

MICHIGAN FARMER

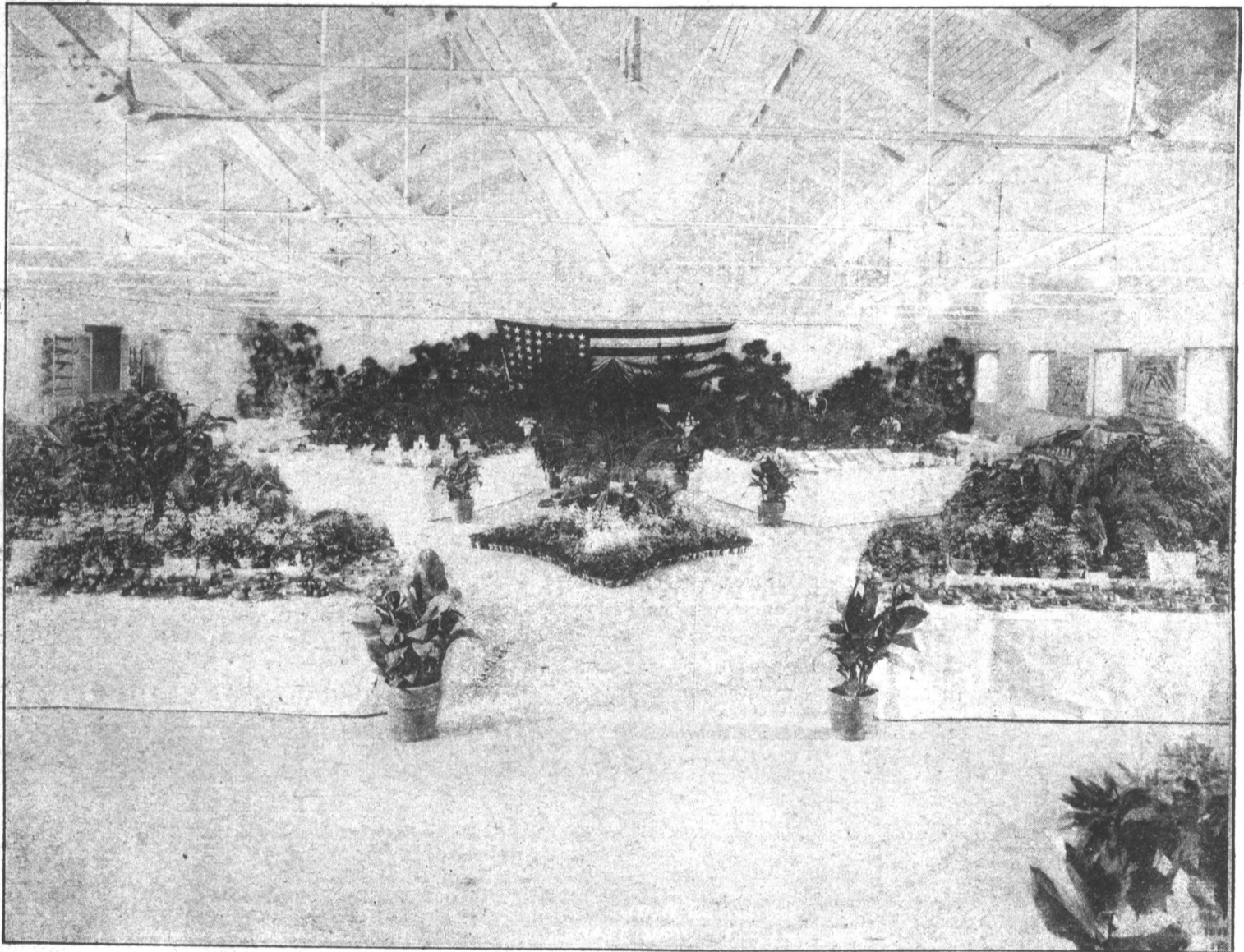
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Horticultural Exhibit at the College

HORTICULTURAL and agricultural crop exhibits not only afford a fine opportunity for farmers to study points of special merit in the products, but with a skilled judge they can profit more largely in studying the deficiencies. These exhibits invariably show that quality rather than size should be considered in the selection of varieties of fruit and farm crops. A skilled judge will not fail to impress the farmers that uniformity and quality are more important than producing varieties that fail to meet the requirements of their markets. The importance of making a careful

study of the demands of the leading markets cannot be over-estimated in determining the value of these exhibitions.

Now that our fruit and farm crop improvement work here in Michigan is being put on a more substantial community basis, farmers are beginning to devote more and more attention to growing varieties of fruit and farm crops that are adapted to their markets. A vast amount of good is sure to result from these exhibitions; it is a sort of community improvement work that will gain in popularity.



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VOLUME CLVI. NUMBER SEVEN

DETROIT, FEBRUARY 12, 1921

CURRENT COMMENT

Farm Bureau Policies

SOME weeks ago an editorial comment in these columns pointed out the two schools of thought in process of development regarding the policies to be followed by the Michigan State Farm Bureau. The central or main idea of each of these schools was impartially summarized for the information of Michigan Farmer readers, to the end that farm bureau members among them might have a proper opportunity to pass judgment on this important question of the policy of the organization, through the delegates chosen to represent them at the annual meeting. It was also suggested that quite possibly, as is generally the case, the best line of action might lie somewhere midway between the two extremes of thought on the question.

Apparently the rank and file of farm bureau members are of this opinion, since their representatives at the annual meeting repudiated the policy championed by Secretary Bingham by defeating him for president, but refused to lay down an inflexible policy for the future conduct of the organization, voting without dissent to leave this to be worked out by the executive committee. In effect this first expression of a delegate meeting of the organization relating to the question of policy was general, rather than specific, leaving the details to be worked out by an executive committee in which this action was an expression of full confidence.

This course promises well for the future work of the organization. The members of the committee are all representative farmers of high standing and attainment in their respective communities who will undoubtedly reflect the sentiment of the membership which they represent in their conduct of the work of the organization, and in whom that membership may have full confidence.

It is, of course, to be regretted that there should have been any conflict in questions of policy in putting over this great farmers' organization in Michigan. But this seems to have been unavoidable, since those who were chosen to carry the burden of the initial work were of necessity guided by ideals of their own creation rather than by the crystallized opinion of the membership on the points of issue, which found expression for the first time at the recent meeting. But notwithstanding the conflict of opinion and ideals which was apparently unavoidable un-

der the circumstances, the committee as constituted during the past did a great work, for which great and lasting credit is due them. And this credit should not be diminished or withheld because they were loyal to those ideals to the end.

But the good of the cause is of far greater consequence than the personal interests of any or all of those who may have contributed to its initial development or success. The farm bureau is essentially a democratic institution, in which the will of the majority, as expressed through the channels provided in its organization, should rule. And, as is the case in every democracy, the "greatest good to the greatest number" among its membership can result only from a united loyalty to the cause. For this reason the future success and development of the farm bureau depends not a little on the loyalty of the minority in the recent conflict of opinion under what they may deem the handicap of prevailing opinion.

The entire membership of the farm bureau is practically of one mind as to the results they desire to accomplish through the organization. They are divided only in the matter of opinion as to how those results can best be attained, just as they are divided into different groups in their opinions with regard to the conduct of governmental affairs and their personal or party choice of public officials. But this latter division does not make them a whit less Americans when the country faces a crisis. Politics and political policies are then forgotten and we are a unit in the greater cause.

Let it be so with the farm bureau. It has a great work before it, the most successful accomplishment of which must be a matter of gradual growth and development. Its present destinies are in the hands of as competent and representative a group of Michigan farmers as could be selected for the difficult task which confronts them. They are entitled to the loyal support of the entire membership in their efforts to work out a policy which will be for the "greatest good to the greatest number" of the membership, and consequently the greatest benefit to Michigan agriculture.

Farming and the Farmer

OF course time will go on and the race will survive the present disturbance, and surviving, it will need and get food necessary for existence. The farmer will produce the great bulk of this food and in distributing it he will get something in return for his pains. The returns may not be sufficient to satisfy his mind, nor it may not pay him in full for the expenses he may have been to in producing the food. But unless the situation this coming year is absolutely different from that of all other years a few, at least, of our farmers are going to get paid in full and a little profit, while on the other hand, however favorable next season's marketing situation may be there will be some farmers who will take a loss. Babson, the noted statistician, tells us that he has yet to learn of an instance in any line of business where there was not to be found some person or concern operating at a loss. Certainly that is true of farming and it emphasizes the human equation in this business of producing agriculture products.

Undoubtedly this coming year the human element will mean more in successful agriculture than it has in recent years. Profits will come to the industrious and the intelligent who have initiative and intensity of purpose rather than to the thoughtless and slothful. The wise farmer will look well to the policies he is to follow the coming season. Costs will be more carefully considered by him and more

than likely he will adopt some feasible system of financial records. He will engage his labor and purchase his supplies with an eye single to the purpose of securing the most efficient production consistent with permanent agriculture. Every sensible marketing help will be invoked to aid him in disposing of his goods. He perhaps will find it expedient to modify his plan of cropping to the end that a larger portion of his acres will be in pasture or meadow in order that he may have a chance to put his land in a better state of fertility against the day when he may again wish to produce maximum crops to take advantage of high prices. In a hundred ways the thrifty farmer will fix his course so that he will have every legitimate advantage that can be brought to his aid. He will use every effort to keep his business in the profitable class.

Why a Family Garden?

THE labor situation in the country during recent years is largely responsible for the disappearance of the once familiar home garden, with its delicious fruits and appetizing vegetables. There have been presented no convincing arguments showing the wisdom of allowing this rural institution to pass out of the farmer's life, even from an economic standpoint, while we know that its decay has been a contributing influence in driving the younger people away.

The old garden certainly added to the attractiveness of the farm home, and judging from the interest of juvenile members of the various garden clubs in their work the little yard near the house went far toward satisfying the desire for doing things. In fact, when one revisits one of the old homes where once it seemed that everything invited him to come in, he is astonished at the change wrought in eliminating the garden place and devoting it to the regular field crops.

The reason for claiming that the garden has a real place upon our farms is not merely sentiment. It goes farther, farther even than the dollars and cents value of the products grown. That dignified gentleman known as the country physician, has repeatedly told us that we can keep our bodies in much better health if we make a more extensive use of vegetables and fruit juices in our diet, and he is no vegetarian. Any casual observer has noted the comparatively small amounts of fruits and vegetables used on farms where no garden is provided. The better health now enjoyed by city folks as compared with that of a decade or more ago is more or less traceable to the increased amount of green food consumed. Doing without these foods and substituting salt pork is not the economy it may seem. In the end the practice is quite certain to prove exceedingly expensive in shortening life and in mounting up doctors' bills.

Furthermore, the labor end of the question is generally not so bad as many have led themselves to believe. Once the garden soil has been made rich it does not take a large area to supply the farm home with an abundance of health-giving products. If labor demands must be cut there are other places where the reduction can be more safely made, especially if there are boys and girls in the family. Duty toward them in giving the most perfect bodies with which to start their courses in life, is sufficient reason to lead parents to continue or reestablish the good old family garden.

News of the Week

Wednesday, February 2.

MANY independent steel manufacturing concerns in the Pittsburgh district resume operations.—President Wilson addresses the League of Nations in which he urges that Russia be

guaranteed against attacks from without.—The settlement of diplomatic problems between the United States and Japan will be postponed until the Harding administration assumes office.—It is reported that Germany will refuse to negotiate on the basis of the entente decisions on reparations, but will submit counter propositions.—The House of representatives reduces the deficiency bill by \$275,000,000.

Thursday, February 3.

THE senate foreign relations committee reports out resolution prohibiting secretary of the treasury from taking further action in regard to allied loans.—A drive is started looking toward the modification of navigation laws on the great lakes.—A group of American banks have approved a \$10,000,000 loan to finance the sale of condensed milk and other similar products to Great Britain and Europe through the War Finance Corporation.—The Christian population of Galicia, Asia Minor, is said to be threatened by the Turks.—The Poles charge that Germans are making arms in violation of the peace treaty.

Friday, February 4.

DATA gathered by the United States Senate indicate that some of the coal mining companies made profits estimated at two hundred per cent during 1920.—The Michigan State Senate passes the so-called auditing bill.—United States engineers decide that there are only four practicable canal routes to connect the great lakes with the Gulf of Mexico.—The House of representatives votes funds for an army of 150,000 men.—The French government sends an ultimatum to Turkey demanding the immediate release of French soldiers captured in a recent engagement.—President Wilson acting on a communication from President-elect Harding, issues a proclamation calling a special session of the United States Senate to convene March 4.

Saturday, February 5.

THE British government formally proposes that the United States cancel all inter-allied debts; the United States turns down the suggestion.—The house committee of the Michigan legislature makes an investigation of riots in the state reformatory at Ionia.—The Wayne county circuit court decides that the municipally owned car lines cannot be legally built across the Detroit United lines.—The head of the Greek cabinet resigns.—By decree, President Obregon, of Mexico, returns twenty banks to their owners.—A clash between soldiers and workmen in a nitrate plant in northern Chile results in twenty-three deaths.

Sunday, February 6.

LOYD-GEORGE, of Great Britain, states that Germany must disarm and make full payment of the damage inflicted by the war.—The house of representatives passes a resolution prohibiting enlistments into the regular army until the number of men is reduced to 175,000.—It is stated that trade negotiations between England and Russia have been discontinued.—An investigation of retail prices shows a general decline of about twenty-five per cent in the cost of food at Detroit since December 1.

Monday, February 7.

THE premiers of the federated states of Germany agree to stand firm against the demand for reparations by the allies.—Japanese soldiers are accused of widespread destruction of life and property in the province of Chientoa, by a Korean commission.—Twenty-five persons were killed and forty hurt when a freight and passenger train collide near Felixford, Austria.—The Canadian government will aid in the suppression of liquor smuggling into the United States.—A new Greek cabinet is formed.

Tuesday, February 8.

A REPORT is presented to the French Academy of Science on a new and successful treatment for tuberculosis discovered by the Swiss bacteriologist, Henry Spahlinger.—President Obregon urges members of the Mexican congress to take early action in the oil dispute which he declares has become international in scope.—Twenty of the McKeesport tin plate mills resume work with the men accepting a twenty per cent wage reduction.—Premier Lenine of bolshevist Russia, fears that the fight between labor unions and the soviet for supremacy will break up the whole communist state.—Switzerland refuses to permit the armed force authorized by the League of Nations to Vilna during the coming plebiscite, to cross her domains.—Chicago packers propose to the federal courts a new plan for the disposal of stock yard interests.—Canadian fisheries bring in an average of about \$50,000,000 annually and furnish employment for nearly 100,000 men.

Farmers' Week at the M. A. C.

Last Week's Sessions Established a New Attendance Record

CHARLES J. BRAND, former chief of the Bureau of Markets, and now vice-president of the American Fruit Growers, Inc., of Pittsburgh, was the leading speaker Tuesday, discussing "Standardization and Transportation of Perishable Products" before the Michigan Horticultural Society in the morning, and "Market Problems: Financing and Facilities," at the general afternoon meeting.

Because of the present abnormal conditions, with ocean shipping proportionately cheaper than land transportation in the United States, it has become necessary to place sufficient tariff to prevent destruction of valuable industries, in the opinion of Mr. Brand. He declared himself opposed to high tariffs on general principles, but added:

"I firmly believe that those industries called forth by economic need should have that degree of protection that will permit a well-ordered agriculture, economically and efficiently carried on, to exist at a reasonable profit to the producer. I do not favor a high rate of tariff on potatoes that will enable Maine, New York, Pennsylvania, Michigan and Minnesota to collect an



Charles J. Brand.

undue toll from the consumer, but I do favor reasonable tariff rates that will permit our own potato industry to flourish on a fair competitive basis, considering prevalent economic conditions in the United States compared with those existing in other parts of the world."

