasury department, and look upon it as dangerous to the best interests of the entire nation during the present crisis. Reasonable contraction was necessary but drastic deflation as now practiced has caused widespread disaster.

Request cooperation of all banking and commercial interests in our effort to get immediate relief from the present economic crisis by extension and renewal of farmers' obligations in order that there may be orderly marketing of this year's crops.

Recommend that the American Farm Bureau Federation legislative bureau consider the important subject of rural personal credits.

Approve provisions of the Federal Farm Loan Act and demand amendment increasing loan limit to \$25,000.

(Continued on page 779).



GIVING REAL SERVICE.

NOT long ago a group of farmers came to the office of the traffic department in Grand Rapids one evening and said they had sold apples under contract to be shipped on a certain day. If they failed they would forfeit their sale. The local railroad had refused to take the shipment, giving the reason that it had no cars. The traffic commissioner telephoned to railroads here and there and finally persuaded one of them to get one car placed. The next afternoon the car was there and the men filled their contract.

A different kind of service was given to a community of live stock men who were forced to ship their live stock about fifty miles to a feeding point and then send it with other shipments, incurring the extra cost of unloading, loading and feeding. The traffic department secured an extension of the live stock run so they could ship direct to the eastern market from their own town without having to unload at a short distance away. The law is very explicit in regard to feeding stock in transit every thirty-six hours. A study of this particular situation showed that the fifty miles could be included in the thirty-six-hour run.

Celery growers in Washtenaw county faced a big loss when they needed thirty refrigerator cars and the railroad was unable to furnish them with any. When the traffic department was appealed to it hunted for available cars of many roads and finally got some extra equipment from the New York Central. The thirty cars came a few days late but in time to save the crop for the celery growers of that locality.

An unusual instance of traffic department service is found in the case of a local cooperative association which wanted a sidetrack. They had their building plans all made and had asked the railroad to put in a track, which under the law, a railroad is required to do if it can be proved that enough business will be done to make the installation of the track profitable. The railroad had refused to put in the track. The cooperative association had then appealed to the United States officials at Washington who had turned the matter over to a regional committee with headquarters in New York. This committee had put the proposition up to the railroad in question which a second time turned it down, thus completing the whole ring of officials with nothing accomplished. It was at this time that the traffic department was asked to help. Several attempts failed but finally the carrier agreed to put in the track. According to its understanding of the regulations of that railroad, the cooperative association asked for a refund of two dollars a car on each car handled until the sidetrack was paid for. Again the railroad refused to act. It was not until the traffic department showed the officials a letter signed by the freight traffic manager of that railroad directed to the divisional freight agent calling attention to the two dollar refund that the association was able to get its money.

In buying breeding stock it is best to remember that cockerels will bring the best results with hens, while cock-birds can be mated with pullets. But it is the hens that lay the eggs and the best results will be from the hen-cockerel mating. Often buyers of breeding stock purchase pullets when they would do better next spring if they had purchased yearling hens which would be able to produce more plump chicks than the pullets.

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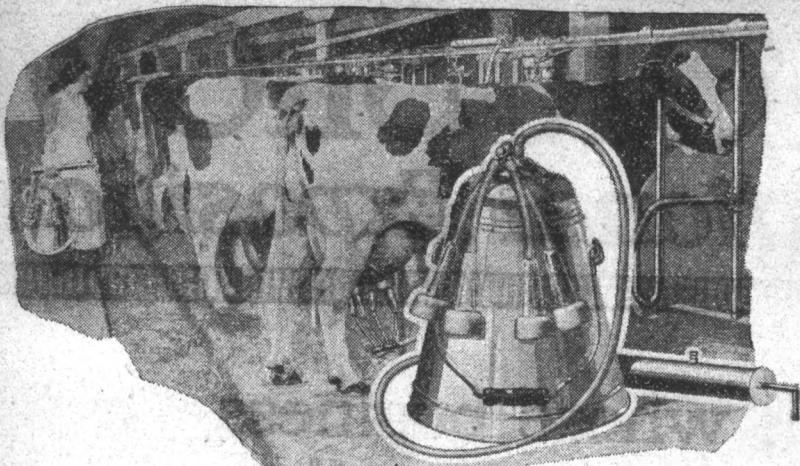
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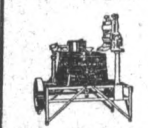
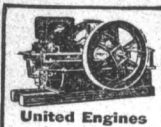
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Inventory Shows Savings

By H. M. Eliot, Farm Management Demonstrator, M. A. C.

WE haven't very much to show for yet begun and the amount of feed on our year's work," said John Gun addressing his wife at the supper table. "Sometimes I think it would be a good thing to have a sale and go to town and work for those attractive city wages."

"We have had our living," answered the more optimistic member of the family, "and our house rent, and besides we have made a payment on the mortgage. And then there is that binder note you paid off. Our farm is nearer paid for, we own our farm machinery and have more cows than we did a year ago."

"That is all true," said the farmer, "but I had to hire money the other day to go to the farm bureau meeting. If we have made any money it is hidden from sight."

After this conversation had taken place Mr. Gun decided to take an inventory each year so as to know how much he is saving. The following is a summary of two inventories taken a year apart and show how earnings may be covered up in various parts of the farm business.

In this inventory summary the horses, sheep and feed have decreased slightly, and the other items show an increase. The dairy herd has increased considerably, machinery and tools have been added to during the year,

and the amount of feed on hand is much lower than on December 31. This means less trouble in estimating feed on hand. Indeed, from the standpoint of figuring feed, May 1 or even June 1, would be better still. However, aside from the easiness of figuring feed there is no reason for taking an inventory at any other time than on the last day of the calendar year.

While inventories are easy to take they are also highly valuable. An inventory when taken will tell how much one has saved during the year. Indeed, it is often encouraging to take an inventory of what one has and thus compare the amount one owns with what one owned on some former date. In almost every case this will show an increase in the amount of property owned. Very often what one has saved is not always apparent, as shown in the summary above. It may have gone into increased live stock or into the payment of a mortgage or into new equipment, and an inventory is the best means of showing such hidden gains.

Inventories are also useful in making income tax returns and in figuring returns on live stock. But both of these points will be discussed in later articles.

Undoubtedly inventories are the

Inventory Summary.

Items.	Value, Dec. 31, 1918.	Value, Dec. 31, 1919.	Increased Inventory.	Decreased Inventory.
Horses	\$ 400	\$ 350	\$...	\$ 50
Dairy cattle	827	1,260	433	...
Hogs	125	156	31	...
Sheep	321	309	...	12
Poultry	100	110	10	...
Machinery and tools	521	745	224	...
Feed and supplies	960	897	...	63
Bills receivable	125	200	75	...
Real estate and buildings	10,000	10,000	...	...
Bank balance	378	412	34	...
Bills payable	1,500	550	950	...
Totals			\$7,757	\$ 125
Increase in inventory value				1,632

and the outstanding bills against the farm have been decreased \$950. The farmer's inventory from various sources shows a net increase during the twelve months of \$1,632. By thus carefully taking an inventory a farmer may know what he has saved during the year and without an inventory it is very difficult for him to tell what progress he has made.

An inventory may be defined as a complete list of the property a person owns, together with the value of each item on the list. Taking an inventory is not difficult. On the average farm it is about a day's work. At any rate it will probably require a day the first time an inventory is taken, but the second inventory can be taken in less time than the first, as nearly everything will be already listed and will need only to be checked over.

WILL GROW LUPINES.

THE date of taking an inventory is of sufficient importance to merit some consideration. There are reasons for taking an inventory on December 31 and other reasons for taking it on April 1, or even later. December 31 is the last day of the calendar year and an inventory taken at that time fits in well with the closing of the year's business, and furthermore the United States Department of Internal Revenue strongly prefers to have the farmer's business year end on December 31 when an income tax payment is involved.

The reason, on the other hand, for taking an inventory on April 1 is that at that date the spring's work has not

J. A. Doelle, of the Upper Peninsula Development Bureau, has laid in a supply of lupine seed for planting next season on some of our sandy lands as a test of the suitability of this forage crop for this section of the state. Mr. Doelle is much encouraged by a recent expert opinion that lupine does best on an acid soil, which is characteristic of some of our sandy areas.

CLOVERLAND POTATOES MOVE.

A shipment of four carloads of potatoes from Cook's on the Soo Line to Chicago and Cleveland, is reported from Manistique. The transaction was effected through the Cadillac Exchange.

True Value

DAIRY FEED-STOCK FEED



Winter Profits From Dairy Cows

Winter Profits from Dairy Cows depend upon the economy of winter feeding. Economical feeding in this case does not mean feeding a small amount of feed, nor does it mean feeding the cheapest feed obtainable. It means that combination of feeds that will produce the most profitable results at the least cost.

True Value

True Value Dairy Feed is a combination of those nutrients which the dairy cow can most **profitably** transform into bodily maintenance and milk. The cow uses the energy received from the feed **first** for bodily needs and **then** produces milk from the balance. Some nutrients can be used most profitably for body maintenance and others for milk production. Hence, it is absolutely necessary to have the **exact balance** of nutrients to make the most profit.

In True Value Dairy Feed we have combined **only** those nutrients which the Dairy Cow can convert into vital energy and milk **at a profit**. The profitable cow will not fatten on True Value Dairy feed but she will maintain her **highest** standard of bodily vigor—produce her **maximum** amount of milk—and return the **greatest** profit on the **money** invested.

True Value Stock Feed Like True Value Dairy Feed is a profit making feed. It is designed first of all for young stock. That is, it will furnish energy for plenty of rapid growth and development and still not fatten. Because the nutrients in True Value Stock Feed are directly available for use, the development of young stock is made at a wonderful profit.

True Value Stock Feed forms the base for a very profitable dairy ration when used in combination with silage, ground corn or oats and oilmeal or cotton seed meal. Ask your dealer for True Value Feeds. If he cannot supply you write us.

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LIMESTONE PRODUCTS CO.,
133 W. Washington St., Chicago.

New Crop Table Rice

Producer to Consumer. 100 pounds beautiful clean white table rice in double sacks, freight prepaid to your station \$5.50. J. Ed. Ocanalis, Box 162, Katy, Texas

News from Cloverland

By L. A. Chase

HOW many people live in the upper peninsula of Michigan? From the mass of statistics of population put out by the United States Census Bureau during the past few months, it has been possible to compile the aggregate for that portion of Michigan lying north of the Straits of Mackinac, and the figure stands at 336,383, compared with 325,638 for 1910. In Gogebic county a notable increase of some ten thousand population has occurred—a county in which mining and agricultural progress has taken place in the last decade; while Houghton county, while it remains the most populous county in the northern peninsula, has lost more than 16,000 inhabitants in the ten-year census period, owing to serious depression in the copper industry following the close of the war. Marquette county has second place with 45,786—a loss of about one thousand inhabitants. As to cities and villages, Ironwood, with 15,739 inhabitants, tops the list in spite of Escanaba's claim to be the metropolis of Cloverland, as proclaimed by an electric sign near the Chicago & Northwestern Railway station in that city. Escanaba is dissatisfied with its showing of 13,103. Marquette with 12,718, and Sault Ste. Marie with 12,096 are close rivals.

The United States Weather Bureau has established a new upper peninsula volunteer station—that at Sack Bay, Delta county. Miss Adella Elliot, one of three sisters engaged in operating a successful farm at Sack Bay, has been appointed local volunteer weather observer. This location is an old, well-developed farming community twenty or thirty miles off the railroad, with its outlet to market by way of the lake to Escanaba, or overland to the Soo Line railroad. It is in a sense one of the most isolated agricultural communities in Michigan, but it presents a pleasing, well-kept appearance, and the underlying limestone affords excellent soil conditions where it doesn't come too close to the surface. The late fall means a good deal to these farmer folks of the Garden peninsula, for it delays the close of navigation by which most of their marketing is done.

The Marquette County Farm Bureau has received inquiries from southern Michigan County Farm Bureaus regarding fenceposts. Plans are formulating for satisfying these inquiries through the County Farm Bureau here. On the other hand, orders for clover and other seed are being placed with the State Farm Bureau through this county's organization. An Ishpeming township farmer obtained a carload of hay through the Chippewa County Farm Bureau and estimates a saving of \$140. Many Marquette county locals are placing orders for feed. Several of these locals have become incorporated under the State Act of 1903.

The Iron County Agricultural Commission, reports the Farm Bureau News Letter of that county, is to start a stump-removing campaign and the work will begin, it is stated, as soon as the new county agent is settled in his office. The example of Marinette county, Wisconsin, is to be followed. Each farmer is to be asked to stump at least four acres. Land-clearing associations among the farmers will be formed to promote this work. The commission is to purchase powder in carlots and re-sell to the farmers at cost, it is stated. A fifty per cent saving is thus to be secured, it is planned. The work will go forward under expert direction, if such is desired. The agricultural commission's plans are, ambitious, for they comprise financing

this work, where such is desired, and in addition a soil survey of the county's farm lands. The Iron county board of supervisors at its annual meeting, appointed an agricultural commission of three to cooperate with the county agricultural agent and promote the agricultural policies of the county. County Agent Long has gone to Muskegon county in a similar capacity. The agricultural commission is now in quest of a new agent and is in communication with the Michigan Agricultural College to this end. It is not easy to obtain such an agent who is acquainted with upper peninsula problems and sympathetic towards them. Meanwhile the commission is keeping the office open and has divided its work into three departments: of land clearing and soil survey, of community work, and of farm production. The Iron County Agricultural Commission means, among other things, to get after the township officers through the agricultural agent, with a view to the enforcement of the laws relative to the destruction of noxious weeds. The production of potatoes free from disease is also to be promoted by this commission.

Alger county has perfected the organization of its County Farm Bureau. The objects to be sought by the farm bureau are stated to be "to encourage better and more economical methods of production, secure better results in grading, packing, advertising and marketing farm products; to purchase farm supplies in large quantities in a cooperative way and lease, purchase, erect, own, sell and control real and personal property as needed; to cultivate the cooperative spirit in the community and to perform any other work that will tend to the betterment of the members and the uplift of the community."

Baraga county has similarly completed its organization under the Michigan Act of 1903.

The purpose of the recent farm bureau conference held in Marquette is given as follows: "To acquaint county agents and farm bureau representatives with policies of the bureau and to define relationship between local organizations of the farm bureau and county agents who represent the state college in agricultural extension work." A resolution was adopted for presentation to the state executive committee of the State Farm Bureau, as follows: "That a branch office be established in the upper peninsula to assist the County Farm Bureaus in a business and educational way." This resolution illustrates again how different are the two sections of Michigan, calling for a difference of treatment of the problems confronting the two portions of the state and the agencies that are to deal with these problems. Such a branch office of the State Farm Bureau, it seems to be agreed, should be located at Marquette or Escanaba. The selection of the person in charge of the branch bureau and of the location, it is recommended by the conference, should have the approval of the county bureaus and county agents. It is expected that this proposal will be taken up at the annual meeting of the State Farm Bureau to be held in Lansing in February. The proper and necessary relationship of county agents to farm bureau activities was explained at this Marquette conference, bringing out the ruling of Mr. R. J. Baldwin, director of extension work of the Michigan Agricultural College, to the effect that county agents may assist in forming organizations of farmers and in giving instruction and advice, but may not take upon themselves business responsibility or act as officials of local organizations.

ENSILAGE AS A FOOD.

One of my neighbors who feeds silage to his cows told me that they gave twice as much milk when fed corn silage, but that it would test only half as much. And one of my other neighbors said it did not increase the flow of milk. Which is right? My hogs tear holes in the cement floor as soon as I feed them corn for a few weeks while fattening. What is the cause and what can I do to prevent it?

Muskegon Co.

A. C. K.

Corn silage has now been used so many years under so many different circumstances that its value as a food cannot be questioned. It must be understood, however, that the corn plant is not a balanced ration. It does not contain a sufficient amount of protein and should never, under any circumstances, be fed alone but always in combination with other foods. In the first place, it is a succulent food and should have some dry forage with it. Then, as stated above, it is a carbonaceous food lacking very much in protein and some food must be fed in connection with it that will increase the per cent of protein in the ration.

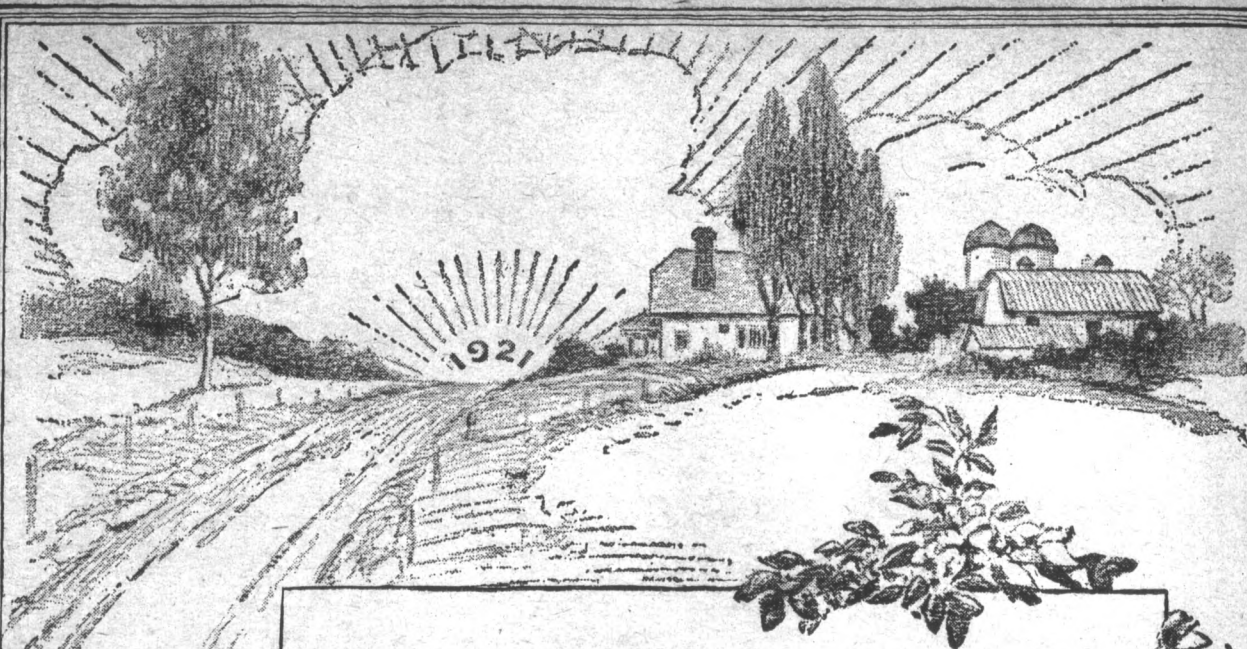
Now, there can be nothing in this idea of ensilage increasing the flow of milk and lowering the per cent of butter-fat. The ration has practically nothing to do with the richness of the milk. You cannot increase or diminish the per cent of fat in milk by changing the ration. The quality of the milk is fixed by breed and individual characteristics. Two cows standing side by side in a stable, fed exactly the same ration, will produce milk varying materially in quality. For instance, a Holstein cow might give only two and a half or three per cent milk, or a Jersey or Guernsey cow standing beside her and fed in the same way, would give five per cent or six per cent milk, so the ration has nothing to do with it.

Another man states that ensilage does not increase the flow of milk. One cannot answer this intelligently without knowing the other foods in the ration. Properly combined with other foods, ensilage does increase the flow of milk.

Ration Lacks Mineral Matter.

It is quite common for hogs, when confined and fed largely on corn, to act in this way. They will actually eat holes through the cement floor. They will eat wood or almost anything. This is the result of faulty feeding. Corn alone will fatten hogs but if the ration is continued for any considerable length of time hogs will not remain healthy. There is a craving for something else. The ration is not balanced. It lacks sufficient mineral elements and also protein.

If, in connection with corn, you will feed tankage which balances up a corn ration, hogs rarely have this craving appetite. It can be satisfied largely by feeding them wood ashes containing plenty of charcoal, or even soft coal. Even growing pigs that are confined in the winter time where their ration is partially balanced with skim-milk or tankage, ought to have hardwood ashes and charcoal. Charcoal assists in digestion. Even some people have to use charcoal. Often we purchase coal slack and throw it by the shovelfull into the pens and the pigs will eat it all up. In this way you can satisfy the craving of the pig so that he will rarely destroy the pen. A certain amount of salt should always be included in the ration of any animal. Where the portion is fed in the form of a slop salt can be used every time a new portion of slop is mixed. For instance, if you were feeding ground barley and middlings made in the form of a slop, salt should always be added to this. If you are feeding nothing of this kind, then salt and ashes can be mixed together and kept so the pigs can have free access to it.—C. C. L.



Over Another Threshold

SOON you will put the calendars of a new year up on your walls. You have weathered the labors of the past four seasons—with what benefits and damages you recall full well. Now the cycle of a new year looms ahead, and we must prepare to gather the fruits of 1921.

It is a time when conservative manufacturing enterprises and business houses are reviewing the past, taking stock of resources, and building future campaigns. Leaks are stopped, needs are reckoned with, and plans are made with extreme care.

Winter is the best time in most sections for complete farm inventory, for overhauling machines and making repairs, for accurate reckoning of profit and loss, for planning crop changes, for discarding old habits and considering new methods.

Every farmer knows this. It is good to see that there is more and more definite planning of full year's work at the close of every December, on the farms of America. It is so easy a matter to slide through the comparative resting period of Winter, and then Spring with its hundred duties bursts forth and finds many important matters and details unattended to.

We are glad to note this trend toward business-farming because we hope to be allied with Agriculture many more years and because our interests are so closely mingled with the interests of the farming world. So then, while we are setting our own house in order for 1921, we pause to publish the hope that you, the reader, may set forth into a new year of farming enterprise with all plans laid for a most profitable twelve-month.

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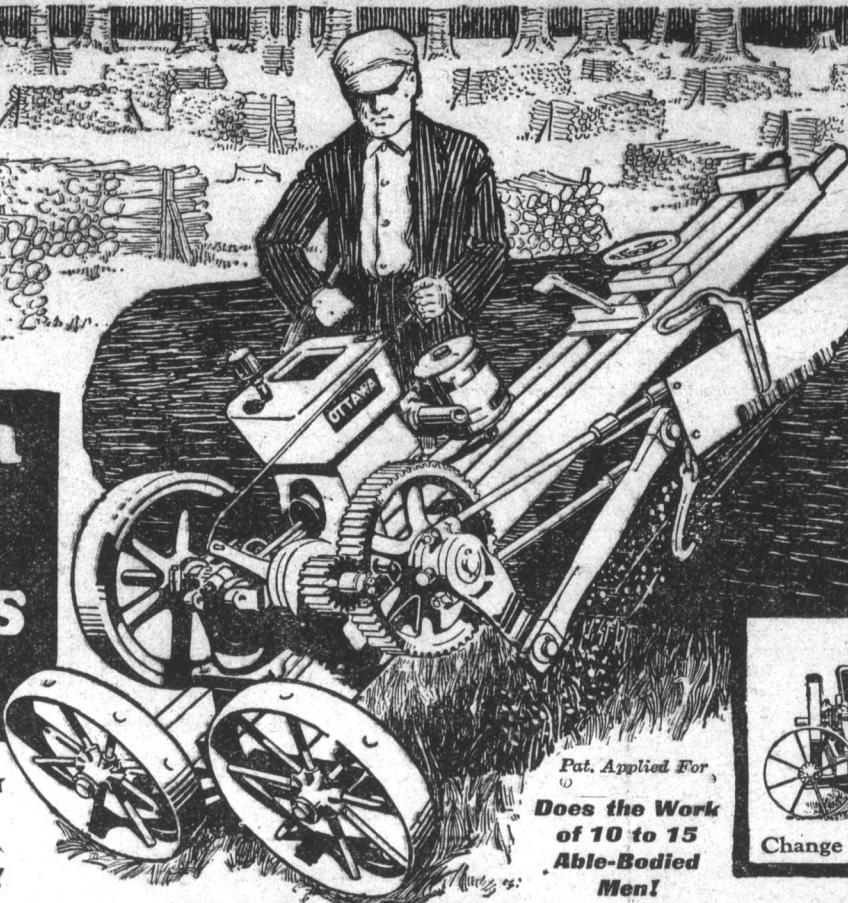
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Friction Clutch lever controlled, roller bearing, enables you to start and stop saw blade without stopping engine. Saves time and provides absolute safety in moving saw from log to log and from cut to cut along the log! No dangerous swishing of the saw blade in the air! Second clutch provided as a safety clutch to prevent accident if saw blade should bind.

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Read These Letters!

Cut 150 Cords in 5 Days in Rain

The Ottawa Engine Log Saw I purchased from you last spring is a great success and a necessity to a timber man. I used it about 6 days and cut 150 cords of wood and on awful rough and muddy ground, during that awful rainy weather last spring, and also I had a lot of bad small timber to work up.—Gus Bulla, Ottwell, Ark.

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The Ottawa is a wonderful machine. Mine works fine. It is a labor saver, and I would not take anything for it, if I could not get another. I can give affidavit that the Ottawa will do all you recommend it to do. I can't praise the Ottawa too highly, for it is simply a little giant in the timber. It does not get tired of its work. Rain or shine, it keeps at work.—G. Kiechert & Bro, Monticello Florida, Route 2.

Greatest Labor-Saving Machine

The Ottawa is one of the greatest labor-saving machines on the market. Anyone can operate it satisfactorily. Sawing down trees is a pleasure and to saw a log into varied lengths, it cannot be beat. I strongly recommend it to anyone having trees to fell or logs to saw.—C. Christensen, Osage City, Mo.

Saws in a Creek—on a Hillside.

I consider the Ottawa Log Saw one of the greatest labor savers on my farm. Have had it in all kinds of places—in a creek, on a hillside—it is almost impossible to find any position in which it won't saw.—Stanley Watkins, Morrow, O., R. 2.

Pulls Over 4 H-P. The New Improved 1921 Model cuts much faster than other mounted Drag or Log Saws. Makes 310 Saw Cuts a Minute—Over 5 each second. Weighs 100 pounds less than any other 4-Cycle Log Saw built. Easiest to move and operate of all log saws. Counter-balanced Crank Shaft eliminates vibration; increases power and saves fuel. Direct gear drives saw; no chains to tighten; no keys; no set screws. 4-Cycle Frost Proof Engine. Built-in Magneto—no batteries ever needed. Automatic Governor with Speed Regulator. Eccentric gives saw human rocking motion, keeping cut free from saw dust. Outfit strong but simply built. Nothing to get out of fix. When not sawing, engine runs pumps, feed grinders, or anything requiring 4 H-P.

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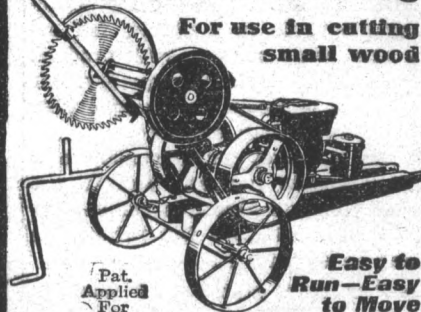
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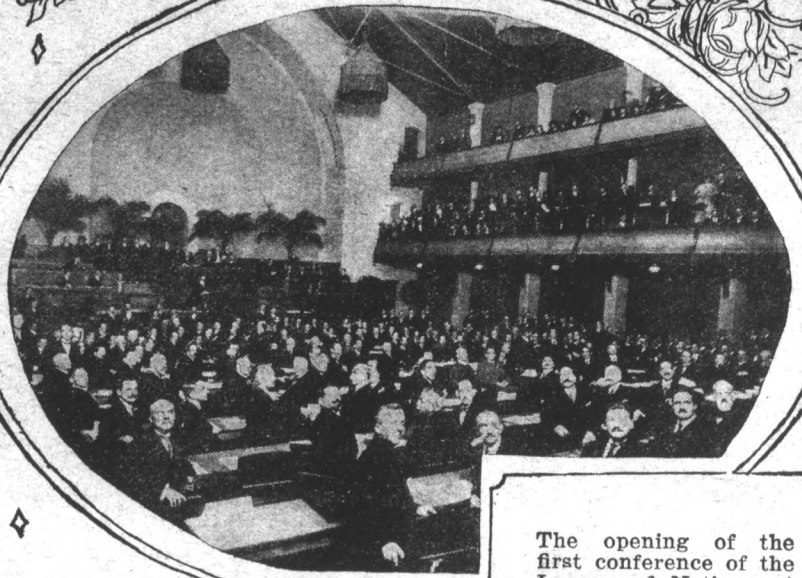
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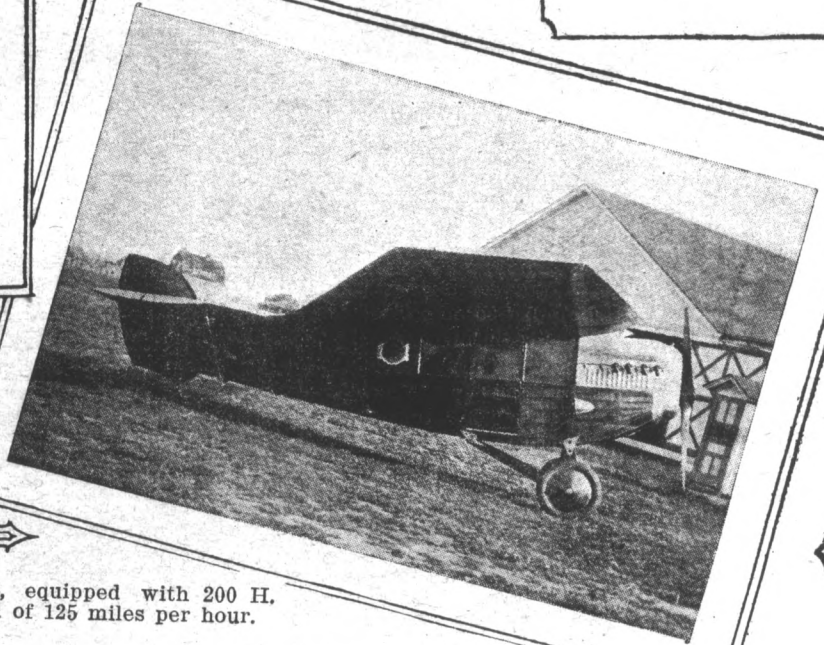
WORLD EVENTS IN PICTURES



In twenty minutes this famous sculptor made the likeness of the well-known Bohemian violinist who has captivated Italy and South America and is now touring this country.



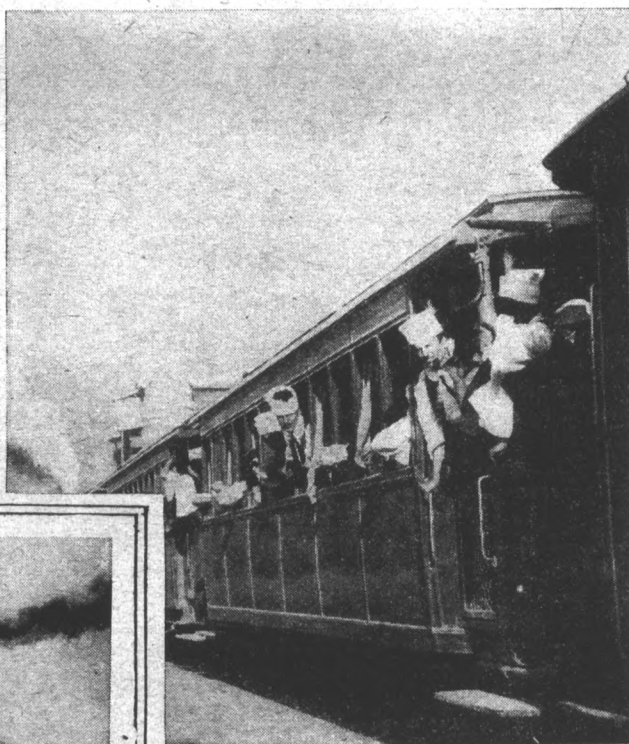
The opening of the first conference of the League of Nations at Geneva, Switzerland.



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Cleveland short-stop attending college.



A trainload of Bosnians leaving their native land to take a steamer at Fiume for the United States.



U. S. mine sweeper ashore near Plymouth, Mass.



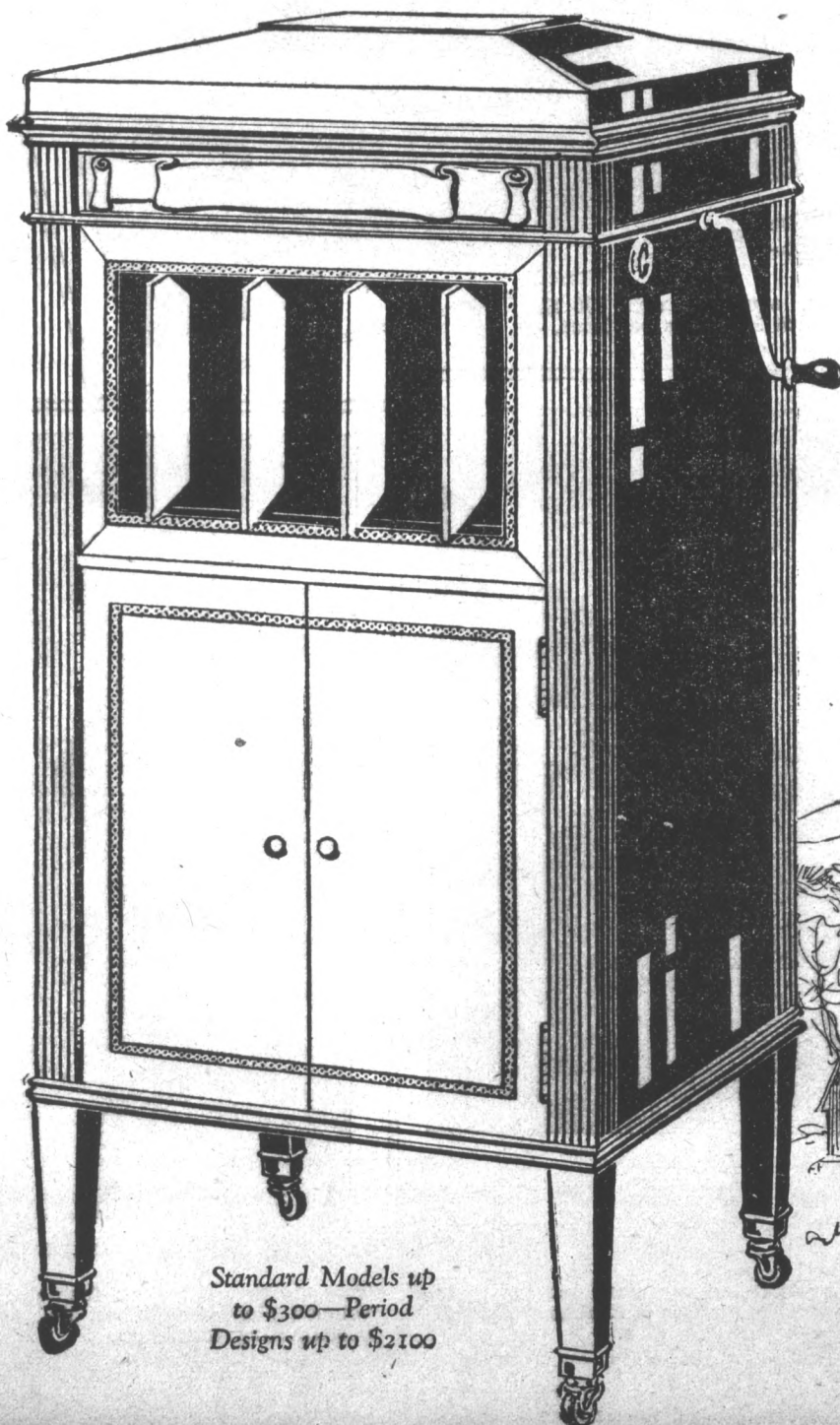
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WORK



THE VOICE OF THE PACK

By EDISON MARSHALL

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CHAPTER VI.

DAN and Lennox started together up the slope of the ridge. Dan alone was armed; Lennox went with him solely as guide. The deer season had just opened, and it might be that Dan would want to procure one of these creatures.

"But I'm not sure I want to hunt deer," Dan told him. "You speak of them as being beautiful—"

"They are beautiful, and your grandfather would never hunt them either, except for meat. But maybe you'll change your mind when you see a buck. Besides, we might run into a lynx or a panther. But not very likely, without dogs."

They trudged up, over the carpet of pine needles. They fought their way through a thicket of buckbrush. Once they saw the gray squirrels in the tree tops. And before Lennox had as much as supposed they were near the haunts of big game, a yearling doe sprang up from its bed in the thickets.

For an instant she stood motionless, presenting a perfect target. It was evident that she had heard the sound of approaching hunters, but had not as yet located or identified them with her near-sighted eyes. Lennox whirled to find Dan standing very still, peering along the barrel of his rifle. But he didn't shoot. A light danced in his eyes, and his fingers crooked nervously about the trigger, but yet there was no pressure. The deer, seeing Lennox move, leaped into her terror-pace—that astounding run that is one of the fastest gaits in the whole animal world. In the wink of an eye, she was out of sight.

"Why didn't you shoot?" Lennox demanded.

"Shoot? It was a doe, wasn't it?"

"Good Lord, of course it was a doe! But there are no game laws that go back this far. Besides—you aimed at it."

"I aimed just to see if I could catch it through my sights. And I could. My glasses sort of made it blur—but I think—perhaps—that I could have shot it. But I'm not going to kill does. There must be some reason for the game laws, or they wouldn't exist."

"You're a funny one. Come three thousand miles to hunt and then pass up the first deer you see. You could almost have been your grandfather to have done that. He thought killing a deer needlessly was almost as bad as killing a man. They are beautiful things, aren't they?"

Dan answered him with startling emphasis. But the look that he wore said more than his words.

They trudged on, and Lennox grew

thoughtful. He was recalling the picture that he had seen when he had whirled to look at Dan, immediately after the deer had leaped from its bed. It puzzled him. He had turned to find the younger man in a perfect posture to shoot, his feet placed in exactly the position that years of experience had taught Lennox was correct; and withal, absolutely motionless. Of all the many things to learn in the wilderness, to stand perfectly still in the presence of game is one of the hardest. The natural impulse is to start—a nervous reflex that usually terrifies the game. The principle of standing still is, of course, that it takes a certain length of time for the deer to look about after it makes its first leap from its bed, and if the hunter is motionless, the deer is usually unable to identify him as a thing to fear. It gives a better chance for a shot. What many hunters take years to learn, Dan had seemed to know by instinct. Could it be, after all, that this slender weakling, even now bowed down with a terrible malady, had inherited the true frontiersman's instincts of his ancestors?

Then all at once Lennox halted in his tracks, evidently with no other purpose than to study the tall form that now was walking up the trail in front of him. And he uttered a little exclamation of amazement.

"Listen, Dan!" he cried suddenly. "Haven't you ever been in the woods before?"

Dan turned, smiling. "No. What have I done now?"

"What have you done! You're doing something that I never saw a tenderfoot do in my life, before. I've known men to hunt for years—literally years—and not know how to do it. And that is—to place your feet."

"Place my feet? I'm afraid I don't understand."