"Taking up the taxation question, Mr. Brand attacked the proposed sales tax which would be levied upon general or limited turnovers. A sales tax, he said, would be objectionable for the following reasons: First, it would be on gross and not on net income; second, it would be based upon volume of business rather than ability to pay; third, it would not fall equally upon the citizenship; fourth, it would give large and well-organized industries an advantage over small ones; fifth, foreign goods would pay only one tax, domestic goods many; and sixth, trading corporations would be taxed unduly compared with manufacturing ones.

"Organizations such as these represented here should make their voice heard with respect to these matters in congress," said Mr. Brand.

Standardization in production methods, products, containers, and trade practices and terms was urged by Mr. Brand in his address before the horticulturists. As for production methods, he urged a reduction in varieties and a focusing upon those kinds that com-

bine in the highest degree the good qualities that the consumer desires with the characteristics necessary to make possible successful transportation to market."

"Standards are essential to the large scale handling of any product. Contracts cannot be made sufficiently definite nor can they be enforced properly without them. The producer and distributor will not be able to describe with sufficient accuracy what he is selling or the purchaser and consumer to know certainly the character of what he is buying without them.

Too many varieties of containers are now on the market, said Mr. Brand, to permit efficiency in the distribution of products. The Vestal bill now before congress provides for a radical reduction in the number of these on the market.

Standardization of trade practices and terms he urged to prevent misunderstandings between the shipper and the receiver.

SUGAR BEET GROWERS RETAIN ORGANIZATION.

REJECTION of the contract prices submitted to Michigan sugar beet growers by sugar companies, and determination to retain the organization of the Michigan Sugar Beet Growers' Association, marked the meeting of the association held in the Agricultural Building, Wednesday afternoon.

Endorsement of the work of the association during the past year was given when the entire list of officers and directors was re-elected for the coming year. Credit for a gradual raise in the price of beets during recent years was given to the association by President Ketcham, who contended that while the growers did not get the price they asked for last year, the association was responsible for getting as high prices as were given.

While the association turned down the proffered contract prices offered by the manufacturers, it indicated willingness to accept the standard of prices worked out by the National Sugar Beet Growers' Association in Chicago last month.

Previous meetings of the Sugar Beet Growers' Association have been held at Saginaw, but the gathering was set for East Lansing during Farmers' Week this year in the belief that it would be a better time and place for the growers to meet, according to President Ketcham.

The four major motions passed by the association might be summarized as follows:

1. That Michigan Sugar Beet Growers' Association retain its entity.
2. That contract submitted to growers by Michigan sugar companies be rejected.
3. That standard contract as worked out in Chicago last month at National

Sugar Beet Growers' meetings be adopted; that it be presented to sugar factories asking their cooperation; and that information of the action be given to local associations.

4. That National Farm Bureau Federation program with reference to organizing beet growers of all states growing beets be backed, the amount of pecuniary aid to be given being left to the executive committee's discretion.

Commenting on this last action, President Ketcham of the Michigan Association, said that it involved carrying out the National Farm Bureau's recommendation that Michigan take the initiative by putting a field agent out to effect organization of the growers in this and other states. The arrangement would call for the Michigan organization to pay the salary of the agent, while the National Farm Bureau would take care of administrative expenses, stenographer, postage etc.

The association then adopted a resolution providing funds amounting to \$1,000 to be immediately released to the American Farm Bureau Federation to use in the employment of an organizer. It will be the duty of the man employed to assist in developing representative organizations in each of the important sugar beet states, and to work out so far as it is possible, uniform contracts and prices to be offered the manufacturers.

A fifty-fifty split of beet profits between the grower and manufacturer, and determination of price on the basis of the price of sugar and the average sugar content of the beets, were points urged by C. A. Ackerman, of Durand, in addressing the meeting. Ackerman reviewed the beet situation, and recommended legislation as the method of solving some of the problems in the present situation. The bona fide membership of the association was given by Ackerman as between nine and ten thousand.

Establishment of a court of business relations, to settle disputes such as arise between growers and manufacturers, was suggested by J. N. McBride. Consideration of the cost of production of beets and determination of the cost of manufacture would be the means by which the court could aid in getting at a settlement of differences. Support of the farm bureau in this matter was the definite suggestion made, the Public Utilities Commission being mentioned as a possible body to act as the court.

The consumer is not to be forgotten in the plan outlined by Mr. McBride, for following the price clear through to the consumer to see that he also gets a fair deal is part of the program. Discussion of judicial and senatorial sanction of the plan was also given.

Details of the standard contract price basis worked out recently at Chicago were given the association by T. C.

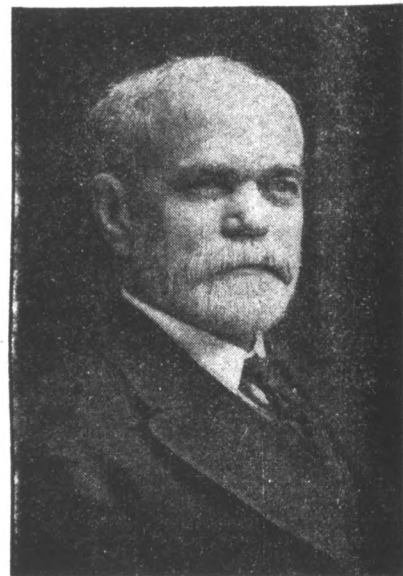
Price, of Saginaw, who was a delegate to the national meeting.

The standard contract is based on price for the entire year and the average sugar content during the slicing season. It runs as follows: For five-cent sugar, \$6.45 a ton; six-cent sugar, \$7.74 a ton; eight-cent sugar, \$10.32 a ton; nine-cent sugar, \$11.61 a ton; ten-cent sugar, \$12.90 a ton; eleven-cent sugar, \$14.19 a ton; twelve-cent sugar, \$15.48 a ton; thirteen-cent sugar, \$16.77 a ton; fourteen-cent sugar, \$18.05 a ton; fifteen-cent sugar, \$19.55 a ton.

Officers re-elected for next year include: President, John C. Ketcham, of Hastings; secretary-treasurer, R. P. Reavey, of Caro; general manager, C. A. Ackerman, of Durand; directors, Fred Holland, of Linden; Tom C. Price, of Saginaw; John Purtell, of KawKawlin; Bert Mellinger, of Ithaca; D. S. Harriott, of St. Johns; Godfred Gettle, of Sebewaing, and John L. Shepherd, of Allenton.

PROBLEMS OF RECONSTRUCTION.

MOST of the foolish talk about retaliation, about coercion and about starving the world has subsided," said Dean Eugene Davenport of



Eugene Davenport.

the University of Illinois, speaking upon the subject, "Agriculture in Reconstruction," at the evening session on Wednesday.

"Thanks to our marvelous system of farm bureaus and their federations, we are rapidly settling down into a state of mind which is both sane and safe, and we are approaching the next planting season with a remarkable understanding of the situation. All things considered, it looks as though the country as a whole, together with the farmers, had passed through within a period of six months what required several years of readjustment period following the Civil War.

Questions or marketing, transportation and credit will be the principal problems of reconstruction in the near future, according to Dean Davenport. The farmer must have credit for more than three months, since his turnover comes only once a year, maintained Mr. Davenport, and he favored a system whereby the farmer should be given loans extending over longer periods of time.

After three immediate questions are cared for, agriculture again must face the problem of production in competition with the world, said Mr. Davenport. He pointed out that whereas the United States has appropriated great sums of money for agricultural exten-

All Attendance Records Broken

THE record attendance at the Michigan Agricultural College during Farmers' Week marks a new milestone in the history of Michigan's agricultural progress. The attendance during the week totaled more than five thousand, and never in the history of the state and college has there been such a degree of enthusiasm exhibited as was prevalent during the entire period of the various meetings. Good speakers, enthusiastic farmers and the new spirit of cooperation all tended to solidify the agricultural interests of the state and bring about a feeling that in spite of the present adverse conditions there are better times ahead for the farmers of the state.

sion since the passage of the Smith-Lever act in 1914, agricultural research has been at a standstill. The result is, he said, that young men of the country are going into other lines of work, thus imperiling the future of the experiment stations.

Dean Davenport urged liberal appropriations for M. A. C., of which he is a graduate. He declared the college can not live upon its past, and must have money if it is to develop properly.

MAKE FARMING PROFITABLE.

FARM credit is the crux of the whole agricultural problem today, is the opinion of A. F. Lever, member of the farm loan board and former congressman who has played a leading part in

shaping important agricultural legislation for the last ten years. Mr. Lever addressed the general afternoon session on Wednesday.

A federal warehouse plan by which the country would be divided into twelve sections, with a commodity bank and warehouse in each, was favored by the speaker. "The products of the farm should be warehoused," he said, "and against them should be issued warehouse receipts by commodities. These warehouse receipts should be pooled in the hands of a government trustee, regionally, and against these there should be certificates of indebtedness with varied maturing periods issued and offered for sale upon the money markets of the country, just as are the bonds of the government

and the many industrial concerns. "It may be necessary in order to give these certificates prestige to have back of them as an initial capital a revolving fund of sufficient size appropriated out of the treasury. But any scheme of this kind should look ultimately to providing its own capital and retiring the government capital so that the system would be purely a farmers' system, operated under government supervision and regulation, as in the farm loan system."

Mr. Lever declared it is necessary to make farming profitable because only twenty per cent of all American farms have running water in the home and most farm housewives are obliged to labor from eleven to thirteen hours a day. The causes, he said, are a sys-

tem whereby the farmer is forced to sell within four months what he produces and the public consumes over the entire year.

The solution of this state of affairs, he asserted, lies in, first, the elimination of all unnecessary factors in the present system of distribution; second, the organization of commodity sales agencies; third, the standardization of farm products into grades and classes; fourth, the warehousing of sufficient quantities of products to set up an even flow of such product into the market of the world as the immediate demands of the world call for them; fifth, the devising of such credit machinery as will enable the farmer to market his products in a sane and orderly way.

Annual Meeting State Farm Bureau

First Opportunity of Delegates to Express Views on Bureau Policies.

FOR the first time in the history of the Michigan State Farm Bureau, the policies to be followed by the organization were considered by a delegate body at its annual meeting at M. A. C. last week.

For a considerable period, two schools of thought regarding the policy to be followed by the association were developing in the executive committee and among the membership. One of these headed by C. A. Bingham, secretary of the organization, believed that a strong central organization should be maintained in control of all commercial activities—a policy which has been adhered to more or less closely in the organization work of the past year.

The other school, with the apparent support of a majority of the executive committee, which was led on the floor of the meeting by Prof. Hale Tennant, director of marketing of the federal agricultural extension service for Michigan, took the position that cooperative organization work should follow commodity lines. For example, the sugar beet producers should have full control of the business of making contracts with the manufacturers, the potato growers should handle their own marketing problems, and so on with the live stock men, fruit growers, hay growers, elevator exchange, etc. These separate commodity organizations should then correlate their efforts and cooperate through an interlocking directorate in handling matters of common interest.

The positions maintained by these two schools were explained to the delegates in connection with the reading of the recommendations of both the executive committee and the secretary, which are published elsewhere in this issue. The contest came with the election of president for the coming year. Mr. James Nicol, of the executive committee, and Mr. Bingham, were the nominees. When the ballots were counted, Mr. Nicol had 113 and Mr. Bingham 55. For the office of vice-president, M. L. Noon, of Jackson, was elected over Ray C. Potts, of Washington, by practically the same margin.

New members to the executive committee were elected as follows: Mrs. Edith M. Wagar, of Monroe county; A. T. Depue, of Menominee county; W. E. Phillips, of Van Buren county, and Fred Smith, of Antrim county. Delegates elected to the American Farm Bureau-convention were as follows: President James Nicol, M. L. Noon, A. J. Rogers, A. E. Illenden and C. A. Bingham. The following gives a brief sketch of the qualifications of the new officials elected at this meeting:

James Nicol, President.

Mr. Nicol has long been a fruit grower near South Haven, and one of the leading figures in horticultural activi-

ties throughout the state. He was instrumental in organizing and developing the South Haven Fruit Exchange, one of the pioneer cooperative fruit marketing exchanges of the state. He has been president of the Michigan Horticultural Society for the past two years, and has been increasingly aggressive in the promotion of ideas for agricultural development. Mr. Nicol has served two years on the executive committee of the Michigan State Farm Bureau and recently was reelected to the presidency of the Allegan County Farm Bureau.

M. L. Noon, Vice-president.

Mr. Noon is one of the leading dairy farmers of Jackson county, and a force in farmer organization in his county and throughout the state, particularly in the dairy branch. He is a director of the Michigan Milk Producers' Association, producers' representative on the committee of fifteen of the State Farm Bureau Dairy Department, president of the Jackson County Farm Bureau, and a director in local cooperative associations. He was one of the early promoters of the farm bureau idea.

New Members of Executive Committee.

Mrs. Edith M. Wagar, of Carleton, Monroe county, was one of the first members of the Monroe County Farm Bureau. She served on the county board during the state drive. She is a member of the women's work committee of the Michigan State Grange, was lecturer in Wayne county for fourteen years, and is a member of the legislative committee of Michigan women voters. She has always lived on a farm, and her creed is to make her farm home her home for all time.

W. E. Phillips, of Decatur, Van Buren county, has been identified with the farm bureau movements for several years and helped organize Van Buren county. He was a member of the Detroit conference of September, 1919, which decided to put on a state organization drive. He has been active in all three state conventions—was chairman of the resolutions committee in 1920, and of the rules committee in 1921. He is president of the Van Buren County Farm Bureau, member of the board of control of the Farm Bureau Elevator Exchange, and manager of a cooperative exchange. He is engaged in farming near Decatur.

A. T. Depue, of Faithorne, Menominee county, a former Illinois lawyer, who turned his attention to agriculture some time ago, has long been a student of economics and cooperative problems. He assisted in the organization of a number of farmers' cooperative grain companies. He has had several years' farm bureau experience and assisted in the Menominee county

work. He is engaged in dairying and is interested in potatoes, hay, beets and sheep.

Fred Smith, of Elk Rapids, is well known as a leader in state farm bureau work. He has been prominent in cooperative activities, is president of his local marketing association, former official of the Potato Growers' Exchange, and a pioneer in the live stock exchange movement. He is a live stock man and farms eight hundred acres near Elk Rapids.

Resolutions.

The following resolutions were adopted at the annual meeting of the board of delegates February 3-4, 1921:

1. It is resolved by the delegates of the Michigan State Farm Bureau that American farm products should have equal consideration in national protective tariffs with other products and further that the emergency agricultural tariff bill now before congress is hereby endorsed, and further, that a copy of this resolution be sent to all of Michigan's senators and congressmen as an expression of Michigan agriculture.

2. Resolved that the board of delegates in its third annual meeting urge the early enactment of house bills Nos. 51 and 52 relating to reorganization of state agricultural and conservational departments. Also do we urge the same action on the bill regarding state aid in grasshopper control.

3. Whereas, there is a 1920-1921 appropriation of \$3,000, made by the last state legislature to the Michigan State Farm Bureau, as yet unexpended, and Whereas, a survey of the state's finances disclosed by the governor shows that a most rigid economy in expenditures of state moneys is vital if the tax levy is not to become a serious burden to the people of the state, and further that the state this year is facing a deficit of several millions of dollars, and

Whereas, the Michigan State Farm Bureau has developed in the last two years to a point where it may be maintained absolutely by the farmers of the state independently of any other assistance, it is hereby

Resolved, that the Michigan State Farm Bureau relinquish its claim to this unexpended \$3,000 appropriation so that it may become part of the general contingency fund of the state, and further

That this relinquishment of claim be accompanied by an expression of appreciation to the state government for the assistance lent in 1919-1920 by an appropriation of \$3,000 that was used in the up-building of the organization.