"I mean—to walk silently. To stalk, Dan! This brush is dry. It's dry as tinder. A cougar can get over it like so much smoke, and a man who's lived all his life in the hills can usually climb a ridge and not make any more noise than a young avalanche. Just now I had a feeling that I wasn't hearing you walk, and I thought my ears must be going back on me. I stopped to see. You were doing it, Dan. You were stalking—putting down your feet like a cat. It's the hardest thing to learn there is, and you're doing it the first half-hour."

Dan laughed, delighted more than he cared to show. "Well, what of it?" he asked.

"What of it? That's it—what of it."

And what caused it, and all about it. Go on and let me think."

The result of all this thought was at least to hover in the vicinity of a certain conclusion. That conclusion was that at least a few of the characteristics of his grandfather had been passed down to Dan. It meant that possibly, if time remained, he would not turn out such a weakling, after all. Of course his courage, his nerve, had yet to be tested; but the fact remained that long generations of frontiersmen ancestors had left this influence upon him. The wild was calling to him; and the failings once more had begun to run true to form. Inherited tendencies were in a moment changing this weak, diseased youth in to a frontiersman and wilderness inhabitant such as his ancestors had been before him.

But before ever Lennox had a chance to think all around the subject, to actually convince himself that Dan really was a throwback and recurrence of type, there ensued on that gaunt ridge a curious adventure. The test of nerve and courage was nearer than either of them had guessed.

They were slipping along over the pine needles, their eyes intent on the trail ahead. And then Lennox saw a curious thing. He beheld Dan suddenly stop in the trail and turn his eyes towards a heavy thicket that lay perhaps one hundred yards to their right. For an instant he looked almost like a wild creature himself. His head was lowered, as if he were listening. His muscles were set and ready.

Lennox had prided himself that he had retained all the powers of his five senses, and that few men in the mountains had keener ears than he. Yet it was truth that at first he only knew the silence, and the stir and pulse of his own blood. He assumed then that Dan was watching something that from his position, twenty feet behind, he could not see. He tried to probe the thickets with his eyes.

Then Dan whispered. Ever so soft a sound, but yet distinct in the silence. "There's something living in that thicket."

Then Lennox heard it too. As they stood still, the sound became ever clearer and more pronounced. Some living creature was advancing toward them; and twigs were cracking beneath its feet. The sounds were rather subdued, and yet, as the animal approached, both of them instinctively knew that they were extremely loud

for the usual footsteps of any of the wild creatures.

"What is it?" Dan asked quietly. Lennox was so intrigued by the sounds that he was not even observant of the peculiar, subdued quality in Dan's voice. Otherwise, he would have wondered at it. "I'm free to confess I don't know," he said. "It's booming right towards us, like most animals don't care to do. Of course it may be a human being. You must watch out for that."

They waited. The sound ended. They stood straining for a long moment without speech.

"That was the funniest thing!" Lennox went on. "Of course it might have been a bear—you never know what they're going to do. It might have got sight of us and turned off. But I can't believe that it was just a deer—"

But then his words chopped squarely off in his throat. The plodding advance commenced again. And the next instant a gray form revealed itself at the edge of the thicket.

It was Graycoat, half-blind with his madness, and desperate in his agony.

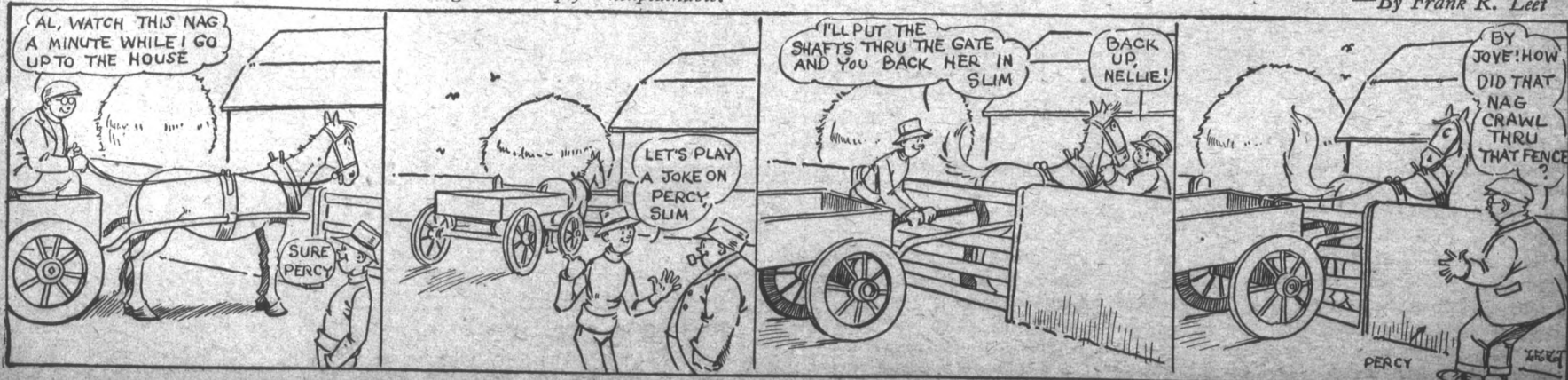
There was no more deadly thing in all the hills than he. Even the bite of a rattlesnake would have been welcomed beside his. He stood a long instant and all his instincts and reflexes that would have ordinarily made him flee in abject terror were thwarted and twisted by the fever of his madness. He stared a moment at the two figures, and his red eyes could not interpret them. They were simply foes, for it was true that when this racking agony was upon him, even lifeless trees seemed foes sometimes. He seemed eerie and unreal as he gazed at them out of his burning eyes; and the white foam gathered at his fangs. And then, wholly without warning, he charged down at them.

He came with unbelievable speed. The elder Lennox cried once in warning and cursed himself for venturing forth on the ridge without a gun. He was fully twenty feet distant from Dan; yet he saw in an instant his only course. This was no time to trust their lives to the marksmanship of an amateur. He sprang towards Dan, intending to wrench the weapon from his hand.

But he didn't achieve his purpose. At the first step his foot caught in a projecting root, and he was shot to his face on the trail. But a long life in the wilderness had developed Lennox's reflexes to an abnormal degree; many crises had taught him muscle and nerve control; and only for a fraction of an instant, a period of time that few instruments are fine enough to meas-

AL ACRES—Percy Agrees that Some Things Are Simply Unexplainable.

—By Frank R. Leet



ure, did he lie supinely upon the ground. He rolled on, into a position of defense. But he knew now he could not reach the younger man before the mad coyote would be upon them. The matter was out of his hands. Everything depended on the aim and self-control of the tenderfoot.

And at the same instant he wondered, so intensely that all other mental processes were subjugated to it, why he had not heard Dan shoot.

He looked up, and the whole weird picture was thrown upon the retina of his eyes. The coyote was still racing straight toward Dan, a gray demon that in his madness was more terrible than any charging bear or elk. For there is an element of horror about the insane, whether beasts or men, that cannot be denied. Both men felt it, with a chill that seemed to penetrate clear to their hearts. The eyes flamed, the white fangs of Graycoat caught the sunlight. And Dan stood erect in his path, his rifle half raised to his shoulder; and even in that first frenzied instant in which Lennox looked at him, he saw there was a strange impassiveness, a singular imperturbability on his face.

"Shoot, man!" Lennox shouted. "What are you waiting for?"

But Dan didn't shoot. His hand whipped to his face, and he snatched off his thick-lensed glasses. The eyes that were revealed were narrow and deeply intent. And by now, the frenzied coyote was not fifty feet distant.

All that had occurred since the animal charged had possibly taken five seconds. Sometimes five seconds is just a breath; but as Lennox waited for Dan to shoot, it seemed like a period wholly without limit. He wondered if the younger man had fallen into that strange paralysis that a great terror sometimes imbues. "Shoot!" he screamed again.

But it is doubtful if Dan even heard his shot. At that instant his gun slid into place, his head lowered, his eyes seemed to burn along the glittering barrel. His finger pressed back against the trigger, and the roar of the report rocked through the summer air.

The gun was of large caliber; and no living creature could stand against the furious, shocking power of the great bullet. The lead went straight home, full through the neck and slanting down through the breast, and the coyote recoiled as if an irresistible hand had smitten him. It is doubtful if there was even a muscular quiver after Graycoat struck the ground, not twenty feet from where Dan stood. And the rifle report echoed back to find only silence.

Lennox got up off the ground and moved over toward the dead coyote. He looked a long time at the gray body. And then he stepped back to where Dan waited on the trail.

"I take it all back," he said simply. "You take what back?"

"What I thought about you—that the Failing line had gone to the dogs. I'll never call you a tenderfoot again."

"You are very unkind," Dan answered. He looked rather tired, but was wholly unshaken. For an instant Lennox looked at his eyes and his steady hands.

"But tell me one thing," Lennox asked. "I saw the way you looked down the barrel. I could see how firm you held the rifle—the way you kept your head. And that is all like your grandfather. But why, when you had a repeating rifle, did you wait so long to shoot?"

"I just had one cartridge in my gun. I fired nine times back at the trees and only reloaded once. I didn't think of it until the coyote charged."

Lennox's answer was the last thing in the world to be expected. He opened his straight mouth and uttered a

great, boyish yell of joy. His eyes seemed to light. It is a phenomenon that is ever so much often imagined than really seen; but the sudden, elated sparkle that came in those gray orbs was past denial. The eyes of the two men met, and Lennox shook him by the shoulder.

"You're not Dan Failing's grandson—you're Dan Failing himself!" he shouted. "No one but him would have had the self-control to wait till the game was almost on top of him—no one but him would have kept his head in a time like this. You're Dan Failing himself, I tell you, come back to earth. Grandson nothing! You're a throwback, and now you've got those glasses off, I can see his eyes looking right out of yours. Step on 'em, Dan. You'll never need 'em again. And give up that idea of dying in four months right now; I'm going to make you live. We'll fight that disease to a finish—and win!"

And that is the way that Dan Failing came into his heritage in the land of his own people, and in which a new spirit was born in him to fight—and win—and live.

BOOK TWO—THE DEBT.

CHAPTER I.

SEPTEMBER was at its last days on the Umpqua Divide—that far wilderness of endless, tree-clad ridges where Dan Failing had gone for his last days. September, in this place, was a season all by itself. It wasn't exactly summer, because already a little silver sheath of ice formed on the lakes in the morning; and the days were clamping down in length so fast that Whisperfoot the cougar had time for a dozen killings in a single night. Fall only begins when the rains start; and there hadn't been a trickle of rain since April. It was rather a cross between the two seasons—the rag-tail of summer and the prelude of fall.

It was true that the leaves were shedding from the underbrush. They came yellow and they came red, and the north wind, always the first breath of winter, blew them in all directions. They made a perfect background for the tawny tints of Whisperfoot, and quite often the near-sighted deer would walk right up to him without detecting him. But the cougar always saw to it they didn't do it a second time. It had been a particularly bad season for Whisperfoot, and he was glad that his luck had changed. The woods were so dry from the long drought that even he—and as all men know, he is one of the most silent creatures in the wilderness when he wants to be, which are the times that he doesn't want to make as much noise as a steam engine—found it hard to crawl down a deer trail without being heard. The twigs would sometimes crack beneath his feet, and this is a disgrace to any cougar. Their first lessons are to learn to walk with silence.

Woof the bear loved this month above all others. It wasn't that he needed protective coloring. He was not a hunter at all, except of grubs and berries and such small fry. He had a black coat and a clumsy stride; and he couldn't have caught a deer if his life had depended upon it. But he did like to shuffle through the fallen leaves and make beds of them in the warm afternoons; and besides, the berries were always biggest and ripest in September. The bee trees were almost full of honey. Even the fat beetles under the stumps were many and lazy.

(Continued next week.)

Feed, as a source of development, is about as important as breed, not in creating impossibilities, but in bettering the possible; so that the heifer, if well bred, if well and properly fed, and with discriminating judgment will be a more highly developed cow.

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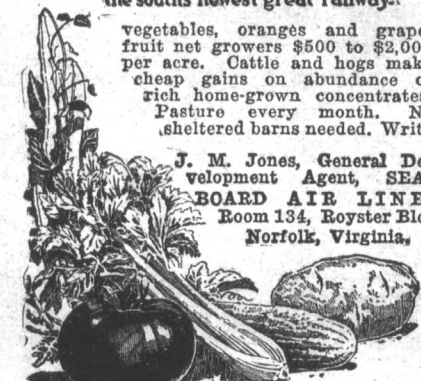
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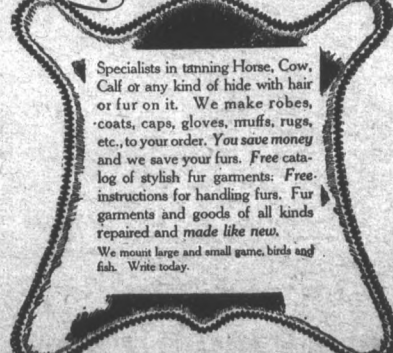
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What Can Make One Happy?

Our Weekly Sermon—By N. A. McCune

THE book of Ecclesiastes is a study of the question, how to be happy. The author is a man who gives much time to thinking on the real meanings of life, though it is not known whether he was Solomon or not. It may have been the Hebrew king, but that is not important, as the meaning of the book is the same, even though the author is unknown. The first method of achieving happiness, he says, is through the attainment of wisdom. Let a man study, let him devour books, talk with learned men, and the way to the peaceful heart is open. But he afterward changes his mind, as he tells us. The acquisition of wisdom does not yield the fruit he hopes for. There still remains an unsatisfied void. "And I applied my heart to seek and to search out wisdom concerning all that is done under the heaven: I have seen all the works that are done under the sun; and behold, all is vanity and a striving after wind. For in much wisdom is much grief, and he that increaseth knowledge increaseth sorrow." The experience of modern men confirms our author in his conclusion. The greatest scholars are sometimes the most melancholy of men.

But now the writer of Ecclesiastes turns his attention to pleasure. In pleasure, he says, in the abandonment of care and anxiety, happiness is to be found. But lo! after hot pursuit of the phantom Pleasure, she turns out, like the fable, to be an old and withered hag, that his soul loathes. Listen to his words: "I said in my heart, Come now, I will prove thee with mirth; therefore, enjoy pleasure: and behold, this also was vanity. I searched in my heart how to cheer my flesh with wine, my heart guiding me with wisdom, and how to lay hold on folly, till I might see what it was good for the sons of men that they should do under heaven all the days of their life." He goes on to tell how he bought large estates and went into extensive farming operations; had gardens, parks, trees, artificial lakes, vast numbers of sheep and cattle. He imported men singers and women singers, became a patron of music, and says that he attained to wealth and greatness above any man of his time. And he concludes: "And behold, all was vanity and a striving after wind, and there was no profit under the sun."

THUS far, his search has not been reassuring, but he turns to another method. The power of money to bring pleasure has always been assumed, by a certain class of people. And indeed, we cannot sneer at the power of money to do many things. The man without any money is in a bad way. But our author does not turn to money-making, himself. That would be beneath an oriental gentleman's manner of living. He draws his conclusions from watching other men make it. He says that he has seen a man toil for years, amass a fortune, and die, leaving his accumulations to a worthless son, who soon parts with them. He notices also that riches often take to themselves wings and fly away. He likewise observes that the rich man frequently tosses on a bed of down in feverish wakefulness, while the laboring man sleeps the sleep of a healthy, tired man. He states that he is convinced that money, pursued as an object in life, is a fool's quest. And modern experience confirms Ecclesiastes in this.

A recent writer asks what wealthy Americans of the past fifty years have been beloved by the people, and goes on to affirm that not a multi-millionaire has had the influence in public life

that Longfellow had, or Mark Twain, or Bryan. And when one reads in the papers that a rich man pays \$38,000 for a wash stand, \$20,000 for a hat, \$50,000 for a piano, and lights his cigarette with one-hundred dollar bills, if money hath power to make men happy, such men ought to be hilarious. But the reverse is the fact. They are not as content as men of simpler means. The rich man of today has wealth more vast than the author of Ecclesiastes dreamed of, in his wildest moments. When a man can go to bed at night and wake up next morning worth twenty-nine millions more than he was worth eight hours before, one has almost passed into dreamland—and still happiness remains to be wooed and won.

But what, then, is the message of Ecclesiastes? It is three-fold. First, happiness is incidental. It is a by-product of right living. When sought as an end, it ever flits on before us. Sir Launfall travels the world over, in search of the Holy Grail, and returns a disappointed man. But when he helps the hungry at his door, a strange rest enters his soul. Many rich men have done good with their money, and in so doing have been blest. An ancient writer put it, "What I spent, I had, what I kept I lost, what I gave, I have." That is as true of the man of ordinary means as it is of the rich. And it is as true of time, ability, influence, as it is of money.

THE second message of our author is, do your duty. Do the day's work and do it the best you can. Put energy, earnestness, conscience into it. Do not make excuses, do not contrive alibis, do not whimper and complain, play the man and do your part. "Fear God and keep his commandments, for this is the whole duty of man." Duty is a great teacher. She is a teacher every man may have, whether he ever attended college or not. John Hay in his little poem, "Jim Bludso," told of Jim and how he stuck to his post, while his ship was on fire. He was a pilot on a Mississippi River boat. He vowed he would "hold her nozzle agin' the bank, till the last galoot's ashore." And he did: He died, doing his duty. The old man who worked in a factory and took care of his invalid wife who had not been out of bed for thirty years, was doing his duty. The young woman who is full of ambition to go to college and become a social worker, but who remains on the farm with her aged parents, is an instance of duty at its best. That is what Ecclesiastes would teach. And happiness comes in the line of our duty.

Ecclesiastes does not know of Christ, for Christ has not come in his day. Hence by his very omission he teaches that there is something better than doggedly doing one's part day after day. And that is to get the zest, the life, the vision there is, in following Christ. When one gets that, he does his work not because he must, but because he wants to do it. He has a new enthusiasm.

Sunshine Hollow Items

By Ruba Rubicon

Wilbert Whizzle cut a hole through a soap box and then sat on it with his leg in the box. This happened out in front of his house. He was hot and held his hat in his hand. Everyone that went by slipped him ten cents or a quarter, thinking he had lost a leg. When Mrs. Whizzle came out, Wilbert had collected \$2.65 and now he has been working three days trying to hunt up all the contributors and give back the money or get spanked twice. He got spanked once anyway.

Woman's Interests

Children and Fire

By Ella E. Rockwood

EVERY mother should see to it that her children are taught to guard against fire. This can be done by beginning early to instil a wholesome fear of fire, and by explaining its dangerous nature. Children naturally like to play with matches, but the danger attending this practice should be pointed out and if necessary examples brought up to show why they should be let alone. It is better to actually frighten a persistent child by enlarging upon the results rather than fail to impress it with the grave danger which lies in the apparently harmless little piece of wood. Matches, the kitchen range and the open fire in the hearth should be shown as sources of great harm to little folks and never to be tampered with.

Children dearly love to play about a bonfire, but many little lives are annually sacrificed in the eager desire to watch the flames dance and leap in the air. A hard and fast rule in every home where there are little folks should demand that a bonfire is never to be lighted save in the presence of some older person. When playing about a bonfire, children should wear woolen clothing, which ignites less readily than cotton.

Fleecy garments such as outing flannel and eiderdown, which are frequently worn indoors in cold weather, are both highly dangerous when brought near a flame. A spark from an open fire or a flying match head is sufficient to set such a garment instantly ablaze, owing to the nap which covers the surface of these materials.

Not only should children be taught to be careful about fire at every time and place, but they should be taught what to do in case their clothing should be accidentally set on fire. Have them go through a little fire drill, and have them practice rolling over and over on the floor, which would be the very best thing to do should such an accident occur.

Older boys should be taught to carefully extinguish the flame from their fires when out camping, even to the tiniest spark, before leaving it. Many destructive fires are started by failure to observe this simple precaution. It is not enough in the case of a self-willed or an inquisitive minded child merely to forbid playing with fire or with matches. A careful explanation of cause and effect may clinch the matter by pointing out the danger and the results which are liable to follow disobedience.

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Little Yuletide Cakes

WAS there ever a little girl or boy who didn't coax mother to make "lots" of those spicy "gingerbread man" cookies, or plummy cakes stuffed full of fruit and spice and everything nice? Little folks always think that little cakes are their especial treat, so here are a number for the holiday time and other times, some old ones that have been favorites in New England homes for generations, and some newer ones.

However, any cookie dough may be cut in fancy shapes suggestive of the season, such as stockings, stars, trees or bells, and decorated with icings in a variety of tints and flavors.

Fruit Sandwiches.

One cupful of sugar, one-half cupful of shortening, one egg, one-half cupful of milk, one teaspoonful of soda, two teaspoonfuls cream of tartar, one teaspoonful vanilla and about two and one-half cups of flour. Roll thin, put the cookies in a pan then place a teaspoonful of the following filling on each and cover with another cookie.

Filling.—One cupful chopped raisins, one-half cup sugar, one-half cupful of water, one teaspoonful of flour and a little lemon or orange juice. Cook until it thickens.

Christmas Gingerbreads.

Beat two cupfuls of molasses and a cupful of softened butter in a bowl until they are well blended. Add a cupful of sour milk; stir in also a quarter of a cupful of hot water in which a level tablespoonful of soda has been dissolved. Add the grated rind of a lemon, cloves and ginger to flavor (some like a stronger spice flavor than do others), then stir in enough flour to make a stiff dough. Roll the dough out thin on the board and cut into fancy shapes. Place the cakes on a well greased dripping pan

and bake in a moderate oven. When almost cold, frost lightly with pink and white icing and tiny candies.

Maple Sugar Puffs.

One egg, one heaping cupful maple or brown sugar, one cup sour milk, one-third cup shortening, one and one-half teaspoonfuls of baking powder, one-half teaspoonful soda, one-fourth teaspoon salt, one cupful chopped nut meats, and flour enough to make a batter that will drop from the spoon—about two and one-third cupfuls. Melt shortening and sugar together, add egg and beat the mixture vigorously. Then add dry ingredients, sour milk and nut meats. Drop from a teaspoon on buttered pans and bake in a rather quick oven.

Almond Cookies.

Yolks of three eggs, three-quarters of a cup of sugar, one-third cup butter, one-half cup of almonds blanched and chopped, one teaspoon cinnamon, and one and a half cups of flour. Beat well, drop small spoonfuls on a well-greased pan and bake lightly.

Peanut Butter Cookies.

Cream together one tablespoonful of shortening, three tablespoonfuls of peanut butter and one and a half cupfuls sugar. Mix well with two unbeaten eggs, and then add three tablespoonfuls of sour milk in which one teaspoonful of soda has been dissolved. Beat in flour to make the dough stiff enough to roll. Bake about twenty minutes in a hot oven.

Star Cookies.

One and a half cupfuls sugar, one cupful butter, three eggs, a pinch of salt, juice and grated rind of one lemon, one-half cupful boiling water, one teaspoon of soda, and enough flour to mix (not too stiff). Roll out and bake in a hot oven. When cold, frost with white icing. Before the icing hardens,



Born Cooks and Others

Until recently the woman on the farm, though a born cook and a peerless housekeeper, has often been handicapped by a lack of information concerning certain new methods that have been adopted in the cities.

To some extent this has been true in the case of Jell-O, which in the cities has for several years been the most popular preparation for desserts and salads.

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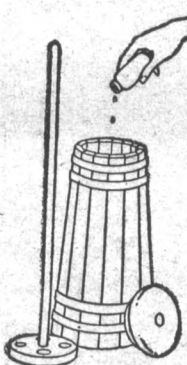
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decorate with small pink candies placed so as to form a star.

Oatmeal Goodies.

One cupful of sugar, one-half cupful butter, seven tablespoonfuls of sour milk, one teaspoonful soda, one cupful oatmeal, one cupful shredded coconut, one cupful chopped raisins and two cupfuls of flour. Drop from a teaspoon

in a buttered pan and bake in a moderate oven.

Butterfly Cakes.

Cut any soft cookie dough in butterfly shapes. Place a strip of candied peel down the center for the body. Raisins or pieces of date may be pressed into the dough to imitate the spots on the wings.

A Real Opportunity to Help

THE war is over, but the pain and misery caused by the war, like a running sore, seem to be eating deeper and deeper, in some parts of the world. The future of some nations, and in just that same degree, the future of the world civilization, is menaced. In central and eastern Europe 3,500,000 children are starving. We have Herbert Hoover's word for this as well as that of the Red Cross, Y. M. C. A., the Y. W. C. A., the Knights of Columbus, the Jewish Welfare Board, and the American Society of Friends. These organizations have banded themselves into one large organization called the European Relief Council, with Franklin K. Lane, former secretary of the interior, as treasurer, and will undertake the work of feeding this enormous number of starving children on and after January 1, when the work of the American Relief Committee ceases.

The American Relief Committee is Mr. Hoover's organization which first functioned in Belgium, then northern France and finally the whole of Europe. Under existing arrangements and lack of funds this body will turn its work over to the newer organization, which Mr. Hoover is backing. The very fact that Mr. Hoover's organization during its lifetime, spent over two billion dollars at an administration cost of less than one-half of one per cent guarantees that the new organization which is also directed by Mr. Hoover will be efficient.

The sum necessary according to Mr. Hoover, is \$33,000,000, which will be divided as follows: Twenty-three million for actual feeding to be adminis-

tered by the European Relief Committee, and \$10,000,000 to be administered by the American Red Cross for medical purposes. We do not want our readers to feel that this is a three-meal-a-day proposition, because it is not. The children are given one meal a day, which is eaten at one of the seven thousand feeding stations in the afflicted countries. This precaution is taken in order that no adults may receive food intended for the children needing it. The worst trouble is in the cities and it cannot be alleviated until the harvests next August.

Mr. Hoover in his characteristic way has insisted that the governments of the countries in which this service is being rendered shall furnish such service as they can toward this maintenance of child life, or in other words, shall provide all administration, all transportation, all labor and all warehousing. Thus every dollar of the fund that Mr. Hoover asks goes almost in its entirety for food, and it only takes one American dollar to feed a central or an eastern European child for one month, one meal a day.

If you feel the spirit of Christ in this Christmas season, who said, "Suffer little children to come unto Me," make out a check for whatever amount you can afford and mail it to The European Relief Council, Franklin K. Lane, Treasurer, 42 Broadway, New York City. We think this is a fine time and a fine way to give some of the children of these districts a chance for life. It does not make any difference to what country they belong, they are children, and should be helped.

Some Facts About Smallpox

State Board of Health Says Smallpox is a Real Menace to the People of Michigan

SMALL-POX is a great deal like quack-grass. Quack-grass, twitch-grass, or Johnny grass as it is called, can usually be killed by intensive cultivation, but as every farmer knows, a few half-live patches will soon cover the entire field unless precautionary measures are taken. So it is with smallpox. Unvaccinated people are the ones who keep the disease in existence.

During the past decade or two, people in this country have grown neglectful of the dangers of the disease. We have had a long period of comparative freedom from smallpox. Like the farmer who summer-fallows the field infested with the long white roots of quack-grass we, for a long time had physicians vaccinate our children and ourselves wherever there was the slightest danger of catching this disease. And we were careful to see that when the immunity of the vaccine wore off we were again vaccinated. It was in this way that smallpox was rendered one of the least feared of infectious diseases. In fact, it became an uncommon sight to see a pox-marked person, an almost certain sign that he was a foreigner coming from some European country which did not enforce, or urge, the use of vaccine as a preventive and curative measure for smallpox.

Now the disease again menaces the American people. For this there are several reasons. One is, of course, our carelessness in regard to the matter of vaccination; another is that fact

that during the war large numbers of our citizens were brought in contact with people from all parts of the world, some of whom brought with them infection of smallpox from countries in which the disease is endemic, or present at all times; while another reason can be found in the recent increase in immigration.

An important factor in the spread of smallpox is the prevailing ignorance of the characteristic symptoms and physical signs of the disease. Thus there has frequently been a failure to recognize the disease until a large number of cases has developed. Inasmuch as the form of smallpox now present in Michigan is so mild that in many cases no physician is called, the characteristics of the disease should be learned by people generally, so that smallpox may be checked as soon as it appears.

In smallpox the first symptoms are headache, backache, chills and fever, lasting about three days, followed by the aforementioned eruption. Fever subsides when the eruption appears. In chickenpox the fever begins when the eruption appears and usually the first sign observed is the eruption, accompanied by a slight rise in temperature.

It should be remembered that adults seldom have chickenpox, and that therefore an eruption, especially a papular eruption becoming vesicular, occurring in a person more than ten or twelve years of age, should be regarded

ed as probably smallpox. The same precautions should be taken as in cases of recognized smallpox, until some competent authority has decided that the disease is not smallpox. It is even best to take such precautions in chickenpox, since smallpox has often been diagnosed as chickenpox, the mild form of smallpox making the error more common of late. By taking all these precautions members of the family will be protected against possible infection. Public interests should be given the benefit of every doubt.

Facts About Smallpox.

The immunity of vaccination lasts about five years.

People should be vaccinated against smallpox because of the danger of exposure from travelers, and in many unknown ways.

The failure of large masses to be vaccinated renders Michigan liable to a widespread epidemic of the disease.

Thus at the present time smallpox is a real menace to our national health and welfare. Yet it is entirely within the power of any people to erect the barrier of vaccination against the disease, the one preventive measure which has proved effective. Here are two examples of the effectiveness of vaccination against smallpox.

In Cuba, during 1896 and 1897 there were more than a thousand deaths yearly in the city of Havana alone from smallpox. Following the American occupation of the island vaccination was enforced among all school children, as well as among those adults who could not furnish evidence of recent vaccination. Between the years of 1901 and 1917 only one person in the city of Havana died of the disease. In 1909 Japan passed a law requiring vaccination of every infant within ninety days after birth. This measure has greatly reduced the number of cases and deaths, and there are no longer serious epidemics of the disease in Japan.

Epidemics of smallpox do not start in the United States. The cases always develop after some person coming from an infected country becomes sick with the disease. During 1919, two thousand cases developed in California from alien sources, while several states which do not rigidly enforce vaccination have reported a prevalence of the disease.

Smallpox is an acute, infectious disease, characterized by sudden fever, which is followed in forty-eight hours by an eruption appearing on forehead, face and wrists, and gradually passing over the entire body. The temperature as the eruption appears, and within from ten to fourteen days the disease passes through various stages until the eruptions become crust-like. As a rule smallpox attacks a person but once, though instances of second attacks have been reported.

Vaccination has rendered the disease so mild that when Americans have been taken sick with it, even though never vaccinated themselves, it has often been mistaken for chickenpox. The very mildness of the disease has greatly increased the difficulty of its restriction.

NEW DEAN OF WOMAN'S DEPARTMENT AT M. A. C.

ARRIVAL of Miss Mary E. Sweeny, president of the American Home Economics Association, and formerly head of that branch of extension work at the University of Kentucky, to take up her duties as dean of home economics at M. A. C., has already convinced persons intimately connected with the life of the college that the work of training Michigan young women along these lines, and of taking the gospel of efficient management in the household to the homes of the women of the state, will be in the hands of a capable and magnetic personality.—HENSCHAW.

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FOR SALE 2000 acre ranch with buildings about ¾ land cleared five miles from town, easy terms. **CLAY R. SPRATT**, 1115 East Forest Ave., Detroit, Mich.

When writing to advertisers please mention the Michigan Farmer.

Our Boys' and Girls' Department

Hereford Cattle for Boys and Girls

This is the Second Article on a Study of Breeds—By L. I. Case

DID you ever stand upon a mountain or a hill-top in June when all the country is in bloom and look down upon a beautiful green valley with a river winding its way lazily through the low-lands? If you have not, picture such a valley in your mind for a moment. You will see numbers of farm houses snuggled up close to small orchards, and beyond the orchards, broad, velvety, rolling pastures running down to the river's edge. Now picture these luxuriant pastures dotted with broad-backed, deep-bodied, thick-fleshed and mossy-coated cattle that have beautiful white faces, white crests, white underlines and white stockings, and you will have a good idea of Herefordshire, England, the ancestral home of the Hereford breed of cattle.

The date of the first importation of Herefords into America is rather indefinite, but all authorities agree that it was the latter part of the eighteenth century or the first of the nineteenth. After that time they spread, slowly at first, but later as ranchmen learned of their ability to live and thrive under all and any conditions their popularity increased until now the entire range has been conquered by them.

Description of the Hereford.

In general appearance, the Herefords approach closely the ideal beef form. They are broad, deep, close to the ground, straight in the back and underline and with a very square and compactly built.

While there is some variation in the color markings of the Herefords, the favorite type is a medium red with a clear white face, white over the crest running back to the shoulders, white on the leg not higher than the knees, a white switch on the tail and white on the underline, but not running up too high on the flanks.

The head should be short and broad, wide between the eyes, which should be large and clear. The muzzle or nose should be broad, which indicates that the calf is a good feeder. The horn is medium-sized, flat and coming out straight from the head and curving downward and outward, it should also curve a little bit forward. Particular attention should be given to the neck to see that it is short and joins to the shoulder blade without any bulging. The shoulder should be wide in proportion to the rest of the body and so smoothly covered that it is impossible to tell where the shoulder blade joins the body. Immediately back of the shoulder is the cavity which contains the heart and other vital organs; the ribs and shoulder at this place should be wide and deep. Plenty of thickness in the chest with a good deep body gives plenty of room for the vital organs and an animal could not have a hardy constitution without plenty of chance to expand and grow. The ribs and back should spring out from the backbone like the staves from a barrel.

The back should be straight and perfectly level from where the neck joins the shoulders to the tail head. The loin should be wide and thick because this is where the highest-priced cuts of beef are taken, but the thickness should conform with the rest of the body and be smoothly covered

throughout. The tail-head should be level on the top and join the body perfectly smooth. Legs should be very short and set on the body straight, with medium-sized bone. The hide should feel very loose and pliable to the touch and the hair should be soft and silky.

In selecting a heifer it is very important that you should get one with a very feminine head as this indicates the breed character and the ability of the cow to produce calves.

In selection of a bull choose one

little whether it took two, three, four or even five and six years to grow a steer and get him ready for market. Today it is different. Much of our large range areas have been cut up into small farms and these farms are high in price. Grains and feeds of all kinds are expensive. For these reasons, the feeders of the corn belt are paying a higher price for calves or feeders that show they are of Hereford blood. The prices quoted on Hereford feeder cattle at our leading markets usually run from fifty cents to

the different breeds say that they have raised a bigger calf crop from the Hereford cows than from the other breeds. That inborn instinct to go the limit to find feed and water will account for Hereford cows taking better care of their calves and consequently raising a larger percentage of them.

6. Herefords, the prepotent breed. No matter what the color or makeup of the cow, a good Hereford bull will put the quality mark on the offspring. The calf will have the white face and other color markings of the sire and what is more important it will have that quality and low-set, square, blocky makeup that is desirable in the ideal beef animal.

7. Herefords, the most economical producers of beef. That the Hereford can be fattened at any age profitably has been proven time after time. In a breeding and feeding experiment at the Kansas State Agricultural College, covering the four-year period from 1909 to 1912 inclusive, the Herefords showed that they would produce more beef at less cost and more profit than the other breeds. They outweighed, out-gained and out-sold all the rival breeds when handled the same way and given the same feed.

8. Herefords make good under all conditions. The same characteristics that make Herefords so popular on the range cause them to give satisfaction when better feed and more of it is given them on the farm or in the feed-lot. Under any and all conditions wherever they have been given a trial, Herefords have proven their ability to make the best use of conditions as they have found them and have invariably won many friends.

Suggestions for the Beginner.

To a beginner it is of primary importance that he make a study of the Hereford breed and select individuals that measure up closely to the ideal or perfect animal. Also, if money is to be made in raising pure-bred cattle, they must be well cared for. As the most critical time in an animal's life is the first twelve months, let us consider the care of the calf.

Care and Feeding of Calves.

Probably the first essential in handling any young stock successfully is to have unlimited patience. Calves are more intelligent than most persons give them credit for being, and the boy or girl who has patience and studies the individuality of his or her calf is the one who will be ultimately successful. The more quietly and gently the calf is handled, the fatter he will get, and less feed will be necessary and the shorter the time will be taken in fattening.

The Calf Stall.

A box stall is the most satisfactory, if available, though a clean dry tie-stall or pen will do very well.

The stall should be well lighted, except that during the fly season a darkened stall affords protection from the little pests. The floor of the stall should be clay, earth or cinders and well-bedded with clean, dry straw. A concrete or other hard material used to floor the bottom of the stall is often the cause of stiffness in the calves' limbs.

Cleanliness.

Cleanliness is only a matter of a few minutes a day, but it means

Congratulations Boys!

EVERY boy and girl in the state may well feel proud of the work done by their representatives—Carl Johnson, Walter Ball and Rex Stow—in the judging ring at the recent International at Chicago, where they were awarded second place in the junior judging contest.

In behalf of the readers of this department, we are extending their heartiest congratulations to each of these successful contestants who have brought much honor upon the state and particularly upon the thousands of members of our Boys' and Girls' Clubs.

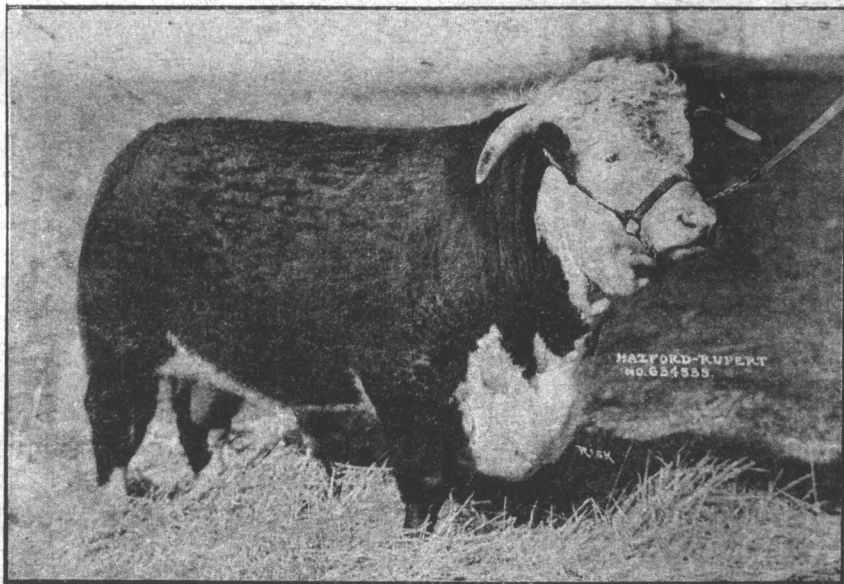
that has the opposite tendency. A \$1.75 per hundred weight better than that on all other breeds.

4. Herefords are the best rustlers. The hardy, rugged constitution, which has been a characteristic of the Hereford ever since the breed has been known, has given them the courage to rustle for feed and water in times when these are scant. This one trait has won the respect and admiration of many a cattleman. Many instances have been brought to our attention by

Reasons for Popularity of Herefords.

Hereford cattle in all parts of the world have been gaining many friends. Let us consider some of the things that have won them this popularity.

1. Herefords are market toppers. Records show that carloads of finished



Hazford-Rupert, the Product of Skillful Breeding.

Herefords more often bring the highest price on the big markets of the United States than all the other breeds combined.

2. Herefords are hardy and free from disease. Government records show that there is less tuberculosis among Herefords than any other breed.