4. Resolved by the Michigan State Farm Bureau that action should be taken by the legislature to limit the powers of county road commissioners in laying out the so-called Covert roads and spreading assessments upon the different political subdivisions and property owners.

5. The Michigan State Farm Bureau endorses the campaign for near east relief being made in Michigan, as a meritorious enterprise deserving of the hearty personal support of the membership.

6. Whereas, congress is considering a proposed tariff on Canadian timber, therefore, be it resolved, that it is the belief of the Michigan State Farm Bu-

reau that imposing a tariff on Canadian timber or lumber imported from Canada is contrary to the best interests of American farmers and home-makers.

7. Whereas, thousands of autos are now driven from factory to user outside the state, resolved, that these cars, known as drive-away cars, should pay a tax of three dollars on each drive-away car in Michigan and such tax money so collected shall be placed in the general highway maintenance fund.

8. Whereas, the Michigan State Farm Bureau represents all the organized counties in Michigan, impartially, therefore be it resolved that we, the delegates of the Michigan State Farm Bureau in meeting hereby instruct the state executive committee to keep close supervision over all the business operations in organized counties, seek in every possible manner to help the county obtain better business managers and methods and where county memberships are so small that the receipts from the farm bureau dues will not support a capable manager, the state executive committee shall assist two or more counties to organize together into a unit.

9. Resolved that the Michigan State Farm Bureau, through its legislative committee support the plan of merging the many agricultural boards now in existence into centralized departments, urge the passage of a state income tax in the place of the present personal intangible tax on bonds and mortgages; strive for greater economy in state government; request adequate appropriation for the Michigan Agricultural College; urge the state aid for counties combating the grasshopper plague and urge the passage of the seed law that will give real protection; that investigation will be made of all bills presented and where necessary actively oppose or support such legislation.

10. Whereas, the Michigan Agricultural College has proved itself to be a great benefit to the farmers of Michigan, and whereas its liberal support by the state of Michigan is necessary for the continuance of its great work,

Therefore be it resolved, that the Michigan State Farm Bureau request the legislature of the state of Michigan for ample appropriations for its support and maintenance.

Recommendations of Executive Committee.

Here are the recommendations made to the board of delegates, Michigan State Farm Bureau, by the executive committee. The following is taken from the report of the joint committee on organization policy of the Michigan State Farm Bureau and the Extension Department of Michigan Agricultural College, as adopted October 18, 1920:

That the Michigan State Farm Bureau is both a promotion and business institution and necessarily inseparable.

That the farm bureau members organize by departments with reference to agricultural commodities, and that each organized department be entitled to an advisory board to work with the executive committee, and that at such future time as developments will warrant, that these departments be entitled to representations on the executive committee.

Whereas, there is a fundamental difference of opinion as to the most ef-

(Continued on page 207).

Grain Feed Prices and Prospects

Accumulating Surplus Has Tendency to Hold Prices at Low Levels

By Sanders Sosland

SOMETHING is wrong with the feedstuffs market. That something is merely a case of too much—too much feed. For every bid for a quantity of feed there are ten offers and ten dealers competing keenly to obtain the order. A year ago, or in the past few years, it was a case of more bidders and more buyers than offers, and buyers were entirely dependent upon the attitude of the sellers. Not in many years has there been such a radical change from a sellers' to a buyers' market. This has been made possible, of course, by the immense supply of various feeds. Where there is a scarcity of some individual feed, others which provide an excellent substitute are available in abundance and at much cheaper prices. As to the price changes in the past month, no material interruption to the declining tendency has developed, nor are there any signs in the market which indicate that an upturn is in sight.

The immense supply of corn in the United States is the bearish force behind the feedstuffs market. Corn is selling at ridiculously low prices, far below the cost of production, and at a sharp discount under competitive feeds. So corn is being used on a very extensive scale as a substitute for most feedstuffs. Cattle fatteners are feeding corn very liberally and cutting down on their purchases of cottonseed cake and meal, linseed feed, alfalfa mixed feeds and other commercial products. The hog producer is following a similar course, and even the dairyman is using larger quantities of corn than in previous years. Feed authorities are urging the use of corn in feeding dairy stock as a partial substitute for oil meal, and they claim that excellent results are being obtained. Certainly there is a sufficiently wide differential in price to justify the use of corn. The substitution of corn for other feeds has been stimulated also by the fact that the crop is more evenly distributed than in many years.

Even with the generous use of the grain, the market for corn is extremely weak and the demand at terminals is far insufficient to absorb the offerings. Corn is selling between fifty and sixty cents a bushel, around fifty-five to sixty cents a bushel in Chicago at this writing, for cash offerings, the lowest prices which have prevailed since January of 1913. Based on the net price received by the producer, the current corn market is even lower than at the opening of 1913, owing to the sharp advance in freight rates since that time. In few sections of the important producing areas of the middle west are the net prices received by farmers more than thirty-five cents a bushel, with many districts down to twenty-five and thirty cents. The only important buyers of corn are the elevator operators, particularly those located at terminals, who are absorbing the offerings on a large scale and immediately selling or hedging the grain in the future market. A very sharp discount prevails on the cash under the future, and the elevator men are profiting by such operations. With the heavy selling pressure in the future market, however, and the lack of demand, corn cannot gather enough strength to turn up in price, so continues to tend downward.

The ability of hogs to hold up in price around nine cents a pound on middle west markets would ordinarily be a bullish influence on corn, yet there is such a remarkable disparity in supplies that the coarse grain hardly feels the effect of a firm hog position. Nine cent hogs under normal condi-

tions would mean ninety cents a bushel for corn. There is a relative scarcity of hogs in the country and not enough to consume the surplus grain. The heavy corn receipts on markets are not finding their way into hands of hog producers, nor are cattle fatteners buying on a liberal scale, as usual at this time of the year. Excellent winter weather has been a restricting influence.

Oats can be bought around forty cents a bushel in Chicago, with other markets in the central states within a range of two or three cents of this figure. The market is weak, probably extremely weak, due to position of corn and actual lack of demand. Cotton planters in the south are buying sparingly and the outlets to other sections have contracted sharply. Both corn and oats usually enjoy a bull market during the spring and early summer period, and it is possible that a higher level of prices will then prevail, though supplies are so burdensome and the demand prospects so discouraging that material upturns the remainder of the crop year are now a serious question. Both grains, however, have declined to such abnormally low levels that purchases on a moderate scale are advis-

able, though not with any idea or expectation of effecting a sharp saving in price. Neither of these grains is so low that they cannot go still lower. No material change is apparent in the linseed cake and meal situation. The price has remained about stationary, around \$39 a ton at Minneapolis, while cake and meal market at the seaboard, which for a time displayed strength as a result of an increase in the foreign demand, fell off about \$4.00 a ton to around \$46 a ton. Linseed feed is too high compared with corn and the feeding demand is thus rather sharply restricted to domestic channels. Feeders are using more corn and less of the concentrate. The flaxseed market is extremely weak, with continued pressure of offerings from the Argentine. This tends to exert a weakening influence on values. Operations of crushing plants have been quite restricted, due in a large measure to the lack of demand for linseed oil. In this connection, there is hope of a revival of buying of linseed oil by the paint trade with the opening of the spring season, in which event crushers would begin grinding more rapidly. This, of course, is a bearish prospect on the linseed cake and meal.

Market observers are more or less divided as to the position of cotton-

seed cake and meal and the price outlook. Many argue that the market must reach a new low level, down to \$20 a ton in Texas, the basic price state, with a freight parity at other other points in the south. Still others say that the low point already has been witnessed, that is, the \$22-market of a month ago. Within the past month cottonseed cake and meal have sold as high as \$25.50 a ton in Texas, \$26.50 in Oklahoma, \$28 to \$30 in Little Rock and Arkansas territory, and \$31 to \$33 in Memphis territory, these quotations being on the forty-three per cent protein grade. Slight recessions have since occurred, particularly in Texas, where offerings are down to \$23. Feeding demand for cottonseed feed has increased on a small scale, Michigan and the surrounding states being moderate buyers. Corn belt producers of live stock, while not using as much cottonseed cake and meal as a year ago owing to the immense stocks of corn and cheap price of the grain, are consuming more of the concentrate than commonly supposed. They find the use of cake and meal in the ration profitable. But the corn belt demand is not enough to sustain values. The range country, normally a very heavy

consumer of cake and meal, has bought only insignificant quantities. There is too much hay in the west, and the exceptionally favorable weather over the range territory has permitted a sharp contraction in the buying. Also, fertilizer interests have bought little cottonseed meal, and the manufacturers of commercial feeds, whose outlets have shrunk relatively more than that for other feeds, have been practically out of the market. There is no important export business passing. There is little probability of any sharp upward swings in prices, the question just now concerning the prospects for a further downturn. There is no immediate need of buying cake and meal for deferred requirements. Favorable consideration should be given cottonseed feed by feeders in their purchases of protein feeds. It is doubtful whether protein alone is available anywhere at a cheaper price than in cottonseed cake and meal.

Millfeeds present a rather bearish outlook. The consuming trade is very reluctant to take hold, buying only on a hand-to-mouth scale and restricting consumption as much as possible. Corn is being used as a partial substitute, particularly for shorts. It is not surprising that bran and shorts are being used sparingly in view of the fact that

corn, with a higher feeding value, is selling at a considerable discount under the mill offals, with cottonseed cake and meal also below a parity. But there is a powerful influence against a declining trend of prices in the fact that operations of flour milling plants over the entire United States, in both the spring and winter wheat sections, are far below normal, less than half normal capacity for this time of the year. And this has been the case throughout the crop year, the exceptionally light demand for flour in both domestic and foreign channels having forced many mills to shut down. Nor is the prospect for enlargement in the demand for flour encouraging. The trade in the breadstuffs is increasing slightly and slowly, but normal operations for any lengthy period are not expected the remainder of the crop year. The supply situation on millfeeds is therefore rather bullish, but this is almost entirely offset by the super-abundance of other feeds available at a discount in price. So far as demand is concerned, still lower prices are to be expected. The weather has been too mild to create a demand, and, with spring approaching, the trade sees less buying ahead.

Minneapolis quotes spring wheat bran around \$26 a ton for spot or prompt shipment and down to \$25 a ton for deferred delivery, with brown shorts or standard middlings there at \$23 and gray shorts or flour middlings around \$27. Kansas City, the leading hard winter wheat market, is offering bran at \$24 a ton for spot shipment and \$23 to \$23.50 for thirty-day shipment, with brown shorts at about the same price, and gray at a premium of a dollar a ton. Bran in St. Louis is around \$28 to \$29 a ton and gray shorts at \$29 to \$30. Chicago is practically on a parity with St. Louis. Detroit quotes bran around \$36 a ton. Values as a whole average about a dollar to two dollars a ton lower than a month ago.

Alfalfa and tame hay have not reached bottom. The supplies of hay in the country, particularly the surplus being held by alfalfa growers in the west, are of enormous proportions. Prices are being temporarily sustained, however, by the reluctance of producers to dispose of their surplus at the prevailing level, which they claim is too low. The prices being paid for hay on markets is relatively high, too high, in fact, for the consumer, but, after exorbitant freight rates and other charges are deducted, there is little left for the producer. Incidentally, there is vital need for a reduction in freight rates, carriers, recognizing this, already having made a partial readjustment from the northwest. Growers are hoping for a rally in prices on alfalfa before spring, around which time they are planning to unload freely of their surplus. Possibly they have analyzed the market outlook correctly, but this is not the conclusion generally reached. Market observers feel that the producer is merely stretching out his losses and holding up the agony. Alfalfa is selling in Kansas City, the principal market, around \$15 to \$25 a ton, with good shipping grades available around \$18 to \$20 a ton.

"When the farmers' pocketbooks are empty they are poor customers," says the Missouri Farm Bureau Federation in a letter to its members in which it reports that the largest of mail order houses has just given out a statement that sales during October declined forty per cent as compared with October, 1919. Through lack of business the Missouri Federation points out the city man is hurt as well as the farmer.



H. W. Wigman's Guernsey Herd Sire.

Readjustments in Sheep Markets

What Has Happened During 1920

THE erratic character of the sheep industry was again demonstrated by the history of the market during 1920. Not only were there numerous sudden changes in the market prices within short intervals, but the industry as a whole was plunged from the heights of prosperity early in the year well towards the depths of adversity at the close.

Early in 1920 prices upon sheep and lambs were far out of line with cattle and hogs. Apparently the consuming market for mutton and lamb had been broadened during the war period and by a definite propaganda campaign to induce the American population to "eat more lamb." The prospect for a profitable winter and the fact that most of the range lambs marketed in the fall of 1919 were in only feeder condition resulted in filling an unusually large number of lamb feed lots. This faith was well rewarded until in the middle of the winter announcement was suddenly made of the coming of a consignment of frozen lambs and mutton from New Zealand. At first this was supposed to be merely a chance consignment attracted to this country by the high prices prevailing in our markets. However, Australia and New Zealand actually had on hand an enormous number of these carcasses representing the slaughter during 1919 and also the surplus from several preceding years during which the shortage of ships in general and of refrigerator ships in particular made it impossible to ship to European markets. There were said to be six million of these carcasses, the property virtually of the British government. American packers undertook their distribution in this country. The prevailing rates of exchange were also favorable for this trade as they made it possible to sell in this country from twenty-five to thirty-five per cent lower than otherwise. These shipments have been coming at irregular intervals throughout the year and the end is not yet in sight.

In May the slump in the wool market occurred and reduced by about eighty per cent the value of the by-products from sheep slaughter. This may have been offset in part by ad-

vancing the price of mutton and lamb at wholesale but most of it was offset by lowering the price of lambs on the hoof. A similar decline took place earlier in the year in the value of the other by-products, hides and tallow.

In addition to these burdens, money shortage, principally in the range territory, resulted in liquidating a large number of flocks, thus sending to market a larger supply than the sheep population would have furnished under normal conditions. Low prices for lambs and wool discouraged many farm flock owners who had become enthused during the preceding two or

and mutton coming from Australia, New Zealand and the Argentine.

The stocker and feeder shipments of sheep and lambs during the first eleven months of 1920 totaled 4,911,941 head, compared with 6,214,614 head during the corresponding period of 1919; a decrease of 1,302,673 head, or twenty-one per cent. The decrease was particularly marked during the last four months of the year so that the shortage in the number of lambs on feed for the coming winter market is relatively greater than these figures indicate. As an offset to this shortage, however, there is a stock of around

depleted credit are less able to pay.

The wool market at the beginning of the new year is showing signs of slight revival but the large stock in the hands of growers, together with the fact that taking off the new clip will begin within ninety days and that large purchases have been made by American buyers in Australia and New Zealand, does not indicate a pronounced rise above the present level of quotations.

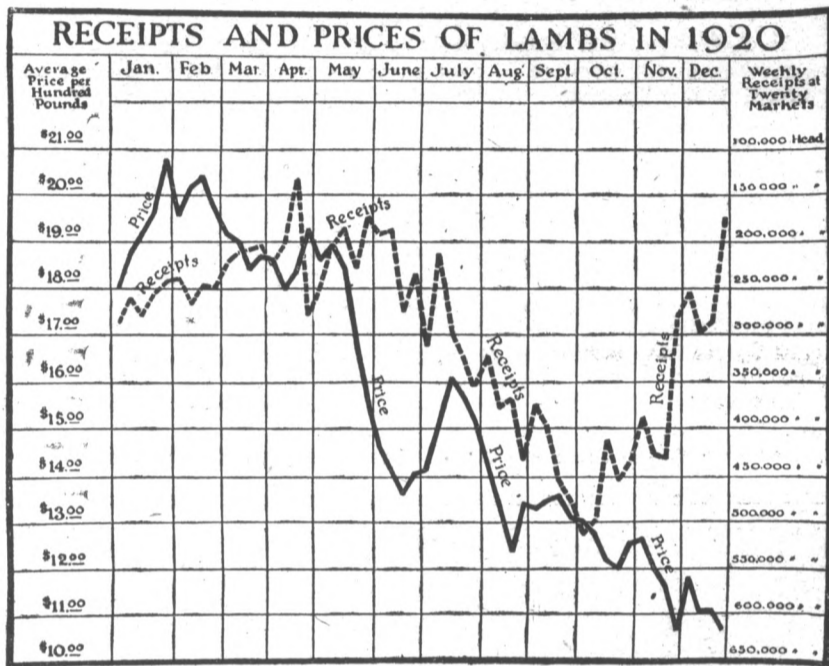
Combined receipts of sheep and lambs annually at the seven leading markets during 1920 and preceding years are as follows:

Year.	Receipts
1920	11,117,499
1919	14,308,000
1918	12,064,000
1917	10,017,000
1916	11,637,000
1915	11,147,000
1914	13,272,000
1913	14,037,000
1912	13,734,000
1911	13,500,000
1910	12,328,000
1909	10,197,000
1908	9,787,000
1907	9,837,000
1906	10,771,000
1905	10,526,000

The run during 1920 was not large in itself, but when the imported lambs and mutton are added to the supply it is not difficult to understand the hard road over which the sheep market has traveled during 1920. When allowance is made for the liquidation of flocks represented in the 1920 supply, it is apparent that our sheep-producing population is now down to a comparatively low basis.

Cycles of alternate prosperity and depression have always been an especially pronounced characteristic of the sheep industry. How far toward the bottom of the present depression the end of 1920 has brought the industry, it is impossible to say, although one may be sure that it is far on its way. A pronounced revival does not appear likely to occur during the coming year but sheep producers are quite likely to be prosperous before 1922 has expired.

Tariff legislation covering both wool and meat is impending. If passed, it should speed the time of recovery to an earlier date than it would occur if the reduction in our sheep population were the sole influence.



three years of prosperity, and they also disposed of their holdings on a liberal scale. The general depression which by this time has affected practically every branch of production assisted in accelerating the decline in value for lambs and sheep.

The slaughter of sheep and lambs at sixty-six markets during the first eleven months of 1920 totaled 10,088,677 head, compared with 11,429,696 head during the corresponding period of 1919. The decrease amounts to 1,341,018 head, or 11.7 per cent. As an offset to this decrease there have arrived about 2,700,000 head of frozen lambs

60,000,000 pounds, or at least one and one-half million carcasses of frozen mutton and lamb awaiting consumption. This frozen product competes more sharply with the mutton market in this country than it does with lamb since lamb consumers habitually are fastidious and the frozen product is not an entirely satisfactory substitute. Presumably, these foreign importations will continue, although at a slower rate as the southern hemisphere constantly produces a surplus which must find a market in some country or other. European nations have greater need than our own, but as a result of

Forms of County Government

Various Civil Functions of County Government—By L. A. Chase

BECAUSE of the evident interest in the proposed reform of our method of governing counties, the Michigan Farmer has asked me to give a brief account of county government in general for the information of its readers. We Michigan people have become so accustomed to one form of county government that it is difficult to realize that there may be any other form in use in the other American states. In reality the Michigan type is not the kind most commonly found in the United States. It was derived originally from New York, whence many of the early inhabitants of Michigan territory and state came in the days when Michigan institutions of government were in the formative stage. Settlers are pretty apt to use in their new home the same institutions of government to which they were accustomed in the state from which they came, at least when they occupy a vast unsettled region with the opportunity of settling their own affairs in their own way. It was this way in Michigan af-

ter the War of 1812, when the American emigration to Michigan set in. At that time there had existed in New York a kind of county government not found in the New England and southern states, in which the governing board consisted of township supervisors meeting together at the county seat for the purpose of administering county affairs. There was no very good reason why Michigan people should have adopted the New York way, except that that was the way they were used to. In New England they had long got along very well without county government, save for judicial purposes; while in the south and near-southern states counties were managed by a small board or commission of three to five persons, at first of appointed officials, later elected by the voters. There were no townships in the south, although parishes existed

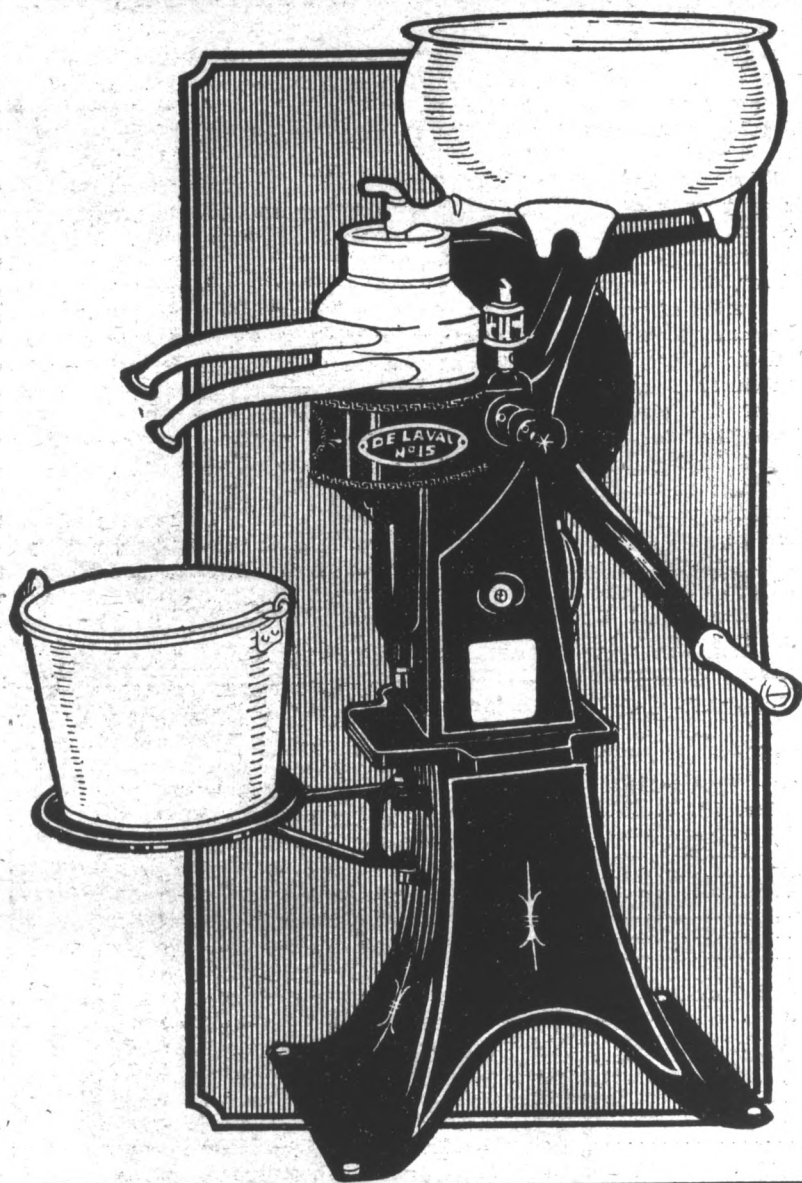
for local church administration. The Michigan system of large boards of supervisors is now found in New York, Wisconsin and Illinois. In Kentucky, Tennessee and Arkansas matters of finance and administration are dealt with by the local justices of the peace, sitting as a county court. Usually the county boards, whatever their form, deal with questions of administration and finance. In this respect Michigan is an exception, since by the home rule act of 1909, Michigan sought to make its county board of supervisors into a local legislature, with power to make laws which should be referred to the governor of the state for approval or disapproval and should be filed with the secretary of state at Lansing, and which should be subject to the initiative and referendum of the voters. So far as my information goes, not much use has been made of this right of

county legislation, although it has not been wholly neglected.

In Indiana and some other states there has been created a sort of county council to handle matters of taxation and appropriation, in addition to the board of county commissioners. According to Fairlie, this separation of functions is exceptional. In all the states outside of New England, counties have important fiscal duties, including in most states the collection of state taxes. County officers assess property for taxation in some of the western and southern states. In most states outside of New England the county administers poor relief and supervises school affairs, while in many states health and sanitation fall within the domain of the county administration. In Michigan the counties have in a few instances established normal and agricultural schools and are permitted to establish county libraries, assist fairs and agriculture and other developmental agencies, establish hospitals, sanitariums and parks.



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Some Soy Bean Experiments

By Edward E. Evans

MY soy bean trials cover a period of more than a quarter of a century, during which I have grown more than one hundred and thirty varieties. Many of these proved of no value in Ogemaw county (latitude 44), and some would not mature in the southern tier of the state. Of the varieties included in the 1920 trials I have had Early Black since 1897; Ogemaw and Ito San, 1898; Merko, 1909; Manchu and Black Eyebrow, 1912; Wilson has been grown four times within ten years. All the numbered varieties, Peking and Wisconsin Black were grown for the first time in 1920.

The land on which the trials were made consists of a surface soil of eight to fifteen inches of clear sand. Under this did lay a stratum of hard brown hardpan, varying in thickness from ten to twenty-four inches. This hardpan was broken up shortly before planting, by the use of a stick of dynamite every fifteen feet. Under this lies a heavy clay subsoil. The previous crop on this land was corn. It had grown three previous crops of soys since 1911. It is thoroughly impregnated with the bacteria of many species of legumes. The fertilizer used was four hundred and eighty pounds of bone black per acre. Planting was made on May 28, or about ten days later than usual. Had I been able to plant on May 14 or 15 the period of growth would have been shortened fifteen to twenty days on all these varieties which did not reach maturity before September 15, because of the cloudy weather and great humidity later.

In the following table, "Maturity" refers to the time when the plants have attained their maximum growth and development, at which time they contain the maximum amount of protein and are at the correct stage for the silo. The weight at maturity was taken at this stage. Air-dry weight

period of growth. From past experience I believe that two or three seasons here in Michigan will very materially shorten their growing time. It seems probable that both Mandarin and No. 30600 will be among the earliest of the species, while the others will probably ripen along with Manchu, Ito San and Medium Green.

Bearing in mind that one season's trial is not conclusive proof in any instance, nevertheless some of the figures obtained are quite startling. No. 30600, though attaining a height of only twenty-eight to thirty inches, was so widely branched as to create a square flat head, overlaid by clusters of pods. This variety is one of the erect, rigid type, as distinguished from the slender, willowy Ito San and the decumbent Merko. It seems probable that several of the numbered varieties may in future displace a number of our standard sorts. Ten to twelve tons of soy ensilage per acre, from rows three feet apart, certainly looks good. The seed is not available as yet and should not be distributed until more thoroughly tried out.

The trials very forcibly illustrate the necessity of knowing where one's soy seed was grown. Home-grown Merko matured its crop fully. Maryland-grown Merko seed, while it produced large healthy plants, still lacked two weeks of maturity when killed by the frost, the last week in October. Wilson also matures here, occasionally, when Michigan seed is planted. This variety was just forming pods when killed by frost. While the bulk or weight of these late or undeveloped soys is often great, it should be remembered that they simply make bulk in the silo and do not balance the ration, as the protein content is low at that stage. I very much doubt if the 21050 pounds of green Pekings contained anywhere near the amount of protein that was in

Table of Maturity Dates of Varieties of Soy Beans and Yields

Variety.	Maturity.	Weight at Maturity.	Air Dry Weight.	Weight of Seed per acre.
Wilson No. 5	Not mature	14520	5770	None
Peking	Not mature	21050	7115	None
Merko (Michigan)	Oct. 5	14520	5770	1208
Ogemaw	Aug. 25	9075	1960	906
36652	Oct. 15	23960	6500	2150
36902	Oct. 15	22140	6280	1924
36846	Oct. 10	20330	6130	1512
28050	Oct. 10	17420	5410	1410
30600	Oct. 5	13070	4800	2410
Wisconsin Black	Sept. 15	10160	3610	1188
Ito San	Oct. 1	14520	4230	1368
Manchu	Oct. 1	15970	4330	1842
Black Eyebrow	Oct. 5	16700	4350	1586
30594	Oct. 5	14520	4080	1390
36576	Oct. 10	24660	6480	1680
37062	Oct. 1	13430	4880	1106
37063	Oct. 5	20330	5420	1208
36915	Oct. 10	17420	5800	1275
Mandarin	Sept. 5	14520	4300	1240
Early Black	Sept. 1	9800	2960	928

was taken when the preceding had attained a consistency approximating tinner. The weight of seed is from the crop after becoming thoroughly ripe and dry. The wide variation in the per cent of moisture at maturity is in some measure due, to the variety; also to the amount of humidity in the atmosphere on different days; and to the presence or absence of large numbers of capillaries on the stalks, pods and leaves.

Of the seeds planted Merko, Manchu, Black Eyebrow, Ito San, Ogemaw and Early Black were grown in Ogemaw county and are thoroughly acclimated. Wilson No. 5 and Peking were Virginia grown. Mandarin and the numbered varieties, though originally from northern Manchuria, a considerably colder climate than Ogemaw county, had been grown at the United States trial grounds at Arlington, Va., thus in a measure lengthening their

the 8900 pounds of fully developed and practically ripe Early Blacks. The varieties that are densely covered with capillaries (fine hairs) have the greatest resistance to both extremes of temperature, but the ripening up process requires longer.

Of the standard varieties included in the trials Ito San (my introduction of 1901) has been longer in cultivation. It is probably the most widely disseminated variety, having been grown in nearly all agricultural countries of the world. It seems to be a general favorite, though inferior to Manchu and Black Eyebrow. These are both a little earlier and during eight years' trials have continuously produced heavier crops of both forage and seed than Ito San. Manchu produces the heavier crops of seed and Black Eyebrow a slightly heavier crop of forage. During the past three years Manchu has given

(Continued on page 184).