3. Herefords reach maturity quickly. The fact that Hereford calves fatten easily and get ready for market quickly make them most popular with the feeder and packer. In years past, when land and feed were cheap, it mattered

little whether it took two, three, four or even five and six years to grow a steer and get him ready for market. Today it is different. Much of our large range areas have been cut up into small farms and these farms are high in price. Grains and feeds of all kinds are expensive. For these reasons, the feeders of the corn belt are paying a higher price for calves or feeders that show they are of Hereford blood. The prices quoted on Hereford feeder cattle at our leading markets usually run from fifty cents to

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When you subscribe for The Michigan Farmer you are not only paying for the 52 copies of your Own State Farm Paper, but you are making an investment in SERVICE.

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In these just battles you are now waging for better agricultural conditions you will have our whole-hearted and aggressive support.

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It is impossible for an agricultural publication to meet the big problems now confronting its readers without their loyal support. The more loyal the support the better we can serve you. Without the moral support of our 80,000 subscribers it would not be possible for us to promise you a "Bigger and Better Michigan Farmer" for 1921.

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When sending your renewal give us your support by getting a neighbor or a friend to subscribe with you. The larger our sphere of influence the greater will be the service we can render you. You will enable us to give you a bigger better Michigan Farmer this year than ever before.

Send in your renewal early. It is not necessary to wait until your subscription runs out. Your time will be correctly extended from date of present expiration. Within a short time we will be receiving renewals in large volume. Your assistance in helping us to avoid a rush will aid us greatly.

Write us a letter when sending your renewal giving us suggestions for improving the Michigan Farmer. Tell us what you want. It is your paper.

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

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This is your opportunity. ACT QUICK, TODAY. Wisconsin machines have been on the market over 20 years. Backed by one of the oldest manufacturers. Sold on money back guarantee. Thousands in use. Shipped complete, set up, ready to use. FREIGHT PAID. 30 Days Trial. Made of California Redwood, copper tanks and boilers, double glass doors, Tyco's thermometers, double walls, dead air spaces. Winners in National Hatching Contests.

WISCONSIN INCUBATOR CO.
Box 309, Racine, Wis.

The Extra Eggs
will soon pay for one of these Automatic Self-Heating Poultry Fountains and Heaters

keeps water at the right temperature day and night in the coldest weather and the hottest. Made of Galvanized Steel. A long felt want supplied. Every Hen-House needs one. Price of 1 Heater and 2 gallon Automatic Fountain complete \$2.10. Also made in 3 and 4 gallon sizes. Write for Circular I and testimonials. Agents wanted.

C. A. S. FORGE WORKS, SARANAC, MICH.

A Quality Hatcher At The Lowest Price "Successful" INCUBATORS & BROODERS

Mail a postal—Get our offer. Poultry lessons free to every buyer. Booklet, "How to Raise 48 Out of 50 Chicks," 10c. Catalog FREE. Make green, egg-making feed in "SUCCESSFUL" Grain Sprouters.

DES MOINES INCUBATOR CO.
368 Second St., Des Moines, Ia. 28 Years of Big Successes

Rhode Island Whites If you have ever said there is no money in raising poultry try the R. I. White, stock for sale, order ahead. H. H. JUMP, R. 5, Jackson, Mich.

Barred Rocks Surplus cockerels all sold. Hatching eggs next spring from stock rich in blood of Parks best pedigree pens. R. G. KIRBY, R. 1, East Lansing, Mich.

Cockerels White Leghorn, Black Minorcas, Buff Minorcas, Rhode Island Reds, at reduced prices to make room. Hatching eggs in season. Paradise Poultry Yards, Box 565, Halfway, Mich.

R. I. RED SALE
100 Rose Comb R. I. Red cockerels at \$3 each. Good in color, type and size and from heavy laying stock. 5 for \$14. Satisfaction guaranteed or your money back. We have hundreds of good cockerels worth up to \$25 each and make this special offer to move some of them quickly. Order at once from this adv. as this offer may be withdrawn at any time. INTERLAKES FARM, Box 39, Lawrence, Mich.

pounds per month in the growth of a calf. Remove all manure from the stall or pen daily and replace with clean, fresh straw. Keep the hay manger, feed trough and everything that comes in contact with the calves' food clean. Once each week thoroughly clean every corner and portion of the stall or pen.

Regularity.

Feed, water and perform the other necessary chores at the same hour every day. Do not feed early one day and late the next, for the calf will not gain or thrive as well if systematically attended to. When the work is regularly done, it does not take so long to do it and it is more easily accomplished.

Feeding.

Probably the most important point to be observed in feeding calves is to feed at the same hours each day. It has been found best to have the morning meal and evening meal just twelve hours apart and the other meal just half way between.

Good quality hay, clean and free from dust or mold, should be placed each day where easily accessible to the calf. Don't put a large quantity down and keep placing fresh hay on top, but put out just enough for each day.

A small amount of silage may be fed successfully, but a large amount of silage or hay and a small amount of grain feed will produce a more or less paunchy calf.

The more grain you can induce a calf to consume and the less roughage, the more meat the calf will put on and

the more nearly the ideal shape or conformation he will assume.

During the day when the weather is cool and the flies are not bothersome, turn the calf out into a lot or pasture. Grass and exercise are just as essential as feed and water.

During the hot weather and fly time let the calf out in the pasture at night and where possible keep in a cool, well ventilated and darkened stall in the daytime.

At all times watch your calf to find out his likes and dislikes. Try to feed what pleases him and do not mix in feeds that are not to his liking.

Place a lump of salt in the stall and pasture, where the calf may lick it as he pleases.

Watering.

At all times have clean, fresh water to where the calf can easily drink. Where a bucket is used, clean it thoroughly every day. The calf likes a clean dish as much as you do. Refill the bucket two or three times a day, being especially careful about this during warm weather.

Grooming.

Five or ten minutes a day with the brush and currycomb will work wonders in the appearance of the calf.

Use a comb only to remove mud and manure which may be attached to the hair.

Thoroughly brush all the dirt and chaff out of the body and tail, brushing with the hair. If the hair is long after the dirt has been well cleaned out, brush up, that is, brush against the hair and you will in a short time find that your calf is as pretty as a picture.

Breeding Poultry

(Continued from page 751).

laid more eggs, the feed bill was reduced more than one-half and the labor reduced.

Probably the cheapest and most effective way to build up a farm flock is the purchase of a few good male birds, and selecting some of the best females in the flock to mate with them. Care must be taken to buy young males of good size, bone and stamina; those descending from farm stock accustomed to life on the range if possible. Many failures to build up the vigor and productivity of the farm flock are due to selecting males with fine feathers rather than utility birds possessing strong vigor and inherited egg-producing qualities. A man buying cockerels should know the conditions under which they were developed as well as the type of birds he wants. Fine feathers and a particularly artistic spreading of the feathers in the tail do not always indicate a vigorous bird.

Many farmers have a feeling that it is necessary to send away to buy cockerels rather than buy them of some poultryman-farmer where the blood lines as well as the conditions under which the stock is kept are necessary in building up the flock. The purchase of hatching eggs and developing one's own cockerels has some advantages over purchasing them from other farms. It gives a better selection, besides the birds may be developed in a manner more satisfactory than is the case when they are purchased from some other farm.

Another good method of making the change from mongrel birds to pure-breds is to buy hatching eggs and incubate them. This way one assumes some risk, and must decide which incubator to buy and learn how to operate it. If one feels competent to assume this task, and has the necessary time it is a mistake to invest in some cheap machine that does imperfect work. For the farmer who is unusually busy during the incubating season the real economical way is to buy day-old chicks. Here one is getting something definite and all breeding, fertility and

hatching risks are eliminated, and a fair start is secured. But do not make the mistake of thinking that anything will do. It will pay handsomely in the end to buy chicks that come from vigorous and reliable layers. In the long run a few cents on the chick is insignificant alongside of the value of the extra eggs she will produce if she proves a good layer. In securing the chicks from which to develop pullets for the laying flock one should endeavor to get the very best he can find.

A few words of advice about buying baby chicks. Make a careful study of your conditions and decide the number desired. Always bear in mind that in order to get the most desirable early hatches it is necessary to place orders early. The number of chicks needed will be determined largely by the number of pullets desired to renew the flock in the fall. One safe rule to follow is to order three chicks for every pullet desired in the fall. Next choose a reliable breeder with whom to place an order. If the eggs are purchased on the farm where they are hatched, all the better, but unless you are satisfied with the quality of the breeding stock do not hesitate to buy the eggs elsewhere, even though it may add two or three cents a head to the cost of the chicks. This is a small item compared with the value of the crop of pullets.

DEFINITE PLANS FOR ST. LOUIS MARKETING COMPANY.

DEFINITE plans have been formulated by the Southern Illinois Milk Producers' Association and Illinois Agricultural Association to organize a cooperative milk marketing company. At a meeting of farm advisers from the farm bureaus in the St. Louis district recently, plans were made for cooperating with the Milk Producers' Association in each county and for having the farm bureau offices be the headquarters for county campaigns. The farm advisers feel that the milk marketing problem is a serious one and are ready to cooperate to the fullest extent.

Our Service Department

DISPOSAL OF LIQUID MANURE.

In building my barn I have not solved the question of how to treat the liquid from the gutters. I understand some people run a drain out to a cistern and then later pumped this into a sprinkler and spread on the land. Please let me know if you think this practical, or if you have some other system you think is better.

Wayne Co.

J. H.

In most all of the up-to-date market milk plants the liquid manure in the gutter is disposed of in the way you intimate. All the gutters are built so that they will drain into an outside cistern or reservoir. When the stables are cleaned of the solid manure in many instances then the gutters are washed out or flushed out. This, of course, makes the stables somewhat more sanitary. However, for ordinary dairy barns liquid manure can be taken care of by absorbents. Dry straw or chaff placed in the gutter every day with plenty of bedding for the cows, will absorb the liquid manure so that it can be hauled out with the solid manure when the stables are cleaned. Of course, there will be a slight amount left every time but this is changing constantly from day to day so that it doesn't get offensive. If there is plenty of bedding used for absorbents you will have no difficulty. If in addition to this one will use acid phosphate sprinkled on the floor and in the gutter every day after the stable is cleaned it will prevent any offensive odor, will absorb a large per cent of the moisture and will make the manure much more valuable because it adds phosphorus to the manure which is lacking in that element of plant food.

If one can take care of the liquid manure by absorbents it does away with a larger amount of work in disposing of the liquid and washwater after it has been drained into a cistern. This is more of a job in the winter time than in the summer time because your sprinkling system does not always work well in cold weather.

C. C. L.

COOKING WHEAT.

I have, but not lately, cooked whole wheat until the kernels would burst open, and fed it to hogs, and it would come through them whole the same as they swallowed it. Now, did they get the benefit of it as they would if it had been ground and fed raw? I have had beans do the same thing.

Eaton Co.

L. G. T.

It would help very much to cook the wheat but even then hogs do not take the time to properly masticate such food and it would be much better to grind it always and grind it fine. Where the kernel passes through the animal whole, only a portion of the nutriment has been assimilated and there is a whole lot of waste that one cannot afford. If the wheat is cooked thoroughly it can be mashed up as you mash potatoes and get better results, the same is true with beans, if they are cooked until soft they can be mashed and you will get better results. It is quite essential that the beans be cooked whether in meal or whole, as they are more digestible. In case of wheat it is not necessary to have it cooked after it is ground.

C. C. L.

ADDITIONAL PROTEIN NEEDED.

I am feeding ground beans and oats equal parts. We fix two sacks of that with one of bran. What can I add to make a good ration for dairy cows? Our rough feed is corn ensilage and No. 1 mixed timothy and clover hay.

Charlevoix Co.

R. G.

I am of the opinion that your ration could be somewhat improved by add-

ing two pounds of oil meal a day and then feeding a sufficient amount of your prepared grain ration together with the two pounds of oil meal to make a pound of grain for every three or four pounds of milk produced in a day. This ration is pretty well balanced but the timothy hay and corn silage for roughage is quite deficient in protein. If you had a little good feed of clover hay or alfalfa hay I would say that your prepared grain mixture would furnish a sufficient amount of protein.

C. C. L.

MILLET SEED AS A GRAIN.

I have considerable millet seed and would like to know its feeding value and to what kind of stock it is best to feed it, and how far it would take the place of cottonseed meal or linseed meal for milch cows? What is the seed worth as a feed? It is very nice seed but cottonseed meal costs here \$3.00 per hundred pounds and I don't know whether to sell the millet or grind it for feed.

Eaton Co.

G. T.

Millet seed has about the same food analysis as corn or oats. It does not differ materially but it is very much unlike cottonseed meal and therefore it would not take the place of cottonseed meal. Cottonseed meal being very rich in protein and millet seed contains only a moderate amount. It would be more of a substitute for corn, oats or barley. I do not know the market value of this seed at the present time, but I have an idea that it would pay you to sell it. Of course, if you feed millet it must be finely ground for everything except poultry.—C. C. L.

HENS WITH BRONCHITIS.—WEAK CHICKS.

I have some hens that seem to have a rattle in their throats when they breathe. I first noticed it two months ago and gave them roup medicine, and they got over the attack, but now they have the same thing again. They go blind in one eye which swells up, but the hens do not die. Will you tell me what is the trouble? My little chickens seem to get a nice start and grow for a while, then they get light, droop awhile and die. What is the cause, Shiawassee Co.

H. O.

A rattling sound and a gasping for breath is a sign that the birds have bronchitis. They may recover in a short time but such birds are more subject to the disease again. It is most apt to occur when the hens have been out in a cold wind or rain storm. Roosting in a draughty coop may cause colds and bronchitis. A tablespoonful of castor oil and about five drops of turpentine may help the bird. It should be placed away from the flock as colds spread rapidly by means of the drinking water. Potassium permanganate in the drinking water helps to reduce the chances of colds spreading. Color the water a deep crimson. A small amount can be made up as a stock solution and enough added to the water each day to color the drinking water. Do not breed from birds that have had colds. It usually pays to get rid of them because of the danger that the trouble will occur again and possibly spread.

The young chicks may die because of a lack of vitality in the breeding stock or it may be due to a lack of a balanced ration. Try feeding chicks plenty of sour milk and give them a grassy clover range. Watch for head lice as they devitalize growing chicks during hot weather. A bit of lard placed on the head of each chick will destroy the lice.



A healthy Holstein, this. She is a 3-year-old junior champion, with a seven-day score of 581 pounds milk; 29.3 lbs. butter fat.



Keeping Tabs on Health Pays

THE whole scheme of profitable dairying leads back to the subject of health. No way of escaping it. A cow is profitable or not, according to the degree of vigor of her milk-making organs.

Watch the milk-yield closely; it's the barometer of health. Reduced milk-flow means the presence or approach of disease.

Each year more thousands of dairy farmers are learning the value of the simple Kow-Kare

home treatment—both as a preventive and reliable aid in relieving diseases of the genital and digestive organs. Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches can be kept out of your dairy with the aid of this great cow medicine.

Give Kow-Kare a trial; feed dealers, druggists and general stores sell it—70c and \$1.40 packages. Write for free book, "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY

Lyndonville, Vermont

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.



BREEDERS' DIRECTORY

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

Wildwood Farms Angus

Effies Lass 238203 sold on May 6th for \$7100. She was sired by Black Monarch 3rd. We are offering for sale Editor of Wildwood 295059 a full brother in blood lines to Effies Lass also four more choice bulls which are old enough for service and sired also by the champion show and breeding bull Black Monarch 3rd.

Our herd is under State and Federal Supervision.

WILDWOOD FARMS ORION, MICHIGAN

W. E. SCRIPPS, Prop., Sidney Smith, Supt.

WOODCOTE ANGUS

Imported Herd Bulls
ELCHO OF HARVESTOWN (45547)
by Jason of Ballindalloch (38048)
EDGARDO OF DALMENY (45501)
by Escort of Harvestown (38006)
Woodcote Stock Farm, Ionia, Mich.

The 2nd Annual

Mich. Aberdeen Angus Breeder's Ass'n Sale will be held at M. A. C. East Lansing, on Jan. 14, 1921. This space is contributed by Geo. Hathaway & Son, Ovid, Mich. A few females and an aged bull to spare at private sale.

Reg. Aberdeen Angus 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.

For Sale Having decided to sell part of my herd of pure bred Aberdeen Angus cattle, consisting of males and females of different ages.
ANDREW P. EITEL, Vermontville, Mich.

Village Farms Guernseys
for sale. High grade milking cows, heifers and heifer calves. Also registered bulls from 1 month to serviceable age whose dams are on test and making good records. Write or come and see the herd. Rex Griffin Herdsman, O.J. Winter Prop. Sebawing, Mich.
GUERNSEYS—REGISTERED BULL CALVES
Containing blood of world champions.
HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

GUERNSEYS

Bull calves for sale. Sired by Anton's May King that sold for \$7,000. Farmers prices and guaranteed to please. GILMORE BROTHERS, Camden, Mich.

Guernsey Bull Busto of Smallidge Farm, born Feb. 2nd, 1920. Sire Bennie of the Ridge, who's dam Trixie of the Ridge holds first place in class EE in Michigan. Granddam Abbie of Riverside is champion of Mich. Dam May Kings Ezalia of Eau Claire an A. R. cow. E. J. SMALLIDGE, Eau Claire, Mich.

GUERNSEYS—Federal Inspected. Headed by only a son of Carrie of Hillhurst, exchampion of A. A. class. 5 bulls under 10 mos., 1 a dandy whose dam in class D has given over 50 lbs. milk. No females to spare. G. W. & H. G. RAY, 4 mi. east of Albion, Mich.

GUERNSEY BULL CALVES whose sire's dam made 19,460.20 milk, 909.05 fat. Their mother's sire's dam made 15,109.10 milk, 778.80 fat. T. V. HICKS, Battle Creek, Mich.

Registered Guernseys

a 6 months old bull (100%) satisfaction for \$100. A nice heifer calf \$150. J. M. WILLIAMS, North Adams, Mich.

For Sale 2 Registered Guernsey cows 6 registered bulls ready for service, call or write JOHN EBELS, R. 2, Holland, Mich.

Registered Guernsey bulls two ten months old excellent breeding back of them. GEO. W. REEVES, R. 7, Grand Rapids, Mich.



A Few Large Yield Cows Are Better Than Many Poor Producers

Use Holsteins and you save labor, feed, stableroom, equipment and the risk of loss, because they are the most vigorous and healthy dairy cattle on earth.

If you choose cows according to capacity for converting coarse feed into milk, which is the true function of the dairy cow, you will choose the big Black-and-White Holsteins.

Read the interesting and instructive story of Holsteins in our free booklets. Write today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
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MR. DAIRYMAN!

Are you using a first class herd sire? You can't afford to use a poor one. We have good ones of all ages listed at reasonable prices. Let us know your needs.

The Michigan Holstein-Friesian Association

H. W. NORTON, Jr., Field Secretary,
Old State Block, Lansing, Michigan

NOTICE

The Winwood Herd

on Nov. 1st will move their Herd of Pure Blood Holsteins to their new home, 1 1/2 miles south of Rochester, Mich. and for the next 30 days we will sell what bull calves we have cheap as we will be unable to get our buildings complete before winter. So get busy if you want a son of Flint Maplecrest Boy at your own price.

JOHN H. WINN, (Inc.)

Roscommon, Michigan

For Sale Holstein-Friesians

A bull calf ready for service. Combines show type and production. Herdsire, Model King Segis Glista, whose granddam is Glista Ernestine, the only cow of the breed that has six times made better than 30 lbs. butter.

Grand River Stock Farms
Corey J. Spencer, Owner
315 N. East Ave. Jackson, Mich.

Superior Holsteins

Bulls all sold but are now booking orders for our expected fall crop of

Bull Calves

sired by my new herd bull, a grandson of May Echo Sylvia

My sire's two nearest dams average over 35 lbs. butter and 800 pounds milk in seven days.