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Bad Axe..... Huron Sto. Batt. Co.
Battle Creek..... Central Sto. Batt. Co.
Bay City..... Thorne Elect. Co.
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Big Rapids..... Automotive Elect. Co.
Blissfield..... H. D. Bailey
Cadillac..... Cadillac Sto. Batt. Co.
Calumet..... Calumet Sto. Batt. Co.
Cedar Springs..... Floyd Davis
Charlotte..... Charlotte Sto. Batt. Co.
Cheboygan..... J. A. Garrow
Coldwater..... Coldwater Garage Inc.
Dearborn..... Lindsay Batt. Serv.
Detroit..... Mrs. M. W. Carpenter
Clements Batt. Service
Duncan Bros.
Fred's Tire & Batt. Service
Gould Bros.
J. Hergenroeder & Sons
Long Batt. Service Co.
Mart. J. Schneider
Western Batt. Service

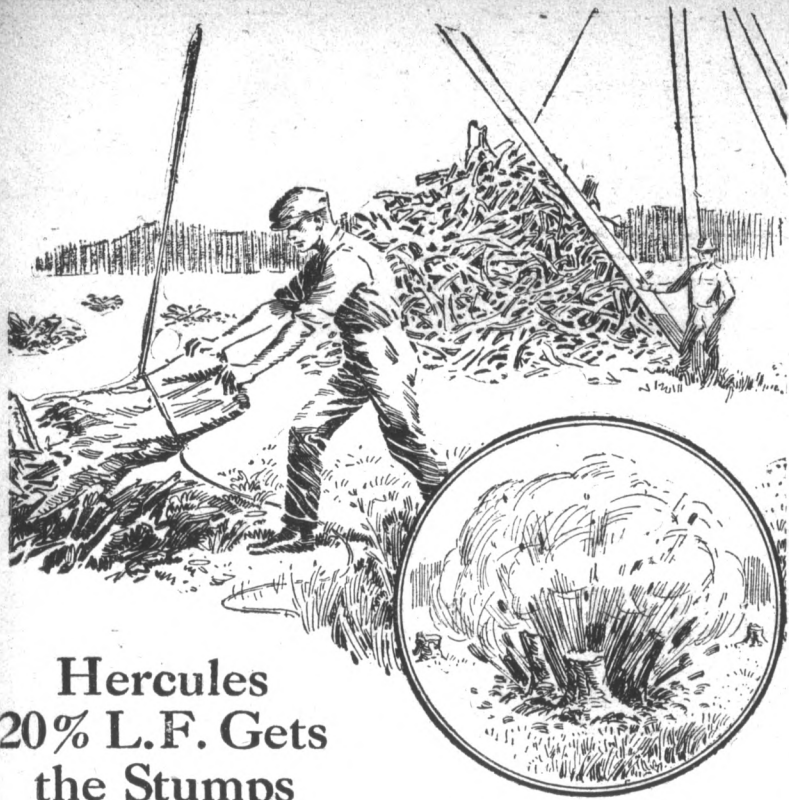
Dowagiac..... Walworth Batt. Serv.
Eaton Rapids, Smith Tire & Batt. Service
Escanaba..... Home Electric Co.
Flint..... Flint Sto. Batt. Co.
Fremont..... John J. Hansel & Co.
Grand Haven, Kooiman Batt. Serv. Co.
Grand Rapids, Wolverine Sto. Batt. Co.
Greenville..... Elmer Wilber
Hamtramck..... David Berger
Hastings..... Universal Garage Co.
Highland Park, Dewar Sto. Batt. Co.
Hillsdale..... Simpson & Simpson
Holland..... Holland Sto. Batt. Co.
Houghton, Superior Sto. Batt. Co.
Howell..... Donald Maycock
Ionia..... E. W. Thomas
Iron Mountain, Iron Mountain Batt. Co.
Iron River, Iron River Batt. & El. Shop
Ironwood, Julius Bentzen Elect. Co.
Jackson..... Jackson Sto. Batt. Co.
Kalamazoo, Thompson's Sto. Batt. Co.
Lansing..... H. F. Heath
Lapeer..... Lapeer Sto. Batt. Co.

Ludington..... Harry Trepanier
Manistee..... Lloyd & Smith
Manistique..... Manistique Batt. Sta.
Marquette..... Battery Serv. Sta.
Midland..... Kaufman & Revenaugh
Monroe..... Monroe Sto. Batt. Co.
Morenci..... Green & Rorick
Mt. Clemens, Mt. Clemens Sto. Batt. Co.
Muskegon..... Electric Serv. Co.
Niles..... Niles Batt. Serv.
Owosso..... Blair & Gaylord
Petoskey..... Petoskey Sto. Batt. Co.
Plymouth..... Plymouth Sto. Batt. Co.
Pontiac..... Storage Batt. Serv. Co.
Port Huron..... Storage Batt. Service Co.
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St. Johns..... F. H. McClintock
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Hercules 20% L.F. Gets the Stumps

Many farmers in your section who have heretofore used 40% Dynamite for stumping find that in heavy soil Hercules 20% Low Freezing Extra will do the work better—and cheaper.

This grade not only breaks the stumps into good sized pieces but it gets the roots out cleaner than higher percentage explosives.

Try 20% L. F. on your stumps—but when you do be sure to use

HERCULES DYNAMITE

Send for "Progressive Cultivation". This 68-page illustrated book will tell you the best and most economical ways to use explosives in farm work—how to clear land, blast ditches, plant trees

and do many other things to put your land in condition for cultivation. This book will be sent to you without charge—just sign the coupon and mail it to us today.

Hercules Dynamite is for sale by leading Hardware and Implement Dealers

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910 Market Street, Wilmington, Del.



Gentlemen: Please send me a copy of "Progressive Cultivation".

I am interested in dynamite for _____

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RAW FURS

WE pay the Market's Highest Mark. Are absolutely reliable—established 1853—capital, \$1,100,000. Write at once for FREE Price List and Booklet, "Successful Trapping." Postal will do.

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A New Labor Saving Implement

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MINERAL HEAVE COMPOUND

FOR HEAVES

Booklet Free

\$9.25 Box guaranteed to give satisfaction or money back. \$1.10 Box sufficient for ordinary cases (includes War Tax).

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Kentucky Tobacco

TWO YEAR OLD LEAF. Rich, Mellow, Nature Cured. Chewing and Smoking. SPECIAL TRIAL OFFER. 3 lbs. \$1.00 POSTPAID. KENTUCKY TOBACCO ASSN., Dept. 216, Hawesville, Ky.

FREE New 176-page Book with your order. Gives tables, plans, etc. 132 illustrations. Big help in your concreting work. Regular price \$1.00. **\$1.68** and upward

PUT THIS CONCRETE MIXER ON YOUR FARM

You can't afford to waste valuable time, good materials and money by having to do over again concrete work which was mixed by shovels. Get a Sheldon Farm Concrete Mixer and put in your own concrete so it will last a lifetime—it will save its price on the first job. What is more, you can do the work when you please in otherwise idle time. No big gang of men needed.

SHELDON PATENT CONCRETE MIXER

is made especially for farm use and has a reputation of six years of successful operation on thousands of farms all over the U.S. No complicated machinery to get out of order—easy to operate—easy to move—mixes 3 cubic feet at a batch—a 1 1/2 H. P. engine will run it. No other mixer excels its quality of work nor approaches its low price.

FREE—New 1920 Catalog—FREE

It illustrates and describes all types of Sheldon Mixers and gives all of the prices. It tells about our special 30-day Trial Privilege Offer and tells you how to save money on your concrete work. It's FREE. Get this book today.

SHELDON MFG. CO.
Box 670, NEHAWKA, NEB.

Associational Meetings

Held During Farmers' Week at M. A. C.

CROP IMPROVEMENT ASSOCIATION.

OVER three hundred and fifty farmers attended the Wednesday morning program of the Michigan Crop Improvement Association. This is the largest first day's attendance known to "old-timers" in the association.

Great interest was shown in the discussion of the handling of alfalfa, sweet clover, soy beans, and sources of safe seed of these crops, presented by Professor C. R. Megee.

Mr. G. W. Putnam, crops specialist of the upper peninsula, gave the results of pioneer potato work, improvement and culture, which opened many inquiries.

Professor J. F. Cox spoke at some length on the new annual white sweet clover and its possible place in Michigan agriculture. The Michigan Agricultural College has the largest supply of seed of this new crop anywhere available for distribution in small lots to Michigan farmers, chiefly through the Michigan Crop Improvement Association members. Extraordinary interest was taken in the annual white sweet clover because of the present price of \$8.00 per pound. The experiment station yields last year were approximately four hundred and fifty pounds per acre.

Professor Spragg gave a discussion of the cultural methods of annual sweet clover and was kept busy throughout the morning answering questions in regard to the handling of this crop in the field.

Mr. E. E. Down followed with the results of planting experiments, where variation of a week in planting reduced the yield of rye ten bushels or more.

The concluding talk was given by Mr. D. F. Rainey on the results of variety tests throughout the state, which have enabled the crops department to show dependable high yielding varieties of various crops as standards for each section.

Mr. A. L. Bibbins, Secretary of the Michigan Crop Improvement Association, presided over the morning meeting. Without doubt the increase in attendance is largely due to the awakening interest in better varieties and better seed. Also due to the fact that the Crop Improvement Association show is the largest ever given and many farmers came along with their corn, bean, or small grain entries.

HORTICULTURAL SESSION.

THE Michigan Horticultural Society gathered for its annual winter meeting on Tuesday, February 1, and continued in session until Wednesday noon. The feature of the gathering was the talk given by Charles J. Brand at the Tuesday meeting. Mr. Brand, whose speech is covered in another column of this issue, discussed market problems.

George L. Comlossy, Superintendent Perishable Products Service, New York Central Railroad; President F. S. Kedzie, of M. A. C.; G. A. Hawley, President of the Horticultural Society; and Dean R. S. Shaw, of M. A. C., were other prominent men who appeared on the program.

An interesting feature of the Wednesday morning meeting was the presentation of practical experiences with commercial fertilizers. Robert Anderson, of Covert; M. D. Buskirk, of Paw Paw; W. L. Hamilton, of Bangor, and H. E. Flory, of South Haven, taking up peaches, grapes, apples, and small fruits, respectively.

Appointment of a committee of five

men from the Horticultural Society to work in cooperation with the college experiment station in the work of developing greater cooperation was decided upon Wednesday morning. The need of a new Horticultural Building at M. A. C. was also brought out by speakers.

WILL POTATO PRICES GO UP?

ADVISING Michigan farmers to hold their potatoes, Daniel Dean, potato expert of New York state, predicted an early and decided rise in the price of tubers from the producer, while addressing the annual meeting of the Michigan Potato Producers' Association on Tuesday morning.

The much talked of over-supply of potatoes in the United States does not exist, according to Mr. Dean, who brought out figures to prove his point. There were 145,000,000 bushels of potatoes on hand in the country on January 1, 1921, according to Bureau of Markets reports recently released and used by Dean in making up his comparative table. This total compares with 127,000,000 bushels on hand January 1, 1920, or only about one-seventh more.

Two years ago there were 174,000,000 bushels in the country, and three years ago 204,000,000 bushels. From these figures Mr. Dean concluded that there was no real over-supply, and predicted an early rise in price, especially to the producer, who at present is getting only a fraction of a dollar a bushel for his crop. Last year the price went as high as \$4.00 to \$6.00 a bushel.

Another factor said to favor Michigan growers is the fact that Michigan potatoes are reported to be keeping well, whereas much of the eastern crop is suffering from blight rot. This will enable local men to hold.

Other speakers on the Tuesday morning (Continued on page 188).

SOY BEAN EXPERIMENTS.

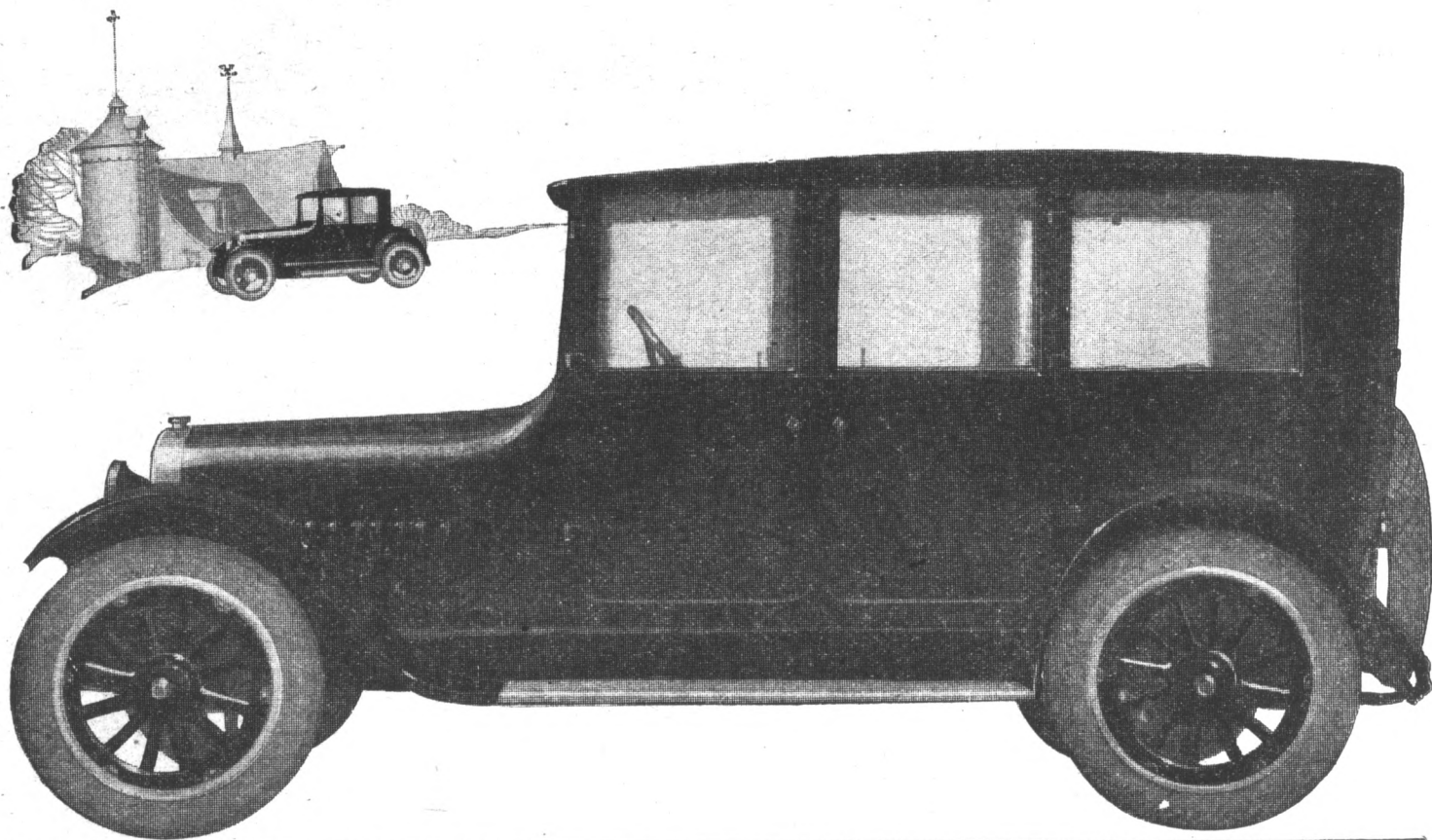
(Continued from page 182).

very satisfactory results in Michigan, Wisconsin, Iowa, Nebraska and South Dakota. When acclimated Mandarin will prove earlier than my Ogemaw, which it far outyields in both forage and seed. Mandarin, in common with all the numbered varieties, retained their foliage until fully ripe. Mandarin had not shed any leaves thirty days after all the pods were dry.

Several old standard sorts were not included in these trials for various reasons. Medium Green, introduced from Japan by Dr. Brooks, of Amherst, Massachusetts, in 1888, still remains the favorite in the New England states. It was grown continuously in Michigan from 1897 to 1915. It is a superb variety for the silo, but in this state shatters seed badly. By crossing this variety with Dr. Brook's dwarf brown I produced (1898) Olive Medium (Evans No. 13). By crossing Olive Medium with Medium Green the Ohio Station produced Ohio No. 9035, very popular in central and southern Ohio, Indiana and Illinois, but too late for Michigan. Medium Early Yellow, introduced from Japan by Prof. George-son, of Kansas, about 1890, was included in my trials from 1896 to 1899, but never passed the blossom stage before killing frosts. Ebony (Black Beauty) still occasionally grown, at one time very widely, was generally discarded because of inferior crop production. Hollybrook or Mongol, also occasionally called "Medium Early Yellow," has never been popular north of latitude 39, but is still a favorite in central Indiana and Illinois. It is too late for Ogemaw county.



OAKLAND OWNERS REPORT RETURNS OF FROM
18 TO 25 MILES PER GALLON OF GASOLINE
AND FROM 8,000 TO 12,000 MILES ON TIRES



THIS OAKLAND SENSIBLE SIX SEDAN IS POWERED WITH THE FAMOUS 44-HORSEPOWER, OVERHEAD-VALVE OAKLAND ENGINE

Summer or winter, over country or city roads, every mile in an Oakland Sensible Six Sedan is a comfortable mile. And an economical mile, also. For this efficient car delivers its reliable service at the very minimum of cost. Consider carefully these things about the Oakland, then contrast against them the very moderate price at which this Oakland is sold. Certainly no earlier type of motor car offers equal value, whether as an investment or as a means of satisfactory personal transportation.