A. W. COPLAND

Birmingham, Mich.
Herd under state and federal supervision

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

Read what your neighbors say about Jerseys

"THE KEY TO DAIRY PROFITS" is a Jersey book that tells of the profits farmers the country over are making with Jerseys—THE PROFIT BREED. The letters of neighbors of yours are probably in it—the letters of several people in your county or state are in it.



Send for this free book and read what men you actually know say about Jerseys. That's the kind of proof that counts. Write now, whether you are interested in one cow or a hundred. We'll include a copy of "Jersey Facts," also.

THE AMERICAN JERSEY CATTLE CLUB, 324-R West 23rd St., New York
An Institution for the Benefit of Every Jersey Owner

JERSEYS

Long Distance

Five dams av. 1186 lbs. butter and 2471 lbs. milk in 1 yr. Bulls all sold. State and Federal Supr. A. FLEMING, Lake, Mich.

The Traverse Herd

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

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write. GEO. D. CLARKE, Vassar, Mich.

"Top Notch" Holsteins

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

Our advertised bulls are selling fast. Here are two good ones:

No. 1. King Vale Colantha De Kol, No. 307701. Born Oct. 11, 1919. A "TOP NOTCH" individual, backed by fifteen dams who average 30.73 lbs. butter in 7 days. Price \$175.00 f. o. b. Howell.

No. 2. Cornucopia Wayne Segis King, No. 318409. Born Dec. 6, 1919. His 4 nearest dams average 25.39 lbs. butter in 7 days. Dams, a 22 lb. cow with a daughter who produced 38.74 lbs. milk and 1543 lbs. butter in two consecutive years. Price \$125.00 f. o. b. Howell.

No. 1 Bull about one quarter white. No. 2 Bull about half and half.

McPherson Farms Co. Howell, Mich.
Our herds under U. S. Supervision.

An Introduction

Mr. Dairy Farmer, Mr. Holstein Breeder Meet KING FLINT

ALL THREE are working to a common purpose—to increase the production of Michigan Dairy herds.

We believe all three should work together. We feel sure that no Michigan bull has ever been better equipped for the work.

We have it on high authority that there are none better individually.

His three nearest dams each averaged to produce 100 lbs. butter and 2100 lbs. milk per month for a full lactation period with an average of 3.8% fat.

His dam is one of Michigan's greatest family—three full sisters that have produced over 700 lbs. milk, and two of them producing more than 1000 lbs. butter and 21000 lbs. milk in ten months.

His sire is the direct descendant of three general tions of 30 lb. cows and two generations of 1200 lb. yearling record cows.

His first three sisters to enter yearly test will each produce more than 800 lbs. butter and 17000 lbs. milk as heifers.

Let King Flint Help You Improve Your Herd Through One Of His Sons

A son of this great young sire suited to head any herd in Michigan, grade or purebred, can be secured in Genesee County and we want them all to stay in Michigan.

Write us about your herd, tell us what you need and what you feel you can afford to pay and let us help you find just what you want in Genesee County, the center of Michigan's long-distance dairy cattle.

Genrida Farm Elmcroft Stock Farm
Walter T. Hill G. L. Spillane & Son Co.
Davison, Mich. Clio, Mich.

Cluny Stock Farm

Offers the best selection of young bulls from 8 to 12 months we ever raised; out of dams up to 29.76 for aged cows and over 26 lbs. for 2 yr. olds. Yearly records up to 24000 lbs. milk and 1000 lbs. butter. Sired by our Senior Herd Sire, Maplecrest Application Pontiac, whose dam made 35 lbs. butter in 7 days and 1344 lbs. butter and 23421 lbs. milk in a year, or by Dutchland Konigen Sir Rag Apple, our Junior Herd sire, whose dam is a 30 lb. 10 yr. old maternal sister of Dutchland Colantha Denver who made 36 lbs. in 7 days and 1315 lbs. butter and 2581 lbs. milk in 1 year. Several carry the blood of both these sires.

They are extra well grown, straight and right. One of these at the head of your herd is bound to increase production.

Send for pedigrees and prices.

R. Bruce McPherson, Howell, Mich.

\$100

Registered Holstein Bulls
Best blood in America. Ready for service, grandson of King of the Pontiacs. Herd sire King of the Pontiac Segis. Herd under State and Federal Supervision.

JAMES B. JONES FARMS
ROMEO, MICH.

507.5 lb. milk 22.8 lb. butter aver. of 5 nearest dams of granddaughters of De Kol 2nd Bull Boy 3rd Due in Mar. to 27 lb. bull. Price \$300. M. L. McLAULIN, Redford, Mich.

Holsteins of Quality

for sale. Heifers from 8 to 24 months old. All registered and sold subject to tuberculin test. E. A. HARDY, Rochester, Mich.

Here Is A Good One.

A yearling son of Maplecrest De Kol Hengerveld. The 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 sister to three each with records of over 1200 pounds by Pontiac Aggie Korndyke. This combination of breeding has produced more 1000 to 1200 pound cows than any other of the breed. If progeny counts, where can you equal it? Price \$150.00 for quick sale. Hillcrest Farm, Mgr. F. B. Lay, Kalamazoo, Mich.

Federal Accredited Herd Bull For Sale

Old enough for service. Dams records, 7 da. milk 467.80, butter 20.85, 305 da. milk 16.15, 3, butter 648. She has 2 A. H. O. daughters. His sire a 24 lb. grandson of Colantha Johanna Ltd. Price \$200. Write for particulars. Vernon Clough, Parma, Mich.

Reg. Holstein-Friesian Bulls ready for service and priced to sell. Light in color and richly bred. B. B. REAVEY, Akron, Mich.

FOR SALE Eight head of Reg. Holstein cattle. Four cows 3 to 5 yrs. of age and four yearling heifers. F. O. PARDEE, R. 5, Manchester, Mich.

FOR SALE

King Mercedes Pontiac Moole Registered Holstein bull calved April 7, 1919. Just right for service. Seven nearest dams on sire's side have seven day records of 20 lb. and 6 have 30 lb. His dam directly related to the 2nd, 40 lb. cow of the breed. This bull at the sacrifice price of \$300. F. O. B. Sterling, Michigan. J. O. MUTH, Owner, Sterling, Mich.

Registered Holstein Heifer born Sept. 20, 1920. Sire a son of King Ona. Dam is a 2 yr. old daughter of a 24 lb. cow and a 30 lb. bull. Price \$125 delivered your station. EARL PETERS, N. Bradley, Mich.

Reg. Holstein bull calf born Nov. 1920 extra choice breeding and individuality, \$60 reg. and del. J. R. Hicks, St. Johns, Mich.

Registered Hereford Bull Bargains

In order to reach every farmer and breeder wanting good bulls I will offer for a limited time a few good ones at \$100 to \$125 ages 12 to 18 mo. (act quick). Farm six miles S. of Ionia, Citz. Tel. 122-4.

Jay Harwood & Son, Ionia, Mich.

GRADE HEREFORDS

of our own raising, 25 head yearling steers, 35 head stock calves, also 30 head heifer calves, these heifer calves would make a good foundation for a herd. SANILAC STOCK FARM, Berkshire, Sanilac County, Detroit Office, No. 76 Broadway.

Herefords For Sale Fairfax and Disturber blood. 150 Reg. head in herds, \$35 reduction on all sires, choice females for sale. Write me your needs. Earl C. McCarty, Bad Axe, Mich.

The Sun Always Shines on GREAT JERSEYS

Great yearly records everywhere.

In Canada	960	lb.	85%	butter
In Maine	1223.5	"	"	"
In California	1105.8	"	"	"
In Mass.	1175.2	"	"	"
In New Mexico	1097.6	"	"	"
In Ohio	1010.5	"	"	"
In Oregon	1212.8	"	"	"
In So. Carolina	1020	"	"	"
In Illinois	1120	"	"	"
In Washington	1102.3	"	"	"
In Iowa	1010.2	"	"	"
In Mich.	1124.6	"	"	"

No! not 80%, but 85%, good honest butter. Sec'y. Henrikson of Shelby, knows of a lot more.

The Wildwood Farm

Jersey Cattle, Majesty strain, Herd on State accredited list, R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 143-5, Capac, Mich.

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

For Sale Jersey bull calves of Majesty breeding from good producing stock. Herd on Government "Accredited List." Write for price and pedigree to C. A. TAGGETT, R. 2, Fairgrove, Mich.

Lillie Farmstead Jerseys 2 R. of M. bull calves, one year old this fall. C. O. 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 Fogis 99th and R. of M. dams SMITH & PARKER, R. 4, Howell, Mich.

Wanted Jersey Cow

address L. F. Zells, R. F. D. 4, St. Clair, 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.

BIDWELL SHORTHORNS

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

Bloomdale Shorthorns

See our cattle get our prices and breeding before buying. Both bulls and females for sale. CARR BROS. & CO., Bad Axe, Mich.

The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare. In service, bulls for sale. J. V. WISE, Gobleville, Mich.

Richland Shorthorns

Imp. Lorne, Imp. Newton champion and Sterling Supreme in Service. We offer for quick sale: Five Scotch Bulls, best of breeding. Three whites at \$1000 each. One roan at \$500, one red at \$400. No females for sale. Public sale Chicago Oct. 28th. C. H. PRESCOTT & SONS, Tawas, City, Mich.

BRANCH COUNTY FARM

Breeders of American Polled Shorthorn Cattle

For Sale two splendid bulls now ready for service, and two younger ones that will be ready for light service Jan. 15th. We also are offering at this time a few bred cows and heifers. Herd headed by Victor Sultan and Sultan's Gift. Prices very reasonable, write your wants. Geo. E. Burdick, Mgr., Coldwater, Mich.

Shorthorns Good Scotch bred bulls, cows and heifers, priced right. W. B. McQUILLAN, R. 7, Howell, Mich.

Milking Shorthorns Breeding the best bulls from high producing cows. O. M. YORK, Millington, Mich.

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

Milking Shorthorns of best Bates breeding, bulls 6 to 8 mo. old for sale. E. H. KURTZ, Mason, Mich.

REGISTERED Shorthorns. Roan yearling bull in prime condition. Snapshot and breeding sent on request. E. J. Knickerbocker, R. 2, Homer, 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 for sale, from 3 mos. to 1 year old, sired by Famous Charming grand son of Charming 1919 International Grand Champion. WESTBROOK BROS., Ionia, Mich.

Registered Brown Swiss Bull ready for service. Write for prices. ALBERT H. ARNOLD, R. 2, Prescott, Mich.

HOGS

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

Quality Berkshires

2 BOARS, 4 SOWS. May farrow. Littermates, sired by Prince of Rudgate (236191) and out of Hilltop Model 2nd. (290816)

All of these pigs are good, growthy individuals that should be in the hands of some Berkshire breeder or farmer where they will have a chance to make good. Write or visit farm.

WILLIAM ROBERTS
Lone Pine Road, Birmingham, Mich.

Fine Registered Berkshire pigs for sale, prolific, large litters. C. H. WHITNEY, Merrill, Mich.

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

Brookwater Duroc Jerseys

BOARS—Ready for Service

Big type, large bone and rugged with plenty of quality. This is your chance to buy high class individuals at reasonable prices.

Open Glits
of choice breeding and right type. Panama Special, The Principal 4th, Orion Cherry King, and Great Orion families. Now is the time to buy before the demand takes all of the good ones.

Write us for Prices and Pedigrees
Mail orders a Specialty. Satisfaction guaranteed.

BROOKWATER FARM

ANN ARBOR, MICHIGAN

H. W. Mumford, Owner J. B. Andrews, Mgr.



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

Phillips Bros, Riga, Mich.

INTERNATIONAL HAY AND GRAIN AWARDS.

MICHIGAN readers will be interested in the following awards made at the recent International Grain and Hay show:

Rye.

1st, Louis Hutzler, Manitou, Mich.; 2nd, Murphy & Gormely, Newberry, Mich.; 3rd, Gifford Patch, Clarklake, Mich.; 4th, G. F. Horton, Jackson, Mich.; 5th, A. Hughes, Hillsdale, Mich.; 6th, A. B. Sanderson, Hanover, Mich.; 7th, H. C. Reed, Fennville, Mich.; 8th, L. L. Lawrence, Decatur, Mich.; 9th, Norman Whitney, Ceresco, Mich.; 10th, E. J. Fenn, Parma, Mich.; 11th, J. H. Thorley, McMillan, Mich.; 12th, W. B. Sterns, Newberry, Mich.; 13th, Ralph Arbogast, Union City, Mich.; 14th, Henry Brown, Newberry, Mich.; 15th, George Starr, Grasslake, Mich.; 16th, A. M. Berridge, Greenville, Mich.; 17th, Rossman Brothers, Lakeview, Mich.; 18th, W. L. Huber, Charlotte, Mich.; 19th, Howard Kerby, Parma, Mich.; 20th, H. L. & L. R. Queal, Hamburg, Mich.; 21st, Arthur Bohance, Ceresco, Mich.; 22nd, C. S. Bender, Marysville, Mich.; 24th, Houseman Brothers, Cathonia, Mich.; 25th, W. H. Every, Manetostin, Mich.; 26th, A. W. Jewett, Mason, Mich.; 27th, S. A. Foster, Okemos, Mich.; 28th, W. W. Means, Shelbyville, Mich.; 29th, Herman Hardwin, Gillets, Wis.; 30th, J. J. Straighan, Craig, Colo.

Soft Red Winter Wheat.

1st, Sauerman Brothers, Cross Point, Ind.; 2nd, C. D. Finkbeiner, Clinton, Mich.; 3rd, I. B. Kechley, Marysville, Ohio; 4th, R. B. Caldwell, Ohio; 5th, Edward Wayne, Allegan, Mich.; 6th, Bert Carroll, Bellevue, Mich.; 7th, C. J. Wright, Marcellus, Mich.; 8th, Clafl & Bender, Kalamazoo, Mich.; 9th, L. Lawrence, Decatur, Ind.; 10th, H. A. Fich, Kent City, Mich.; 11th, L. H. Laylin, Mason, Mich.; 12th, A. W. Jewett, Jr., Mason, Mich.; 13th, W. D. Dun-aety, Sodus, Mich.; 14th, J. E. Mun-ner, Aslona, Ill.; 15th, C. E. Troyer, LaFontaine, Ind.; 16th, W. A. Willard, Middleton, Ohio; 17th, Jay Lawrence, Coshocton, Ohio; 18th, McBarnche, Hilliards, Mich.; 19th, R. Jewett, Ma-son, Mich.; 20th, W. B. Slickle, Three Oaks, Mich.

Yellow Corn.

Region Two.—1st, Charles Laughlin, Three Oaks, Mich.; 15th, L. H. Laylin, Mason, Mich.; 21st, A. W. Jewett, Jr., Mason, Mich.; 24th, R. Jewett, Mason, Mich.; 25th, Ralph Jewett, Mason, Mich.

White Corn.

14th, A. W. Jewett, Mason, Mich.; 19th, Farley Brothers, Albion, Mich.; 20th, L. H. Laylin, Mason, Mich.

Flint Corn.

8th, A. W. Jewett, Jr., Mason, Mich.; 9th, R. Jewett, Mason, Mich.; 10th, R. Layens; 21st, G. J. Frederick, Brook-ings, Mich.; 22nd, L. Jewett, Mason, Mich.

Field Peas.

4th went to John Dunbar, Rudyard, Mich.

Special awards on corn for Region 2.—Chas. Laughlin, (Yellow), Three Oaks, Mich.

Oats.

In the oat exhibit John Dunbar, of Rudyard, Mich., took 17th; A. W. Jewett, Jr., Mason, Mich., 21st; H. K. Hankinson, Grand Rapids, 25th; L. H. Laylin, Mason, Mich., 26th; Ashley Berridge, Greenville, Mich., 32nd, and Lynn Jewell, Leslie, Mich., 35th.

Timothy Hay.

1st, Otto Wolf, La Crosse, Wis.; 2nd, A. W. Jewett, Jr., Mason, Mich.; 3rd, L. H. Laylin, Mason, Mich.; 4th, A. M. Spitzran, Marion, Ill.; 5th, Frank Culfe, Bethalto, Ill.; 6th, Robert Fulton, Mt. Vernon, Ohio; 7th, Carl Holden, Williamsburg, Ill.; 8th, F. McMichael, Spencerville, Ohio; 9th, Frank Line, Fox Lake, Wis.; 10th, Roy Miller, Spencerville, Ohio.

Alfalfa Hay.

1st, Swartz Brothers, Waukesha, Wis.; 2nd, W. J. Otchick, Greenville, Iowa; 3rd, Jacob Willett, Hillsboro, Ohio; 4th, J. D. Peterson, Omaha, Neb.; 5th, A. W. Jewett, Jr., Mason, Mich.; 6th, O. F. Otchuk, Greenville, Iowa; 7th, Duke Sutherland, Alberta, Canada; 8th, La Crosse County School, Asakaska, Wis.; 9th, Sauerman Brothers, Crown Point, Ind.; 10th, Charles Hourtt, Randolph, Wis.; 11th, A. J. Stan, Portage, Wis.

Single Ear Corn.

In the single ear class for Region 2, Chas. Laughlin, Three Oaks, Mich., was awarded 15th place; Ralph Jewett, Mason, Mich.; 22nd; L. H. Laylin, Mason, Mich., 23rd.

Clover Hay.

1st, W. F. Otchick, Greenville, Iowa; 2nd, A. W. Jewett, Jr., Mason, Mich.

3rd, L. H. Laylin Mason Mich.; 4th, F. J. Lindley, Fox Lake, Wis.; 5th, Richard Jewett, Mason, Mich.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

Malignant Sore.—We have a cow which, when we bought her four or five years ago had large sore on face, extending from nostril to eye. This sore has been healed, but persists in opening and discharging pus. I am told it was caused by her running into a barbed wire fence and wounding her face. Just now face is healed. What line of treatment do you recommend? W. L. Holt, Mich.—Occasionally paint sore parts with tincture of iodine. She will never fully recover. Would it not pay you to fatten her for beef?

Chronic Indigestion.—As soon as I turn my cows out in the morning they begin gnawing on posts, boards or any wood they can get hold of. What is the cause of their ailment? They are fed on salted ensilage, alfalfa hay and ground oats. W. R. Columbiaville, Mich.—Feed each cow a tablespoonful of powdered gentian and three table-spoonfuls of powdered wood charcoal at a dose in feed two or three times a day. Feeding same kind of feed too long a time is perhaps the cause.

Sweeny.—I wish you would give me a remedy for sweeny in draft mare, only one shoulder affected. C. T. Eaton Rapids, Mich.—Apply equal parts of turpentine, aqua ammonia and raw linseed oil daily.

Shy Breeder.—I have a cow which I have failed to get with calf; have driven her away about five or six times, and so far nothing doing. Cow is about eight years old, normal otherwise, eats good, comes in heat regular. What method should I pursue to get this cow with calf, if any? H. M. Rosebush, Mich.—Dissolve four ounces of strictly pure bicarbonate of soda in two quarts of clean tepid water, and with fountain syringe flush vagina three hours before she is served. In the course of time she will perhaps get with calf. If very fleshy, reduce her and be sure that she has daily exercise.

Abortion in Cows.—How shall I treat abortion in cows? O. A. J., Allegan, Mich.—Clean and disinfect your stable and keep it clean. Separate the aborter from well cows and heifers. Burn or deeply bury dead calf and afterbirth. Keep the aborting cow away from balance of herd for three weeks, or leave one open stall between her and well stock. Don't breed her for six or eight weeks. Don't sell an aborter if she will breed, especially if she is well-bred and has been a profitable dairy cow. A clinging afterbirth will generally come away, but if taken by hand it should be done within twenty-four, forty-eight or sixty hours after calving. When roughly done the inner wall of uterus is always damaged. Without proper instruments flushing of the vagina had better not be done. Give your stock good care and after a time the cows will carry their calves the full gestation period.