OPEN CAR, \$1395; ROADSTER, \$1395; FOUR DOOR SEDAN, \$2065; COUPE, \$2065
F. O. B. PONTIAC, MICHIGAN. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, \$85

OAKLAND MOTOR CAR COMPANY, *Pontiac, Michigan*

OAKLAND
SENSIBLE SIX



**THE NAME THAT IDENTIFIES
SUCCESSFUL PIPELESS HEATING**

The name CALORIC identifies the heating plant with the exclusive patented features that make pipeless heating such a wonderful success.

It identifies the heating plant that is sold under a Money-Back guarantee of your satisfaction—and that has made good its guarantee in actual service in over 125,000 homes.

The Caloric fills every room with summerlike warmth in coldest weather—and cuts fuel bills 1/3 to 1/2. There is only one Caloric. The name is on the feed door. It's your bond of heating satisfaction.

The Caloric actually costs less than the stoves necessary to heat same size building. May be installed in a day, no plumbing, no pipes to freeze. Burns any fuel. Write today for Caloric Book—or see nearest dealer.

The Monitor Stove Company
(The Monitor Family)
102 Years in Business
110 Woodrow St. Cincinnati, Ohio



LARGEST MANUFACTURERS OF WARM-AIR FURNACES IN THE WORLD
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Free Beans

Burpee's Stringless Green Pod

That you may test the value of BURPEE QUALITY SEEDS we will, during this month, send entirely free a large trial packet of Burpee's Stringless Green Pod Bean Seeds. With the Beans we will send a Burpee Booklet about the best seeds that grow, both absolutely free.

All we ask is that you send us a two cent stamp to pay the postage. Write for your beans today.

W. ATLEE BURPEE CO.
Seed Growers Philadelphia

STRAWBERRY PLANTS

Good strong, well rooted plants at \$4.00 and \$5.00 per thousand. Also a complete line of the best red and black raspberries, hardy blackberries fancy gooseberries and currants, a large stock of popular grape vines. Many of our customers are making from \$500.00 to \$1200 per acre growing berries from our fruit plants. Send for our free catalog.

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Ear Tags FOR STOCK 99
Tag your stock—best and cheapest means of identification for Hogs, Sheep and Cattle. Name, address and number stamped on tags. Catalog mailed free on request.
F. S. Burch & Co., 145 W. Huron St. Chicago

LANDOLOGY Special Number just out containing 1921 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of LANDOLOGY. It is free on request. Address
SKIDMORE-RIEHL LAND COMPANY
381 Skidmore-Riehle Bldg., Marinette, Wisc.

POTATO BAGS Sound and free from holes. Sold direct to growers at wholesale prices. WRITE
LINCOLN BAG CO., Dept. D, Springfield, Ill.

Agents Make Big Money Selling Our SILOS
Write today for catalog and big commission proposition. **NAPPANEE LUMBER & MANUFACTURING CO.,** NAPPANEE, IND.

Kentucky homespun tobacco, 10 pounds \$3.00, 20 pounds \$5.00, 100 pounds \$18.00.
Kentucky Tobacco Growers Union, Jonesboro, Ark.

Experience

YOUR experience tells you what crops will yield best on your farm.

Our experience tells you what fabric will give you the greatest wear—at a moderate price.

The oldest manufacturers of men's clothing in the country specialize in Clothcraft Serge Specials because, in their 75 years' experience, they have found that no other material gives such all-round satisfaction.

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

The Clothcraft Shirts—the largest single clothing plant in the world—make and sell the greatest number of Serge Specials.

Find out what styles and cloth will keep you dressed correctly and sensibly as long as a long wearing suit will last.

A little folder, with a big message of real facts, contains actual samples of the famous Clothcraft Serge Specials in brown, gray and blue, is yours—free. Just write saying "Send Serge Folder"—address:

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

"More Potatoes"
From ground planted secured by use of the **KEYSTONE POTATO PLANTER** than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for **CATALOG,** price, etc.
A. J. PLATT, MFR.,
BOX J STERLING, ILL.

BUY FENCE POSTS direct from factory. Prices delivered your station. M. M. care of Michigan Farmer

Upper Peninsula News

By L. A. Chase

MR. A. R. WHITSON, of the Department of Soils, College of Agriculture of the University of Wisconsin, has written to Mr. J. A. Doelle, secretary-manager of the Upper Peninsula Development Bureau, a letter describing Wisconsin's soil survey. Since Wisconsin is often held up as a model for Michigan to follow in relation to a soil survey, it will be of interest to summarize Mr. Whitson's account of the Wisconsin work. Mr. Whitson states that the Wisconsin soil survey was begun in the northern counties of that state about fifteen years ago. The region was divided into five sections, each including several counties. The map scale was three miles to the inch. The first work was hastily and inadequately done, which gave only a fair general idea of soil conditions with regard to drainage, lay of the land, stoniness, etc. Later, more and more detail was introduced into this work, traverse lines being run on all section and quarter-section lines. From these traverse lines, offsets were taken wherever it seemed desirable. This refers to the northeastern and north central portions of the state. The men who did this work were graduates of the College of Agriculture of the University of Wisconsin and, having been reared on farms, had had a practical farm experience. The cost of the work ran from \$2.00 to \$4.00 per square mile, it is stated. Half of this expense was borne by the Bureau of Soils of the United States Department of Agriculture. The map work resulting from this survey cost about ten cents per map for lithographing and printing. Each map covered from four to six counties. All this refers to the general, or reconnaissance survey. In the southern half of the state the work was by individual counties and in much more detail. In this detailed survey there is shown the type of soil on areas as small as ten acres in extent, and the maps are printed on a scale of one inch to the mile.

Iron County Gets New County Agent.

W. E. Hoyard, of Scandinavia, Wis., has accepted the position of county agricultural agent for Iron county, says the Farm Bureau News Letter, brought out by the agricultural commission recently. It is stated that the first work to be undertaken by the Iron County Farm Bureau will be the ordering of seed for its members. Testing for tuberculosis among the herds of the county has been started, and farmers are already sending in requests for this service, which it is expected, will be pushed by the new county agent. The News Letter calls attention to the large amount of garden truck that is shipped into Iron county from outside its borders, which could quite as well be produced within its limits. "It seems strange," says the letter, "that the farmers of this county have never awakened to the value of a celery crop. With our cool summer nights on the black muck lands, it is wonderful what a choice crop of celery can be grown in Iron county. But there is practically none of this grown. The county needs a few truck-growers—men who are satisfied to grow small vegetables to show what money there is in this kind of work." The success of celery culture in Luce county would seem to justify this Iron county program.

A Good Cow.

Johanna Hengerveld, pure-bred Holstein cow owned by John G. Helli, near Ironwood, has the production record for January, of 2,489 pounds of milk, according to the Daily Globe, of Ironwood. The milk tested five per cent, with a yield of 124.4 pounds of butterfat. The test was made by the Goge-

bic County Cow-testing Association. This animal is not alone as a high-grade milk producer in that territory.

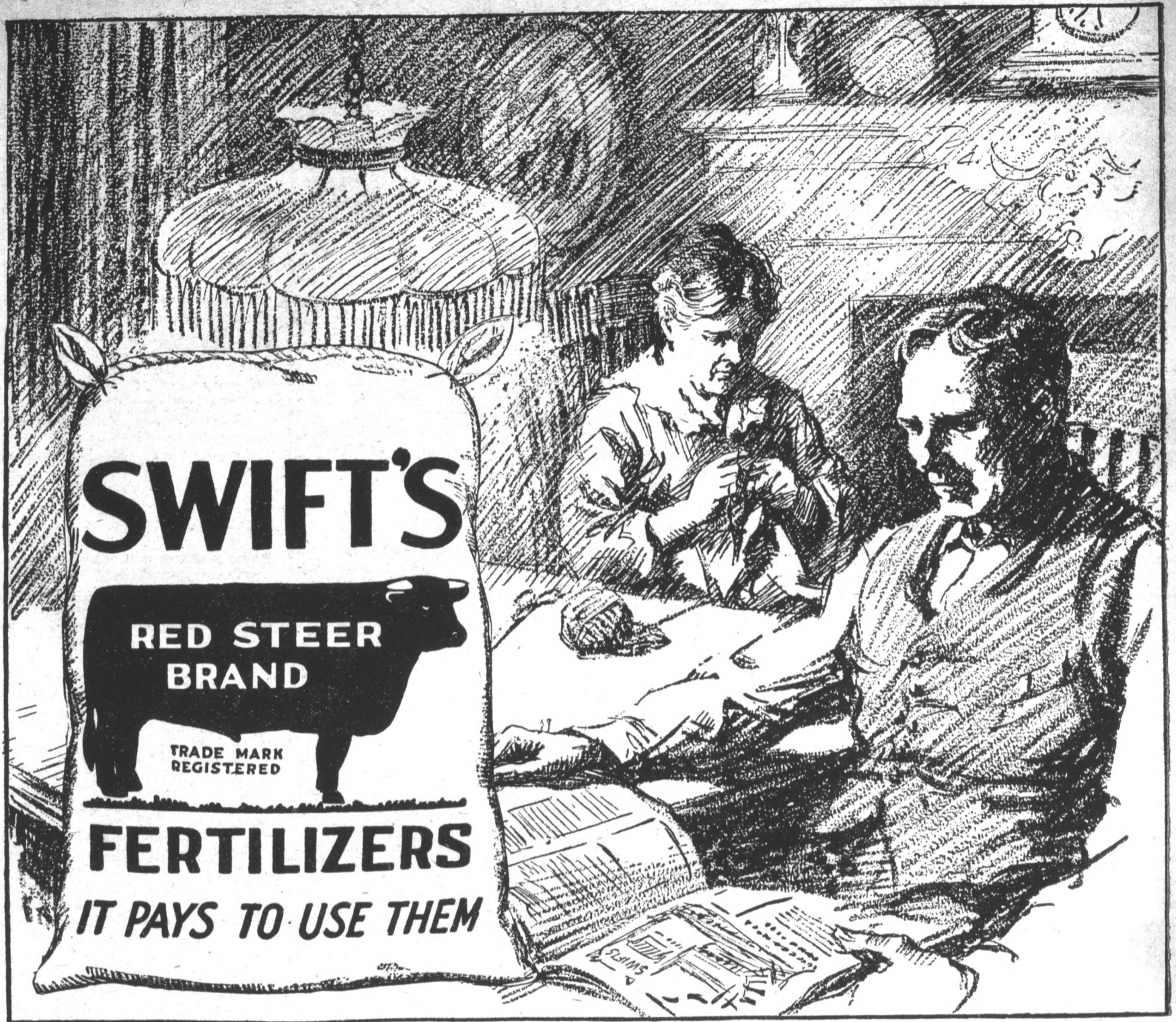
Agricultural School to be Discontinued.

The Chippewa county supervisors at their January meeting reduced the amount allowed to sheep-owners for sheep killed by dogs, from \$10 to \$7.00. The reason given is that at the higher rate, it might become profitable to dispose of sheep in this way in view of the present market price. The Chippewa board also decided to discontinue its support of the Dunbar Agricultural School, at the close of the present school year. The location of the school and other considerations had worked against attendance, and after an adverse report had been received from the State Department of Public Instruction, which pointed out the advantages attaching to township agricultural schools and high school courses in agriculture, promoted by the Smith-Hughes law, the action was readily agreed to. On the other hand, Superintendent of Public Instruction, T. E. Johnson, in a letter published in the Evening News, of Sault Ste. Marie, strongly advises a thorough-going course in agriculture in the high school at Sault Ste. Marie, which has now been re-built since the fire of last year. The discontinuance of the Dunbar school leaves the upper peninsula with still one county agricultural school—that maintained by Menominee county close to the city of Menominee, which seems to have a permanent existence assured.

Land-clearing Campaign.

The Caspian Register, of January 20, announces that the campaign to stump 2,500 acres of land in Iron county will begin February 7. The plan of campaign, says the paper, is to enroll every farmer in the county in an association to be known as "The Iron County Land-clearing Association." For admission to this association it is required that each member pledge himself to stump four acres of land on his farm, or as near that amount as possible, during the year 1921. In return the county agricultural department pledges itself to furnish explosives at cost, and expert assistance. Members will be furnished membership buttons. Lectures on stumping methods will be given the farmers. It is planned to produce as much enthusiasm as possible for this stumping program. The membership campaign, it is stated, will begin with a public meeting to be held at Iron River, where a general roundup of the farmers will be held. Other meetings throughout the county will follow. Much publicity has been given this stumping campaign.

Menominee county is also warming up to the idea of a land-clearing campaign. A large gathering of farmers and business men was recently brought together in Menominee under the auspices of the chamber of commerce of that city, according to the Herald-Leader, for the purpose of discussing the subject and listening to a talk from Harry Livingston, of the adjoining county of Marinette, Wisconsin, with regard to the very successful land-clearing operations conducted on a large scale in that county last year. Mr. Livingston told how cooperation between bankers, who provide capital where required, business men, who provide stump-pulling machinery and explosives, and the farmers was brought about in Marinette county, and how a saving of \$15,000 for the farmers was secured. Menominee county thinks that the advertising accruing to Marinette county as a result of its land-clearing performance, is worth passing around.



Plan for more profit

THE most important job the farmer has today is to grow his crops at the lowest cost per bushel or per pound.

The only way to do this is to secure more bushels of corn, oats, beets, potatoes, etc., per acre and per man.

Good seed and proper tillage are necessary, but in order to secure the best yields, the best quality, and hence the most profit, the right kind of available plant food must be supplied.

Swift's Red Steer Fertilizers furnish available plant food from sources that feed the crop from seeding to maturity.

Don't figure on the increased yield alone for your profit. The better quality crops, due to the use of fertilizer, often pays the entire fertilizer bill. The better "catch" and bigger yield of clover is often worth much more than the cost of the fertilizer applied to the nurse crop.

Liberal applications insure biggest crops of best quality.

The Red Steer on the bag is a guarantee of highest quality.

Order now from the Swift dealer or from our nearest Sales Division.

Swift & Company, Dept. 42

(Fertilizer Works)
Hammond, Indiana

Get the most for your money

Experiment stations urge the use of high analysis fertilizers, because such fertilizers furnish plant food to the farmer at the lowest cost per pound.

Your cost of producing a crop and our cost of manufacturing a fertilizer are comparable. You have a certain fixed expense regardless of the size of the crop and we have a certain fixed expense regardless of the analysis of the fertilizer.

When we increase the amount of plant food in a ton of fertilizer the extra plant food is free of expense for bags, freight and labor and you get the advantage of our saving.

Buy Swift's Red Steer Fertilizers containing 14% or more of plant food and thus secure high grade plant food at the lowest cost.

"IT PAYS TO USE THEM"

Famous Seed Potato and Stock Farm FOR SALE

Dorr D. Buell Estate offers Maplewood, the 320 acre farm at Elmira, Mich., which Mr. Buell made famous as a source of certified potato seed. The now well-known and popular Russet Rurals, were first introduced and advertised by Mr. Buell. This farm, located in the heart of the great potato section of Michigan, has an advertised reputation which makes it an attractive proposition for any buyer who could carry on the profitable seed potato business established by Mr. Buell. Grimm alfalfa, sweet clover and vetch are other staple products which contribute to economic live stock production.

Location and Equipment

Buildings are located less than a half mile from Elmira, on State Highways No. 32 and No. 13, the latter known as the Mackinaw Trail. Modern farm house, equipped with bath, water works, furnace, fireplace, large porches and garage in connection. Large barn equipped with Loudon fixtures, two silos, horse barn, tool house, shop, granary, hen house, sheep shed, etc.