Sidebone.—Is there any remedy for sidebone and if so tell me what to apply. F. M. G., Owosso, Mich.—Lower the heel and paint bunch with tincture of iodine daily. Avoid fast driving on hard road.

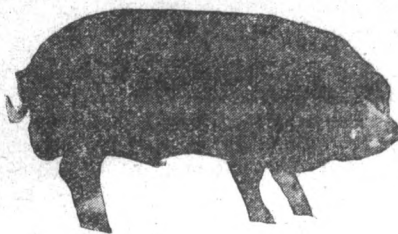
Eczema.—The hair is dropping out in spots about the eyes, tail hair is shedding some, but skin is not sore. W. A. L., Filion, Mich.—Apply one part kerosene and nine parts petrolatum to scalp of tail and bald parts of the body every day.

Fails to Come in Heat.—I have a well cow, but she fails to come in heat and I am having trouble to churn the cream into butter. F. E. S., Alanson, Mich.—Give her one dram of ground nux vomica and a teaspoonful ground capsicum at a dose in ground feed twice a day. You keep the cream in too cool a place before churning. Talk to a good butter-maker and learn how they store their cream and manage at churning time.

Scurvy.—Have two young pigs, both are troubled with scurvy. Have applied fresh melted lard to their back. Have no milk to feed them. Mrs. L. L. F., Niles, Mich.—Apply one part oxide of zinc and six parts vaseline to scurvy part of body daily. Feed some vegetables and roots and keep them in a dry clean place.

Sale BRED SOW Sale

40 Head
Large Type
Poland
China Gilts



Wednesday
Jan. 5, 1920
at farm near
Manchester
Mich.

BRED TO { F's Clansman Grand Champion at Michigan State Fair 1920
Smooth Buster first Jr. yearling boar Michigan State Fair 1920

Sale takes place under cover. All trains will be met A. M. of sale day. Get a sow bred to one of these boars. Send for catalogue. Everything immuned.

Col. Ed. Bowers
Auctioneer

A. A. Feldkamp
Prop.

BIG TYPE

POLAND CHINAS

Hillcrest Farm

Office, Kalamazoo, Michigan

Farm, Allegan, Michigan

Will Sell Thursday, January 6th

40 HEAD Bred Gilts, Fall Yearlings, Tried Sows, Choice Boars and some Extra Choice 35 pound young Holstein bulls at the

Fair Grounds, Allegan, Michigan

There will be SOME GREAT ATTRACTIONS. Don't miss this sale. There will be many bargains.

Write Office for Catalog.

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DEN BLYKER BROS.
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O. I. C. BOARS

Choice individuals; shipped to you c. o. d. express paid and guaranteed right or your money refunded. All stock registered in buyer's name.

J. CARL JEWETT, Mason, Mich.

O. I. C. HOGS

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

CRANDELL'S PRIZE HOGS, Cass City, Mich.

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.

For Sale Duroc Jerseys of the big heavy boned type. CHAS. BRAY, Okemos, 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.

DUROCS spring boars. A few gilts bred for Sept. farrow at bargain prices. W. C. TAYLOR, Milan, Mich.

Duroc Boars ready for service. Sired by Jacks Cherry Orion King number 18929 son of the \$10,000.00 Champion Jacks Orion King 2nd fall large type and heavy bone out of good sows. THE JENNINGS FARMS, Bailey, Mich.

Duroc Jerseys Boars Boars of the large heavy boned type at reasonable prices. Write or better come and see. F. J. DROTT, Monroe, 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. 506, Durand, Mich.

Duroc Jerseys Boars sired by Ed's Defender Col. and Thora Apple Col. The 2nd one yearling Boar by Orion's Fancy King. FREY BROS., Caledonia, Mich.

Duroc Jersey boars from 6 mo. to 1 yr. old. Young sows old enough to breed for spring litters all in good condition and at fair prices. Safe delivery guaranteed. W. E. BARTLEY, Alma, Mich.

DUROC JERSEYS

Carey U. Edmonds, Hastings, Mich.

DUROC JERSEYS Boars and gilts sired by E. D. HEYDENBERK, Wayland, Mich.

Pleasant View Durocs, Service boars, bred sows and open gilts. W. C. BURLINGAME & SON, Marshall, Mich.

Michigana Durocs. We can fill your wants. Several lines of breeding represented including the Sensations. Satisfaction guaranteed. O. F. Foster, Pavilion, Mich.

Raise Chester Whites?

Like This
the original big producers

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

Big Type Chester Whites Spring boars sired by Wildwood Jr. 2nd, Hill's Big Bone, Col. Wykoff, Smith's Giant and Champion X Jr. and out of good big dams. Cholera immune and satisfaction guaranteed. Also fall pigs, either sex, not related. N. L. HILL, Jr., Mackinaw, Ill., Tazewell, Co.

Down With Prices on last fall and this spring's O. I. C. Boars. WEBER BROS., Royal Oak, Mich.

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

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

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

LATEST MARKET REPORTS

GRAIN QUOTATIONS

December 14, 1920.

Wheat.

Detroit.—Cash No. 2 red \$2.02; December \$1.93; March \$1.91; No. 2 white and No. 2 mixed \$2.

Chicago.—No. 2 red \$2.01@2.02; December \$1.70½; March \$1.64½.

Corn.

Detroit.—Cash No. 3 yellow, new 82c; No. 4 yellow, new 77c.

Chicago.—No. 2 mixed 75c; No. 2 yellow 81½@82c.

Oats.

Detroit.—Cash No. 2 white 55½c; No. 3 white 54c; No. 4 white 50c.

Chicago.—No. 2 white 50¼@50½c; No. 3 white 49¼@50c.

Beans.

Detroit.—Immediate and prompt are lower at \$4@4.10 per cwt.

Chicago.—White beans steady. Hand-picked beans choice to fancy \$4.50@4.75; red kidney beans \$9@10 per cwt.

New York.—Market continues dull. Choice pea \$5@5.25; do medium \$5.50@5.75; red kidney \$10@10.25.

Rye.

Detroit.—Cash No. 2 rye \$1.57.

Seeds.

Detroit.—Prime red clover \$12.25; February \$12.40; alsike \$16.75; timothy \$3.50.

Toledo.—Prime red clover, cash and December \$12.20; alsike \$16.50; timothy \$3.50.

WHEAT

Each passing week seems to bring new evidence of the strong statistical position of the wheat market. It is now estimated, based upon careful calculations, that the United States is practically on a domestic basis so far as its wheat supplies are concerned, although purchases by foreign countries in our markets are made whenever prices decline sharply. The 1920 crop plus the carryover of wheat and flour from 1919 made a total available at the beginning of the season of about 910,000,000 bushels. Allowing for the average domestic consumption, disappearance in the form of mill screenings and otherwise, wheat used as feed and the average crop carryover together with the amounts exported up to December 1 and the wheat sold abroad but not shipped, there is a total of about 925,000,000 bushels. It is estimated that about 20,000,000 bushels have been imported from Canada up to the present time so that the balance remaining to be sold to foreign countries, if we consume the usual amount in this country and have the usual carryover on July 1, 1921, was not more than 5,000,000 or 10,000,000 bushels. On one day the past week, 3,500,000 bushels were sold to European countries of which 1,500,000 bushels were domestic wheat and the remainder Canadian. The Argentine surplus is probably around 120,000,000 bushels and Australia has 80,000,000 or 90,000,000 bushels. Reports within the past week from both countries tell of wet weather during the harvest season, causing more or less damage. It was reported during the past week that fifty per cent of the Australian surplus has already been sold to England, and France is reported to have purchased 26,000,000 bushels more. Drought continues in India and the export movement from that country will be prohibited as soon as the 15,000,000 bushels sold a few weeks ago have been shipped. The summary figures still suggest a rather tight wheat situation in the world's supply.

CORN

Corn markets have yet to feel the shock of the heavy movement of new corn which the size of this year's crop promises. Although prices are believed to be down on bedrock, the markets are certain to be rather weak when primary receipts enlarge as they invariably do at this season of the year. The industrial demand is below normal for this season of the year, there is no scarcity of cars to prevent a heavy movement and reports from banking conditions in some of the corn-producing states, notably Iowa, indicate that sales must be made rather freely.

OATS

Oats will follow the course of the other grains to a large extent, although

their heavy crop moving season is over and they should exhibit relatively greater strength.

SEEDS

Seed prices continue to pulsate largely with the farm grains and are lower than a week ago. Foreign crops are large, tight money discourages buying to hold for higher prices and farm demand will not develop for two months. Low grain prices are expected to stimulate seeding to grass on a larger scale than during the last few years.

FEEDS

Feedstuff prices continued to weaken, practically all kinds sharing in the decline. Production of wheat and corn by-products is not large but farmers have home-grown feeds priced cheaply which they are holding for higher prices and thus are out of the market for commercial feeds. Latest quotations per ton (100-lb bags) in carlots are: Chicago.—Bran \$36; standard middlings \$36; flour middlings \$42; cottonseed meal, 41 per cent, \$40; cottonseed meal, 36 per cent \$36; gluten feed \$45; hominy feed \$40; old process oil meal \$50; tankage \$75@85.

Detroit.—Bran \$40; standard middlings \$40; flour middlings \$48; coarse corn meal \$36; cracked corn \$38; chop \$26.

HAY

The hay markets continue easy, with prices showing little change. Buying remains at low ebb and with open weather prevailing, live stock liquidation taking place and other feedstuffs relatively cheaper than hay, the outlook is not especially hopeful. Latest prices per ton in carlots are as follows: Chicago.—No. 1 timothy \$30@32; standard \$28@29; No. 2 timothy \$26@28; No. 3 timothy \$23@26; clover \$22@28; No. 1 to choice alfalfa \$30@34. Detroit.—No. 1 timothy \$26@27; standard \$25@26; light mixed \$25@26; No. 2 timothy \$24@25; No. 1 clover mixed \$23@24; No. 1 clover \$22@23; rye straw \$14.50@16; wheat and oat straw \$13.50@14.

Live Stock Market Service

Markets for December 15.

DETROIT

Cattle.

Market very dull; 50c lower than Tuesday.

Best heavy steers	.....	\$9.50@11.00
Mixed steers and heifers	.....	8.00@ 8.75
Best handy wt bu steers	.....	7.00@ 7.50
Handy light butchers	....	5.75@ 6.25
Light butchers	.....	4.75@ 5.25
Best cows	.....	6.50@ 7.00
Butcher cows	.....	4.50@ 5.00
Common cows	.....	3.50
Canners	.....	3.00@ 3.25
Choice bulls	.....	5.75@ 6.25
Bologna bulls	.....	4.50@ 5.00
Stock bulls	.....	4.00@ 4.25
Feeders	.....	7.00@ 7.50
Stockers	.....	5.00@ 6.25
Milkers and springers	.....	\$ 65@ 90

Veal Calves.

Market is steady on good grades; common very dull.

Best	.....	\$13.00@14.00
Others	.....	4.50@11.00

Hogs.

Market very dull.

Mixed hogs	.....	\$ 9.00@ 9.25
Pigs and yorkers	.....	9.65@ 9.75

Sheep and Lambs.

Prime lambs and sheep are 25@50c higher; others dull.

Best lambs	.....	\$11.50@12.00
Fair lambs	.....	9.00@10.00
Light to common	.....	4.00@ 7.50
Yearlings	.....	6.00@ 8.00
Fair to good sheep	.....	4.00@ 5.00
Culls and common	.....	1.50@ 2.50

CHICAGO

Hogs.

Estimated receipts today are 30,000; holdover 9,423. Market mostly 5c higher than yesterday's average. Bulk of sales \$9@9.15; tops \$9.25; heavy 250 lbs up medium, good and choice \$5.90@9.15; medium 200 to 250 lbs medium, good and choice \$8.95@9.15; light 150 to 200 lbs common, medium, good and choice \$8.95@9.15; light lights 130 to 150 lbs common, medium, good and

BEANS

The Michigan bean market has declined still further and is now at the lowest level of the season. Beans in the dirt are quoted at \$3.50 per 100 pounds and \$4.25 cleaned. The market is the lowest in the country and present quotations put it \$1 below California white beans when transportation costs to consuming markets are considered. Grocers are buying from hand to mouth, their experience with sugar having made them cautious. Also distress beans from handlers hard hit by the price slump keep coming on the market. After the first of the year when inventories are completed, it is expected that buying will be on a more liberal scale.

EGGS AND POULTRY

Egg prices have been out of line with other kinds of commodities for weeks. The past few days' demand fell off and declines were recorded in some of the markets. Supplies are below normal but that fact is not complete protection when other foods have been marked down so radically. Latest prices were as follows:

Chicago.—Eggs, fresh firsts 72@74c; miscellaneous 63@70c. Poultry, spring chickens 24c; hens 19@24c; roosters 18c; ducks 23@27c; geese 23@25c; turkeys 38.

Detroit.—Eggs, fresh candled 68@83c. Live poultry, spring chickens 24@25c; leghorns 20@22c; hens 24@25c; small hens 18c; roosters 18c; geese 27c; ducks 32c turkeys 40@42c.

BUTTER

The butter market has ruled fairly steady the past week and confidence has been restored to some extent. Buyers are out of stocks in some cases. Danish butter continues to arrive but there is much complaint of mold heard. It is the general opinion that Danish shipments will be lighter from now on. The prospect is for a fairly steady market at around the present level. Ninety-two score butter at New York

53½c; Chicago 49c; Philadelphia 53½c per pound; Boston 52c.

CHEESE

The quotations on all markets show some decline but are not in line with the country markets as is usual. The markets closed easy and in buyers' favor with fairly liberal stocks of fresh cheese. Undergrades show a small movement at reduced prices. No new export business is reported.

POTATOES

The potato markets have been sharply lower during the past week. Northern f. o. b. shipping markets losing about 15c per 100 pounds and are now quoted at \$1.25@1.48. The carlot market in Chicago is quoted at \$1.35@1.45 or slightly above the season's lowest point. Other jobbing markets show declines of around 25c and are quoted at \$1.35@1.40 per 100 lbs. in bulk. Detroit is paying \$2.75@3 per 150-pound bag.

APPLES

Apple markets have been dull during the past week but prices at f. o. b. markets and in consuming centers have held practically steady. About two-thirds of the northwest crop of boxed apples is said to have been shipped out by this time.

DETROIT CITY MARKET

Prices are easy and trading light. Apples 60c@2; cabbage 40@75c; carrot 50@75c; onions, dry 75c@1; parsnips 75@90c; potatoes \$1@1.30; eggs 90c@1; pork 14@15c. These are wholesale prices.

STATE FARM BUREAU MARKET REPORT.

Wheat market tone a little better. Local millers are buying wheat only against flour orders. Expect these local people to be in market shortly, which should stimulate wheat prices generally. Exporters not anxious for wheat at present basis. Rye market working upward with exporters bidding strongly with no decided change in future markets. Cash three cents over basis of last week. Michigan feeders will purchase corn shortly. Local supplies very limited. Local oat stocks well cleaned up. Farmers not inclined to sell. Government says oats should go higher soon. Hay market continues dull and draggy, due to mild weather in consuming sections. Large quantities could be moved if buyers' needs could be constantly met, but farmers are not inclined to sell. January 1 should see stimulation and good shipping demand with better prices. Clover seed a little more active. Good sign, for it is usually rather dull before the holidays. Seed department this week announced prices to cooperative organizations and County Farm Bureaus for farm bureau brands Nos. 1 and 2. Volume orders are arriving for clover, timothy and alfalfa.

VETERINARY.

Indigestion.—The skin of my cow is inclined to become dirty and when her milk stands twenty-four hours it has a bitter taste. The cow is fed ground oats and barley, also clover hay, bean pods, shredded fodder, besides she has access to a stack of barley, oat and wheat straw. H. E. C. Durand, Mich.—Be very thorough in the cleaning, also expose milking utensils to sunlight. The udder and hind quarters of the cow should be clean, not forgetting the importance of cleaning the hands of the milker, besides the milk should be stored in a clean cool place. Do you promptly cool the milk after milking? I am inclined to believe your cow is healthy, but perhaps her digestion may be faulty. Give her a tablespoonful of bicarbonate of soda in each feed. Don't forget to clean feed manger.

COMING LIVE STOCK SALES.

Bred Sows—January 5, A. A. Feldkamp, Manchester, Michigan.
Poland-China—Holsteins. — Thursday, January 6, Hillcrest Farm, Allegan, Fair Grounds, Allegan, Michigan.
Aberdeen Angus—Michigan Aberdeen Angus Breeders' Association at M. A. C., East Lansing, Michigan, January 14, 1921.

BUFFALO

Hog prices hold steady with yesterday's quotations, medium and heavy selling at \$10@10.25; yorkers and mixed at \$10.25@10.50; pigs and lights at \$10.50@11; lambs \$13.25; calves \$17.

WOOL

Sales of wool have shown a slight increase recently and there have been repeated expressions of belief that the market was around the low point and preparing for a turn. Boston quotes sales of quarter and three-eighths blood combing territory wools on a clean basis of 45@60c with fine and fine medium territories at 80@85c. A small amount of quarter-blood Ohio wool is reported sold at 32c for choice combing. Efforts to dispose of stocks of manufactured goods have been under way since June. It seems clear enough that this process should soon be completed, making necessary the placement of orders for new supplies. However, the stocks of wool are large and the fact that textile mills have been operating so far below capacity for months has increased the quantity available. For months Germany has been expected to become a large purchaser of wool but so far this hope has not been realized. Latest reports upon the Australian auctions indicate that prices are still declining and large percentages of the offerings are withdrawn. There is a possibility of equalizing the American grower by assessing a duty sufficient to offset the decline in foreign exchange.

NEWS OF THE WEEK.

(Continued from page 750).

ably on account of a revolutionary movement in Germany.

Sunday, December 12.

THE Greek government sends a cruiser and an escort of warships to officially receive former king Constantine at Venice.—The postal deficit for the fiscal year will amount to over \$17,000,000, the second largest in the history of the service.—The internal revenue department will send out income tax advisors to make a county to county canvass between January 1 and March 15.

Monday, December 13.

ABRAM KITTLE, 114 years old, dies at his home in Detroit.—The business section of Cork, Ireland, is burned with the damage amounting to several millions of dollars.—Many lives are lost as the result of great landslides occurring around an inactive volcano in Chile.—Fighting between striking miners and the militia in the mining districts of West Virginia is reported.—The United States civil service list now totals 691,116 persons.—The Russian soviet government sends a strong note of protest to Great Britain, France and Italy against their interference in the affairs of Greece.

Tuesday, December 14.

THE federal house of representatives votes to repeal most of the wartime laws, while the senate favors the extension of relief to farmers.—The British press reflects the general opinion that the burning of a part of the city of Cork will retard Irish peace.—Diplomatic relations between Holland and Jugo-Slavia have been broken off.

WHEAT MARKET SHAPING FOR A TURN.

GRAIN markets continue to fluctuate in a most surprising manner with all grains selling at a new low price for the season the past week. However, there are increasing signs that the period of violent breaks is about over and that prices have discounted practically all the depressing economic and financial factors which have been the dominating influence for so long. The United States Treasury Department has issued a long statement in which they say that the drop in the price of agricultural products is due to world economic causes over which the government has no control and no official acts have tended to aggravate an already bad situation growing out of the world war. It seems certain, however, that when congress convenes early in December that there will be efforts made to curb unrestricted short selling of grain and also to place an import duty on Canadian wheat and flour which was partly responsible for starting the wheat market downward some weeks ago. At the close of the past week Canadian wheat was quoted five to eight cents per bushel above an import basis with Canadian farmers owning practically all of the 18,000,000 bushels in store refusing to sell except at high prices. at Fort William and Port Arthur, and vessel room for 1,500,000 bushels of wheat has been cancelled for shipment to eastern lake ports as the result of this holding tendency, the vessels being unable to secure sufficient wheat to load.

AMERICAN FARM BUREAU FEDERATION.

(Continued from page 756).

We denounce as un-American the principle and are opposed to guaranteeing a fixed return to public utilities and railroads on a cost-plus basis; insist that in fixing the value of property of transportation systems that the commercial value of such property should be at least some indication of its real value; protect the action of the Interstate Commerce Commission in fixing the value of such properties at five billion dollars in excess of their commercial value.

Demand of congress amendments to the interstate commerce act as amended by the Esch-Cummins bill as shall preserve the powers of the several states to regulate the rates and practices of carriers relating to local transportation and distribution of cars.

Request the Interstate Commerce Commission to recognize the need for preferential rates on agricultural limestone, rock phosphate and fertilizers.

We demand of congress rigid economy in the administration of government and prompt reduction in public expenditure. We especially insist that there shall be no further delay in the demobilization of the vast number of clerks employed to meet war conditions.

Demand simplification of the income tax law. This law should be made so plain that its intent cannot be misunderstood.

Recommend to congress liberal increase in appropriations for eradication of live stock tuberculosis and the pink bollworm.

Request ruling of Federal Trade Commission to stop the Pittsburgh plus plan as a basis for steel prices.

A City Comfort for Rural Homes

\$13.95

A sanitary, scientifically planned, handsomely built, indoor chemical closet at an amazingly low price—\$13.95.

Sent Express Prepaid Order Direct From This Ad

A wonderful convenience for farms and town homes. Insures privacy. Saves you from exposures to weather that may bring about attacks of colds, "the flu," pneumonia. Absolutely odorless. Order a

KALAMAZOO Sanitary Closet

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Kalamazoo Stove Co., Mfrs.
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A Kalamazoo Direct to You

\$500 SAVED

On 100 PIGS by FEEDING

ACME PIG MEAL

Equal to Milk Protein 28½%

A COMPLETE RATION

FOR PIGS AND BROOD SOWS

Fed to fattening hogs for half the cost of Tankage.

\$1.65 worth of Acme Pig Meal feeds a pig until five months of age.

500-lb. lots, \$1.75 per hundred; 1,000-lb. lots, \$3.70 per hundred; Ton lots, \$3.65 per hundred. Terms C. O. D.

Write for Free Books and Prices

ACME MANUFACTURING CO.
Dept. 6 WHEATON, ILL.

Rabbits For Sale. Flemish Giants, Belgian Hares, Price right. MARLIN O. GREEN, Walts, Mich.

Furs Furs Furs
All Kinds

No matter what the other fellow says we want your goods at top market prices don't wait ship now. Write for prices, tags, etc. Best reference.

Bergman-Davis Co.
130 Spring St. Marquette, Mich.

SHIP YOUR
POULTRY, VEAL and HOGS

TO
J. W. Keys Commission Co.

470 Riopelle St., Detroit, Mich.

Eastern Market

You Will Get a Square Deal
and Returns Daily.

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.

494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment

HAY Ship to The Old Reliable House
Daniel McCaffey's Sons,
623-625 Wabash Bldg., Pittsburg, Pa.

Mammoth Clover Wanted

We are now buying Mammoth clover. Also Red and alsike. Send samples to
O. M. SCOTT & SONS CO.,
3 Sixth St., Marysville, Ohio.

Men Wanted to sell dependable fruit trees and shrubbery. Big demand. Complete co-operation. Commission paid weekly. Write for terms.
Willem's Sons' Nurseries, Rochester, N.Y.

POULTRY

LOOK! 1,000,000 for 1921.

Baby Chicks Postage PAID. 95% Live arrival guaranteed. 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.

Utility Cockerels from Indiana's Best laying and exhibition strain of White Rocks at \$4 each, three for \$10. L. R. Stewart, Newport, Ind.

FOR SALE Rose Comb Brown Leghorn cockerels \$2 each. White China Geese. Both sex. D. E. SPOTTS, Hillsdale, Mich., 228 Lewis St.

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

Rhode Island Reds R. C. Standard bred cocks Address BURT Sisson, Imlay City, Mich.

S. C. Black Minorca Cockerels from pen headed by our \$50, High cock bird. These cockerels will be very large with quality. R. W. Mills, Saline, Mich.

Silver, Golden and White Wyandottes. A few good cockerels for sale at \$5.00 to \$15.00 each. O. W. BROWNING, R. 2, Portland, Mich.

White Wyandottes cockerels from winners and layers. \$3 and \$5 and worth it. J. H. ADAMS, Litchfield, Mich.

White Chinese Geese, White Pekin Ducks. R. O. Br. Leghorns. Order early. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

TURKEYS Michigan's best Giant Bronze breeding stock. Very large, excellent color, health and vigor guaranteed. N. E. VALYN RAMSDALL, Ionia, Mich.

Bourbon Red Turkeys Choice large early hatched toms and hens. ARCHIE D. IVES, Rockford, Mich.

Pure Bred Bronze Turkeys Mrs. EUGENE RAMSDALL, Hanover, Mich.

HOGS

O. I. C's choice spring pigs either sex. Booking orders for fall pigs. We register free and ship C. O. D. A. J. BARKER & SON, Belmont, Mich.

O. I. C's One last fall boar wgt. 425, two last fall gilts, bred lots of spring pigs and this fall pigs either sex, good growthy stock ½ mile west of Depot. Otto's Phone 24. Otto B. Schulze, Nashville, Mich.

O. I. C's June and July boars and open gilts. Recorded and express paid for next 30 days each one a guaranteed feeder. F. C. Burgess, E. S. Mason, Mich.

O. I. C. Serviceable boars. A few extra good boars at farmers' prices. H. W. MANN, Dansville, Mich.

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.

Closing out sale of big type Poland China hogs, which represents the work of 25 years of construction breeding. Everything goes, including our three great herd boars, "Mich. Buster," by "Giant Buster," "A Giant," "Butler's Big Bob." Two of the best yearling prospects in Michigan great length, big bones. Come get your pick. Jno. C. Butler, Portland, Mich.

Large type Poland China's spring boars ready to ship. Everything immune from Cholera. A. A. FELDKAMP, R. No. 2, Manchester, Mich.

6 boar pigs best I have raised in my 15 years of breeding sired by Big Bob Mastodon a son of the world's champion. Price \$50 and 50 fall pigs send orders now. C. E. GARNANT, Eaton Rapids, Mich.

Poland Chinas

Spring boars and gilts from the Sr. Champion boar at the State Fair at Detroit this year also Grand Champion at West Mich. Fair at Grand Rapids weighing 1025 lbs.

If you want something that will give you satisfaction let us sell you a boar or gilt.

ALLEN BROS., Paw Paw, Mich.

L. S. P. C.

Everything sold previously ad. 25 spring pigs placed on the bargain counter for mo. of Sept. pairs or trios not akin.

H. O. SWARTZ, Shoolcraft, Mich.

Big Type Poland Chinas

Our herd is representative of the best in Big Types. Choice boars for sale now. Wesley Hile, R. 6, Ionia, Mich.

For Sale O. I. C. Swine Strictly Big Type with good boars and gilts left of same type and blood lines, that won for us at Ohio and Michigan State Fairs. Priced very cheap. Write us before you buy. NEWMAN'S STOCK FARM, R. 1, MARLETTE, MICH.

MARLETTE, MICH.

My! Oh My! What An Opportunity

We are now offering a few choice big type Poland China Boars, from Big Smooth Jones, one of the breeds best sires, from dams by such noted sires as Grand Master, Hillcrest Wonder, Mastodon Wonder and Hillcrest Bob.

You can't get better breeding. Individually they will please you. Price \$50.00.

HILLCREST FARM, Kalamazoo, Mich.

L. T. P. C.

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, FULCHER & CLINE, Address F. T. Hart, St. Louis, Mich.

Big Type P. C. a few first class. 200 lb. boars left also some fall boar pigs good enough to head any herd. Come and see or write. E. R. LEONARD, R. 3, St. Louis, Mich.

L. T. P. C. Spring boars and gilts now ready to ship. Something good at a right price. W. J. HAGELSHAW, Augusta, Mich.

Big Type Poland Chinas spring gilts bred to grand son of the Champion for April farrow also fall pigs registered and delivered to your town for \$20. DORUS HOVER, Akron, Mich.

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

Poland China Bred sows and gilts at bargain prices, also spring boars and fall pigs, either sex. CLYDE FISHER, R. 3, St. Louis, Mich.

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

Edgewood Hampshires

All bred gilts sold. Now booking orders for gilts bred for fall farrow, and pigs for pig club work only. Depeu Head, Edgewood Farm, Marion, Ohio.

HAMPSHIRE spring boars and fall pigs at a bargain book your order now for bred gilts. JOHN W. SNYDER, R. 4, St. Johns, Mich.

YORKSHIRES Boars ready for service. Yorkshires cross makes an excellent market hog. Waterman & Waterman, Packard Rd. Ann Arbor, Mich.

Special Offer For December we will take orders for 1929 spring gilts bred for Mar. and Apr. farrow 1921 at \$50 each excellent breeding. Gilts to be shipped when sale in pig. Write or come and make your own selection at once. RUSH BROS., Romeo, Mich.

SHEEP.

WHITTUM FARM SHROPSHIRE

A fine lot of imported and house bred yearling ewes and rams for sale. A fine chance to start a new flock or improve the old one call at the farm or write for just what you want. O. H. WHITTUM, Eaton Rapids, Mich.

Shropshire Rams lambs, yearlings and one 2 yrs. old, priced right. CARL TOPLIFF, Eaton Rapids, Mich.

Shropshires Yearling and rams, with quality, from imported stock. W. B. McQUILLAN, R. 7, Howell, Mich.

Wool-Mutton Shropshire Rams. Good strong individuals, bred, priced right. A. H. FOSTER, Allegan, Mich.

Registered Shropshire Rams and ewes all ages for sale. Well-wooled with size and quality. Priced to sell. H. F. Mouser, R. 6, Ithaca, Mich.

Registered Shropshire Ewes and rams. Jno. Grieve, R. 3, Fowlerville, Mich.

Reg. Hampshire Down ram lambs, one registered R. Shorthorn bull calf. 9 mo., spring and fall farrowed Berkshire pig. M. G. Mosher & Sons, Osseo, Mich.

Want a Sheep? Let American Hampshire Sheep Association send you a booklet with list of breeders. Write COMFORT A. TYLER, 22 Woodland Ave., Detroit, Mich.

Hampshires Registered rams and ewes all ages. Bred right, priced right. W. W. CASLER, Ovid, Mich.

SHEEP Bred Ewes, Rams, Jersey cattle all ages either sex. LeROY KUNEY, Adrian, Mich.

Wanted A Delaware buck, or ram ready for service, send lowest prices. NEIL B. ABRAMS, R. 1, Lawrence, Mich.

HORSES

Percheron Stallions and mares at reasonable prices; inspection invited. F. L. KING & SON, Charlotte, Mich.

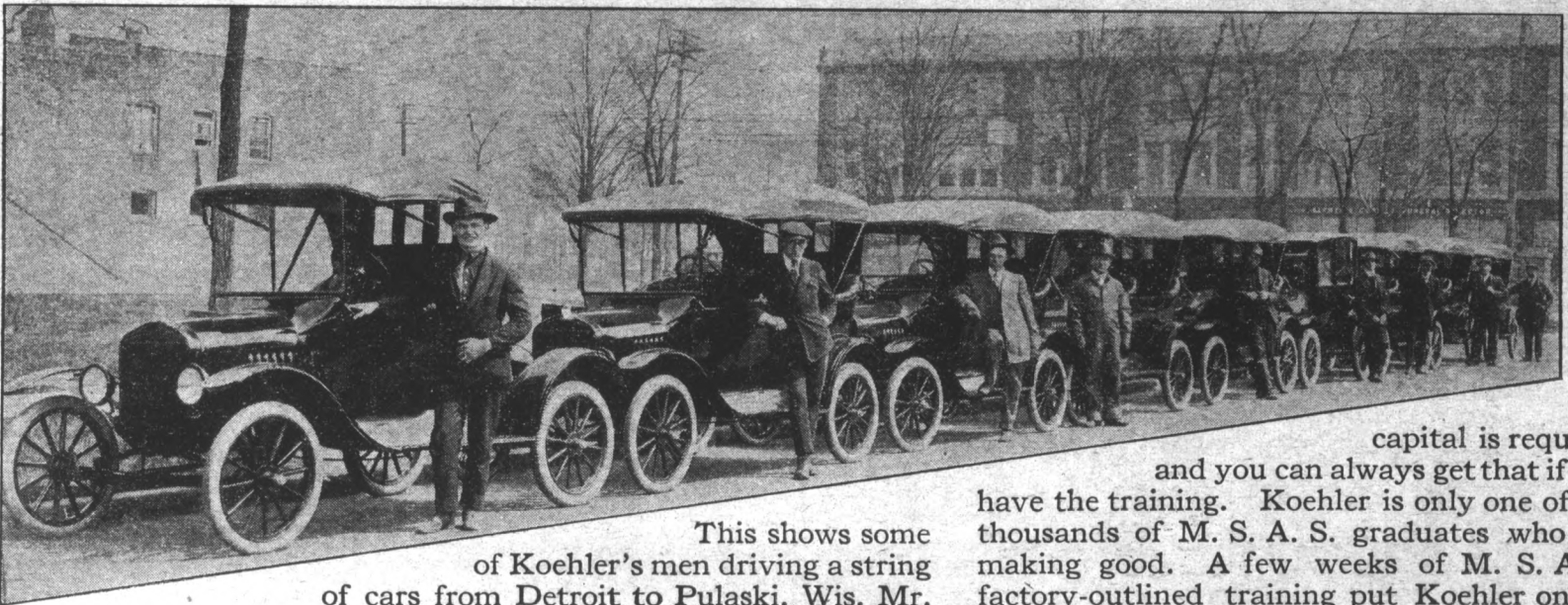
This Small Town Garage Paid \$10,000 PROFIT IN SIX MONTHS

BECAUSE IT IS MANAGED BY A MAN WHO UNDERSTANDS HIS BUSINESS



Ben Koehler of Pulaski, Wis.

This is the garage of Koehler-Wehrman Auto Co., of Pulaski, Wis., that did \$93,810 worth of business in six months with a profit of about \$10,000. Mr. Koehler, Manager, is an M. S. A. S. graduate. Read his letter below.



This shows some of Koehler's men driving a string of cars from Detroit to Pulaski, Wis. Mr. Koehler is at the head of the line—look him over—just a common ordinary young fellow like the rest of us, only 20 years of age, but with lots of pep and an M. S. A. S. training.

You can start a business of your own just as Koehler did. Very little

capital is required and you can always get that if you have the training. Koehler is only one of the thousands of M. S. A. S. graduates who are making good. A few weeks of M. S. A. S. factory-outlined training put Koehler on his feet. It can do the same for you. There are thousands of good locations for garages and sales agencies. Our Graduate Service Department puts you in touch with the factories.

KOEHLER-WERHMAN AUTO CO. Authorized Ford Sales & Service Fordson Tractors & Tractor Implements

Pulaski, Wis., November 26, 1920.
Michigan State Auto School,
687 Woodward Ave.,
Detroit, Mich.

Sirs:

I want to say that your school has been the world of good to me. I graduated from the school on April 1, 1919, and on April 1, 1920, just one year from the time of graduation, I was manager and secretary of the Koehler-Wehrman Auto Co., of Pulaski, Wis.

I am running the business now and will say that the M. S. A. S. receives all credit for my position.

To the interest of graduates and prospective students will give you some figures to show the amount of business that we have done.

From April 1st of this year to the 1st of October our total sales were \$93,810.00. This realized a profit of about ten thousand dollars.

We are authorized Ford dealers and are direct from the Milwaukee branch and the profits next year will be much larger.

We have sold fifty-nine new cars and sixty-one second hand cars. We also wholesale quite a bit of Ford parts to about ten garages which gives us a fair profit.

Am enclosing a photograph of the garage. This picture was taken early this Spring. We have improved the place quite a bit and expect to build this coming Spring.

Well, will have to close, but will answer any letters from any one interested in the auto business and can recommend the M. S. A. S.

I appreciate the way the School has used me, as they have written me letters and keep me well posted on the doings of the school.

A Graduate,
BEN W. KOEHLER, Mgr.
Koehler-Wehrman Auto Co.

Leading Manufacturers Endorse Our School Start a Business of Your Own

Many of Them Assisted Us in Outlining Our Courses. They Know it is Right.



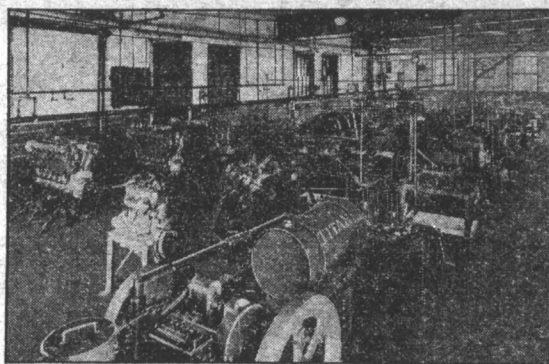
Mr. L. B. Fisher
Route No. 7, Box 181
Paducah, Ky.

Dear Sir:

This will acknowledge your letter of May 1, addressed to the attention of Mr. Vincent.

I would advise you to enter an auto school—as I believe you would get an all-around experience quicker than working either in a Factory or Garage. I understand that the Michigan State Auto School have turned out some very good men, and I do not believe you would make any mistake in attending this school if you wish to become thoroughly experienced in the automobile business. In this school you would get an opportunity to work on all different kinds of cars, and you would also have instructors who could explain the different parts, etc.

Yours very truly,
PACKARD MOTOR CAR COMPANY
J. D. Wilson,
Asst. to Vice-President
of Engineering

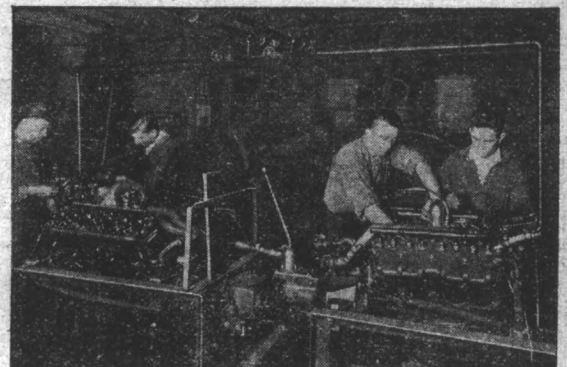


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Let us tell you of the wonderful opportunities in the Auto, Truck and Tractor business. Let us tell you the right way to get a business of your own, one that will bring you \$500 to \$1000 per month. Let us tell you of the thousands and thousands of graduates who are making good. Let us tell you of our factory outlined and factory endorsed course and why Detroit, the heart of the automotive industry, is the logical place for you to learn. Our 124-page catalog FREE on request. Send for it today.

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Gentlemen: Please send me absolutely FREE, New 124-page Illustrated Catalog, "Auto School News," and information as checked below.

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☐ Tire Repairing

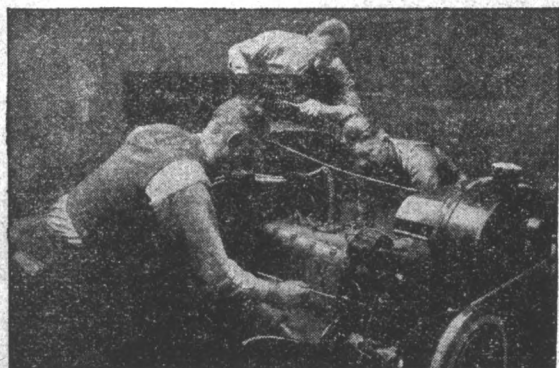
☐ Brazing and Welding

(Mark each course you are interested in.)

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A Corner in M. S. A. S. Electrical Dept. You learn by actual practice.

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