Cut-Over Pasture Land

A 40-acre pasture lot of cut-over land connected with the farm and two half sections of new land partly cleared and improved are offered with the farm or as separate propositions. This is all good land for grazing purposes, making this farm an exceptionally attractive proposition for stock feeding or breeding operations.

Address all inquiries to

GLEE WICKETT, Administrator
Elmira, Michigan

WILL POTATO PRICES GO UP?

(Continued from page 184).
ing program were: A. M. Smith, of Lake City, and H. C. Moore, of East Lansing. On Wednesday morning Dr. G. H. Coons, of the M. A. C. botany department, considered diseases affecting potatoes in transit and storage; Hon. Jason Woodman, of Paw Paw, took up the matter of good potato seed production, and Ernst Kotilla, of the college upper peninsula experiment station, discussed leaf hoppers as investigated in the upper peninsula. Officers elected for the coming year are: A. M. Smith, of Lake City, president; A. B. Large, of Cadillac, vice-president, and H. C. Moore, of East Lansing, secretary. The officers, with C. W. Waid, of East Lansing, and the Hon. Jason Woodman, of Paw Paw, make up the new executive committee.

HON. S. S. McCLURE.

THAT socialism flourishes in the cities where people crowd expecting other people to take care of them, was the idea expressed by S. S. McClure, of New York City, publisher and world traveler, who addressed the opening meeting of the week Monday night.

The people of New York won't come to work on the farm where they must milk the cows, then they howl because they can't get milk for their babies—that's socialism."

In contrast to the tendency of immigrants today, Mr. McClure pointed to the hardships endured by the earlier settlers, who thrived upon adversity and made the American nation what it is. The "come-and-help-me" attitude of some of the people in the cities he characterized as one of the two great dangers challenging the heritage of the American people.

The other challenge he declared lay in the desire for land by the yellow and brown races of Japan and southeast Asia, and he warned against disarmament as long as this condition exists. He quoted from many sources against the English speaking races being carried on in Japan, China, India and other countries.

Ireland, said Mr. McClure, who returned a week ago from a tour of Europe, is the richest agricultural country in Europe and her people are the best fed, clothed and housed now. The Irish question does not vex England nearly so much as some other problems, he said.

Mr. McClure commented facetiously upon his own recent experiences in farming, and declared the secret of successful farming is: "The less you farm, the less you lose."

WOULD EXTEND FARM LOANS.

IN spite of the opposition toward credit for speculative purposes, members of the agricultural section of the Michigan Bankers' Association, who met Tuesday morning, expressed themselves willing to extend farm loans so far as is necessary to tide farmers over the present crisis.

Speakers who addressed the bankers were: A. E. Illenden, director of the Michigan Farm Bureau, who discussed the possibilities of cooperation between the bankers and the agricultural interests; R. A. Turner, state club leader, who asked support of the bankers in Boys' and Girls' Club work; and Dr. Herbert C. Marshall, economist with the United States Bureau of Markets, who discussed prices and the factors influencing them.

However, farm loans for the purpose of permitting the producer to hold his crops over several months for higher prices were strongly opposed by Edward Locke, manager of the federal reserve bank of Detroit, who addressed the general session Tuesday after-

Continued on page 190).

Automobile Losses

The increase in the numbers of automobiles used each year has greatly increased losses. While the most careful men in the state are carrying automobile insurance, it is estimated that the loss on uninsured automobiles each year reaches a total of \$1,850,000. The loss on fire alone will reach about \$200,000, theft \$500,000, liability \$500,000, and collision \$500,000.

Every automobile owner should realize the danger of driving a car, not only the danger of liability suits but also the loss of the car by fire or theft.

During the past three years the Second-hand Used Car Market dealers have been established and all cars have an established value. Used Car Market Reports are based on cars in good condition and sold for cash. These market reports are used by automobile salesmen and automobile owners when they desire to find out the cash value of their car.

Old line companies have made a certain per cent discount on an automobile each year, and a car four years old would not be accepted. The mutual companies are using the Used Car Market Reports as a basis, which is more favorable for the automobile owners for if the car is lost the owner is enabled to buy another car of same year and make. The second-hand cars purchased from responsible dealers are put in condition before offered for sale and consequently are in better condition than the average car which is burned or stolen.

—Advertisement.

\$24.95 Sent on Trial Upward American Cream SEPARATOR

Thousands in Use giving splendid satisfaction justifies investigating our wonderful offer: a brand new, well made, easy running, easily cleaned, perfect skimming separator only \$24.95. Skims warm or cold milk closely. Makes thick or thin cream. Different from picture, which illustrates our low priced, Bowl is a sanitary marvel and embodies all our latest improvements. Our Absolute Guarantee Protects You. Besides wonderfully low prices and generous trial terms, our offer includes our—

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Whether dairy is large or small, do not fail to get our great offer. Our richly illustrated catalog, sent free on request, is a most complete, elaborate and interesting book on cream separators. Western orders filled from Western points. Write today for catalog and see our big money saving proposition.

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

SOLD ON TRIAL You Take No Risk
ROSENTHAL CORN HUSKER CO., Box 2, Milwaukee, Wis.
Also Makers of Feed Cutters and Silo Fillers

TOBACCO Old Kentucky. Best natural leaf chewing or smoking, mild or strong direct from farm. All pure tobacco no dope. 5 pound \$2.00. 20 pound and up 35c pound. Prepaid. D. W. DORON, Mayfield, Ky.

Berry Baskets & 16 Qt. Crates
Waxed paper baskets and A grade wood baskets. Prices quoted, buy early.
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Grown in Presque Isle County Pottery Seed Potatoes, hill selected guaranteed equal to certified stock. Write for prices. HENRY HARDIES, Metz, Mich.

When writing to advertisers please mention the Michigan Farmer.

Record Garden Yields

Plant Northern Grown Seeds
Assure yourself of the biggest yields—the best your garden can grow. Use the Isbell Catalog as your guide. It shows varieties almost unlimited of the finest vegetables, many prize winners of international reputation—all produced from

ISBELL'S SEEDS
As They Grow Their Fame Grows

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

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

Fill Your Silo and Save Your Ear Corn

STOVER SILAGE will winter cattle at half the cost of regular corn silage. You save ALL your ear corn to sell or feed. Drop us a postcard for these two books. Find out how to save hundreds of dollars with a

Jenney Silo-Filler-Husker
the new way of handling your corn crop, and make bigger profits. Husks fast and clean, either green or ripe corn. Fills the silo and husks the ear corn at the same time. Send for books today.

HALL MANUFACTURING CO.
Dept. O, Cedar Rapids, Ia.

3 in ONE—Silo Filler Husker Shredder (12)

Hoosier WOOD SILO

Yellow Pine or Oregon Fir, with or without hinged doors. Best Anchoring system on the market. We can furnish one-piece staves in Pine up to 24 feet long, Fir up to 32 feet long. Prompt shipment from stock.

Steel Roofs, Chutes, and Paints
Complete line of steel roofs and chutes for silos. Paints for all kinds of farm buildings at money-saving prices direct from manufacturer to buyer. Write for prices and special agents' proposition.
HOOSIER SILO CO.
Dept. M-30 Albany, Ind.

WEIGHT AND VALUE OF SILAGE.

Kindly give me an estimate of the amount and value of the ensilage in a silo. There are twenty feet remaining in it. The silo dimensions are 33x12 feet four inches. It was filled to capacity. The corn was cut on the day following the first heavy frost we had here. The corn was nearly all mature but the foliage and stalks were green and juicy. There was a good percentage of grain. I purchased this ensilage and am hauling it one mile over a good road. I am anxious to know the approximate tonnage and value of same.
Ottawa Co. F. C. H.

Many experiments show that on the average ensilage will weigh about forty pounds to a cubic foot. This, of course, will vary a little in regard to depth and of silos of larger diameters. You would not get as much heft per cubic foot in a small silo as you would in a larger one, but I think it is safe to estimate that the bottom twenty feet of ensilage in this silo will average forty pounds per cubic foot. Of course, to find the cubic feet you find the area of the surface and multiply by the depth and I figure there is practically fifty tons of ensilage in this silo.

There is no market value for corn silage. Very little of it being bought and sold, so about the only way we can estimate the value is to compare it with some other food products that are marketable and similar to it in food constituents. Timothy hay has food constituents in about the same proportion and amount as corn silage, that is when you eliminate the moisture. Taking the moisture into consideration it is estimated that one ton of timothy hay is equal in value to three tons of corn silage. Therefore, corn silage is one-third as valuable as timothy hay. If the price of timothy hay is \$21 per ton then the price of corn silage would be about \$7.00 per ton. C. C. L.

LIABILITY FOR TAXES.

In November I bought a farm. Who should pay the taxes for 1920? The party who sold me the farm reserves all crops grown on the place. Furthermore, all his farm machinery is on the place yet and will be until spring, and he also has six hundred bushels of potatoes there which will probably not be moved before spring. F. B.

The fact that the seller of the farm reserved the personal property and crops with right of possession or storage until the spring of 1921, in no way affects the question of who should pay the taxes on the land.

By Compiled Laws (1915), (Section 4035), the taxes become a lien on the land December 1; and the contract to buy being executed in your case before this date, you are liable for the taxes and could not compel the seller to pay them. J. R. R.

CHICKS GO BLIND.

Our neighbor's chicks seem to go blind, we suppose from some disease. We wish to know if there is any prevention for our flock. M. E. S.

Little chicks might go blind because of inflammation due to colds. The colds are contracted by overcrowding at night. The birds become overheated and then are slightly chilled by coming out on the cool ground in the morning. A chick of weak vitality is more susceptible to such trouble. A chick with sore eyes might be greatly helped by applying a drop of glycerine at intervals until the inflammation seems to leave.

A weak solution of boracic acid might be useful in washing out the eyes of chicks that have the lids stuck together from the discharge due to colds. If your flock of chicks are strong and vigorous we do not believe that there is much danger of the disease spreading from your neighbor's flock unless the chicks sometimes range together and drink out of the same dishes. A few grains of permanganate of potash in the drinking water will help to keep colds from spreading among a flock of chicks. R. G. K.

Western Electric Power & Light

Makes The Battery Last Longer



Why you should buy
**Western Electric
Power & Light**

1. It is an extra powerful outfit. Plenty of power and light always.
2. It has a pulley that enables you to use your outfit as a powerful engine, either separately or at the same time you charge the battery.
3. All parts are easy to get at.
4. The engine runs on kerosene and is air-cooled.
5. The "tapering charge" makes the battery last longer.

More Power to You!

Power enough to run nearly all the machinery you've been turning by hand, power a-plenty to pump water and operate your feed grinder and milking machine—power is what the Western Electric Power and Light Outfit supplies in abundance every minute of the day.

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It will pay you to look into these and other important features of this dependable Power and Light Outfit. There is a Western Electric dealer near you. Ask him.

HOLDEN Lime and Fertilizer Spreader

Saves time, labor, money. Handle fertilizer once. Haul direct from cars to field. Force Feed—attaches to any wagon—no holes to bore. Spreads evenly 16½ feet wide, on hilly or level land. Spreads 75 to 10,000 pounds per acre—no clogging or caking. Built strong. Low in price. SPREADS 16½ FEET.

Does all that is claimed or money refunded. Thousands in use. WRITE TODAY for FULL PARTICULARS. Dealers wanted.

GUARANTEED to Handle Wet, Dry or Lumpy Lime (in any form), Commercial Fertilizer, Phosphate, Gypsum, Wood Ashes and Nitrate of Soda.

The HOLDEN CO., Inc.
Dept. 7 Peoria, Ill.

SPREADS 16½ FEET



**BOOK ON
DOG DISEASES
And How to Feed**

Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
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America's
Pioneer
Dog Medicines

SWEET CLOVER 450

Unhulled White Blossom Sweet Clover. For winter or early spring sowing. Builds up land rapidly and produces heavy money making crops while doing it. Excellent for pasture and hay. Easy to start. Grows on all soils. Have Hulled Scarified Seed at Low Prices. Sold on a Money Back Guarantee. Write today for Big Seed Guide. Free. American Mutual Seed Co. Dept. 931 Chicago, Ill.

ROYSTER'S FERTILIZERS



Pay 3 Ways
More Grain
Better Grades
Less Labor

Agents wanted in unoccupied territory

F. S. Royster Guano Co.
 Dept. D-19
TOLEDO, OHIO

WOULD EXTEND FARM LOANS.

(Continued from page 188).
 noon in place of Willis H. Booth, of New York, suddenly called to Europe.

"One of the purposes for which loans by federal reserve banks are forbidden is speculation," declared Mr. Locke, and if the holding of food products for a rise in the market is not speculation then I don't know what is. Should a farmer borrow? Certainly, if it will assist him in producing more and better crops. But the banks have gone about as far in the past as they are in a position to go. They are willing to extend credit until the farmer harvests his crops and receives his return but they cannot continue indefinitely."

Mr. Locke showed that the banks have allowed double the time on loans to farmers as on loans to merchants. At present it is the failure of farmers to meet their obligations which is causing federal reserve banks the most trouble, he said. Many smaller banks to which the federal reserve has given credit are now in difficulties because of this fact, according to Mr. Locke.

Several of Mr. Locke's statements were challenged by Mr. McBride, of Shiawassee county, who among other things stated that our farmers would now be marketing their products if they had a market for them.

GOVERNOR HARDING, OF IOWA.

YOU cannot take your Michigan farm to the ocean but you can bring the ocean to the Michigan farm," ex-Governor W. L. Harding, of Iowa, told his hearers at the Thursday night session of Farmers' Week. His subject was "The Deepwater Highway." Land along the great lakes will be worth twice as much as now when the St. Lawrence waterway project goes through, according to Gov. Harding.

The speaker urged that all discords and jealousies be submerged in the struggle for this common aim, declaring that the city is dependent upon the farm and the farm upon the city for the accomplishment of such projects.

Governor Harding showed some of the benefits that would be derived from the proposed waterway. Sixty million people live in the Mississippi Valley, which he called an "empire waging a world war for trade." He quoted figures showing the percentages of the world's output in various commodities produced in the region affected.

Turning to the subject of cooperative marketing, Governor Harding urged the farmers to learn the lesson already learned by the lawyers, "to shove along on the bench." The farmer has a tendency to be too individualistic, he said, and held it necessary to be a little less "set" if the great new cooperative organization were to succeed.

He also touched upon the question of rural entertainment and maintained that in the future it will be advisable to provide entertainment in the country such that the city people will be attracted there for recreation rather than the farmer folk drawn to the town.

Beets and cabbage are greatly relished by the fowls during the winter months, but care must be exercised to avoid feeding too much green feed. Mangel Wurzels yield larger crops than table beets and furnish equally as desirable feed for the flock as table beets or cabbage. A small plot will furnish sufficient green feed for a good-sized flock throughout the winter. Small potatoes boiled and fed alone or with a mash will prove a valuable addition to the ration, but only small quantities should be fed at a time, and care should be taken to see that the mash is not allowed to become too sticky.—K.



Aspirin

Then It's Genuine

Unless you see the name "Bayer" on tablets, you are not getting genuine Aspirin prescribed by physicians for 21 years and proved safe by millions. Always say "Bayer."

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.



Sturges Milk Cans

Make Cleaner, Better Butter

THE drawn steel barrel of the Sturges Churn, heavily tinned and finished perfectly smooth inside, not only guarantees a lifetime of service but insures perfect cleanliness in better butter making. It is easier to clean and keep sanitary. No corners to hold dirt or germs. Lighter in weight and easier to operate, it cuts down the labor of churning. Made in four sizes—there is a size that will exactly suit your requirements. Attractively finished in red and blue enamel. Just the churn for home use.



Good dealers have Sturges Churns on display. See them and write for Circular No. 5.

Sturges & Burn Mfg. Co.
 Makers of Sturges Guaranteed Capacity Milk Cans
 Chicago, Illinois.

Use Dandelion Butter Color

Add a half-teaspoonful to each gallon of winter cream and out of your churn comes butter of golden June shade to bring you top prices.

DANDELION Butter Color

All stores sell 35-cent bottles, each sufficient to keep that rich, "Golden Shade" in your butter all the year round. Standard Butter Color for fifty years. Purely vegetable. Meets all food laws, State and National. Used by all large creameries. Will not color the buttermilk. Tasteless.

Wells & Richardson Co., Burlington, Vermont.

Perfect Trees GUARANTEED

33 years reputation for square dealing. Kelly's trees (all varieties) are sturdy and well-rooted, perfect specimens and guaranteed to satisfy. You take no risk! The prices are reasonable. Send for 1921 Free Catalog. Kelly Bros., 1100 Main St., Danville, N. Y.

BROWN'S BARGAIN FENCE BOOK

Get this Big Money-Saving Book and sample of BROWN'S ACID TEST HEAVY GALVANIZED FENCE, both free, postpaid. See the quality and compare my LOW FACTORY FREIGHT PREPAID PRICES. Our prices beat all competition—our quality we let you prove before you buy.

LOWEST PRICES—I Pay All Freight Charges

Don't buy a rod of fence this year until you get my New Bargain Fence Book. Shows 150 styles. Also Gates, Lawn Fence, Barb Wire—all at startling low prices. A postal brings sample to test and book free, postpaid.

THE BROWN FENCE & WIRE CO.
 Department 449 CLEVELAND, OHIO

KITSELMAN FENCE

Get It From the Factory Direct

PRICES 'WAY DOWN

We've knocked the bottom out of high cost of fence building. We Pay the Freight and save you money. Here's a man that **Saved 38 per cent**

Mr. R. D. Dillard, Milton, Okla., writes: "I found all the Fence as good or better than I expected. I saved \$28.85 on my \$75.00 order."

You will never know how much you can save thru our **DIRECT FROM FACTORY TO FARM** selling plan until you get our free catalog. Write today

KITSELMAN BROS. Dept. 278 MUNCIE, IND.

WE TAN-DYE

And Make Up Furs and Skins

Any style you like them. We make them up, to your order, into attractive garments, robes, caps, stoles, etc. At lowest cost. This way you will get more money from your furs and skins. Deal direct with us and save middleman's profit. All work guaranteed. Reference—Second Security Bank.

We pay highest prices for your skins should you desire to sell them. Price List Free. Write for it today.

Midwest Fur Tanning, Dyeing & Mfg. Co.
 Dept. 4, 2644 N. Troy St., Chicago, Ill.

FARM HELP

Wanted—March First Steady married man to operate a 250 A. farm on salary. Good proposition for man not afraid of work. Buildings new and convenient. 708 Calvert Ave., Detroit, Michigan.

Widower with 10 year old boy wants position as manager of farm near school experienced in general farming. Box M.G. 212, care of Michigan Farmer, Detroit, Mich.

Wanted March first. Married man to work farm on shares. 200 A. good work land. Good buildings. 708 Calvert Ave., Detroit, Mich.

198⁵⁰ for a Real Power Sprayer

Hardie Junior Sprayer

Not an experiment, but the old reliable Hardie Junior in a new form. \$55 less in price, with nothing cheapened, only a few non-essentials left out. This low price makes it available to the small grower. In fact, over ten thousand growers have seen in this Hardie Junior Special their opportunity to get away from inefficient low pressure hand spraying.

Long on horse power, big in capacity, will maintain the highest spraying pressure. It is equipped with the famous Hardie Orchard Gun, which takes the arm ache and back ache out of spraying, fits in any farm wagon—weighs only 490 lbs., is equipped with 25 feet Hose and Orchard Gun, but truck is extra.

This special offer is limited. Write today. A post card brings full particulars

Hardie Mfg. Co., 112 Hardie Bldg.
 For 21 years the largest exclusive manufacturer of sprayers in America
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NOW! Save Money!

Buy Direct-From-Our-Factory and you will find it easier to solve High-Cost-of-Living problems. We can save you money on that Range—Pipeless Furnace—Combination Coal-and-Gas Range you need.

Cash or Easy Payments Take 10 Mos. or 1 Yr. to Pay

It also presents money-saving offers on Kitchen Cabinets, Refrigerators, Paint, Roofing, Cream Separators, Furniture and many other home and farm necessities.

Send your name and address on postcard for it today.

Ask for Catalog No. 113
Kalamazoo Stove Company
 Manufacturers
 Kalamazoo, Mich.

A Kalamazoo Direct to You

USEFUL TOOL SHED.

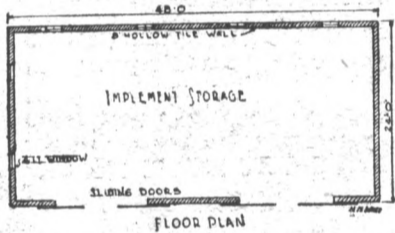
BY HARLEY M. WARD.

WHAT have you done with your mower, your reaper, your corn planter, your disc and all the rest of your machinery that you are not now using? Have you got them in out of the weather and under a tight roof?

The machinery shed should be one of the most important buildings on the farm. It is about the best money-saver a man can have among his buildings. Every farmer realizes that cold animals, as they shiver and freeze out in the wind and the snow, require enough more feed to more than make up for the cost of a building to house them, but many do not realize that machinery also needs protection. Because it cannot feel the cold and does not huddle up and shiver when exposed to the weather, it is left out in the open.

It is easier, perhaps, to unhitch from an implement, and leave it in the field than it is to take it home and place it under cover. At least one would come to that conclusion from the amount of machinery that is left out in the field all winter. It is true that some of it even reaches the barn lot where it remains throughout the winter. It could all be placed in the shed within half a day. Of course, if the shed is filled with something else, there is not room, but on most farms some sort of shelter can be provided, even though an implement shed is not available.

Frequently, an implement is left in the field because the farmer, when he unhitches, has not the time to store it.



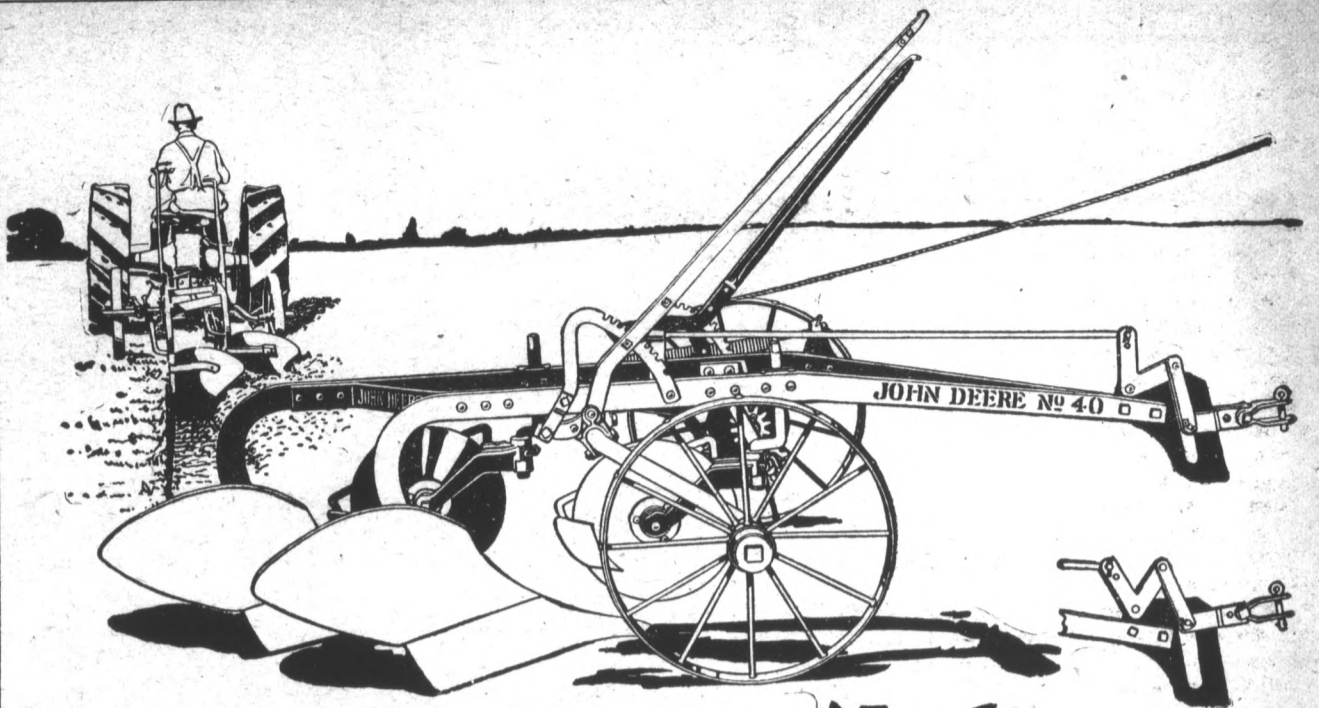
His intentions, of course, are good. He fully expects to place the implement under cover when he has time. When work becomes slack, he forgets about the cultivator, the plow, the mowing machine, or the binder which he left in the field weeks before.

The life of a piece of machinery is shortened by exposure to weather just as is the life of an animal. We know of several binders that have been in use for over twelve years and are still giving good service. They were not phenomenally good binders, either. They were merely given good care and were housed when not in use. The life of the average binder, as treated by the majority of farmers, is only five to six years. The man who has not been obliged to buy a new binder for a dozen years has in that time saved enough to pay twice the rent of shed room to cover it with.

Very few men would think of buying an automobile or a fine carriage and leaving it out in the open. No, indeed, they see to it that they have some sort of shelter to put it in. Yet, many of these same men will leave their binders or mowers or cultivators in the field or out under some convenient tree from one season's end to the next.

We are showing a sketch of what we think would be a good arrangement for a building for this purpose. This building would provide room for a large workshop, if desired, and cover for all the machinery. The points to consider are a tight roof, tight walls, plenty of light and the accessibility of every machine stored in the building.

The size of the building can be determined by the amount of machinery to be housed. If the floor and approach are covered with cinders or gravel, the appearance will be improved and it will not be cut up and get muddy in wet weather.



The Plow the Fordson Needs

UNUSUAL light weight and light draft plus great strength; genuine John Deere bottoms that insure good scouring; long wear and good work; unusual ease of operation, and a self-adjusting hitch that automatically maintains proper line of draft are important features that make the John Deere No. 40 the plow the Fordson tractor needs.

JOHN DEERE No 40 The PLOW with the SELF-ADJUSTING HITCH

The frame parts of the No. 40 are made of John Deere new-process steel—an extremely hard, tough steel, combining unusual light weight and great strength.

The No. 40 weighs no more than the average horse-drawn sulky plow.

Its beams are guaranteed not to bend or break. This guarantee is stamped on the beams.

Frame connections are hot-riveted—no loose joints. You are sure to appreciate the rigidity of this plow.

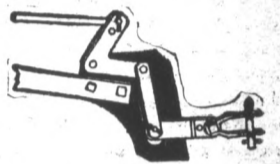
Pulls extremely light because of the good scouring qualities and high grade construction of its John Deere bottoms; and its light weight, self-adjusting hitch and rigidity of frame. Only when you see this plow at work can you fully understand how light draft it is. It's a real fuel saver.

Simple, positive, power lift—it works perfectly and is long-lived.

The self-adjusting hitch on the John Deere No. 40 is an important and exclusive feature.

Because of this hitch the proper line of draft is maintained automatically as depth is varied with the depth lever—bottoms have the proper suction at all times—no "nosing in" or "hopping out"—no bumpy furrows.

Be sure to see the John Deere No. 40, if you have planned to buy a Fordson. Remember, no tractor plowing outfit is better than its plow, just as no knife is better than its blade. The plow is the "business end" of the outfit. It makes the seed beds—the source of your profits. Start right with your Fordson by getting an especially good plow—the John Deere No. 40.



Any plow for the Fordson needs a self-adjusting hitch. Only the John Deere No. 40 has it. Views above illustrate how this hitch automatically maintains the proper line of draft.



Write today for a free folder illustrating and describing the John Deere No. 40. Ask, also, for our big free book, "Better Farm Implements." Its 114 pages have valuable information for you. Address John Deere, Moline, Illinois. Ask for Package F-522.

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

One oiling a year

provides ample lubrication for Model 12 STAR WINDMILLS.

No-Oil-Em Bearings save many trips up the tower, insure positive lubrication, and prevent extravagant use of oil. Ask the Star Windmill dealer in your community to show you one of the No-Oil-Em Bearings.

Catalogue No. 95 sent on request.

FLINT & WALLING MFG. CO.
Department C Kendallville, Indiana

HOOSIER Water Service
Provides an independent supply of water for farm homes. Easy to install—simple and economical to maintain. Write for Bulletin F.

CLOVER

AT SACRIFICED PRICES

BUYERS CAN SAVE BIG MONEY NOW

Big clover growers of the middle west came to us and made bedrock prices to move their crops. They needed cash. We had the money to take their seed. This means lower prices to you because this fine lot of clover will not be hoarded for higher prices, but passed on at a legitimate profit to early buyers. Big volume on a small profit is our aim. Every bag is high testing, guaranteed seed sold on an absolute money back guarantee. This lot will save you money. Write for samples and big seed guide—all free.

American Mutual Seed Co. Dept. 431 Chicago, Ill.

Ditches Terraces

Grade roads, build dykes, levees with the **Martin Farm Ditcher and Grader**

Works in any soil. Makes V-shaped ditch or cleans ditches up to four feet deep. All steel. Reversible. Adjustable. Write for free book and our proposition. **Owensboro Ditcher & Grader Co., Inc. Box 315 Owensboro, Ky.**

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Fleming's Actiniform, for 30 years the standard Lump Jaw remedy. \$2.50 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Lump Jaw and 200 other Cattle and Horse diseases. **FLEMING BROTHERS, 252 Union Stock Yards, Chicago**

For Sale—20 H. P. Huber Late Style

Steam Engine equipped with power guide, 36-60 Huber Separator with wind stacker, Garden City Feeder and Peoria Weigher—Type A, I. H. C. Silo-Filler. This complete outfit can be bought cheap. **J. H. KRAUSE, Box 12, Lansing, Mich.**

Free Catalog

in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co. 35 Elm St., Quincy, Ill.

First—Build on Paper

The man who builds cheaply is he who plans well before building. What a barn costs depends in no small degree on the care with which it is planned on paper in advance. Any mistakes made in building can be corrected only at great expense; and if not corrected may cost you good money, through making unnecessary work every day, so long as the barn is used.

Mistakes made on paper are easily righted without expense and buildings on paper are readily moved.

Get your plans down on paper. Take plenty of time to study carefully; discuss it with others. Make it the ideal barn for your particular purposes.

Be sure you have the right amount of storage, enough light, air space and ventilation; work-saving arrangement for feeding, watering the stock and cleaning the stable; easy handling of the hay; and right location of the barn for sunshine and cold winds.

Make certain that the barn is correctly proportioned, is individual in appearance, a barn that is strong enough to withstand all storms—one that will add value to your farm.

Jamesway Barn Plan Service

You can have all this without extra cost.

The man who has plans completely worked out and blue printed, can submit them to several contractors, accepting in safety the lowest bid because all are bidding on exactly the same proposition.

Contractors and those supplying materials are held to exact requirements; substitution of inferior materials or workmanship is prevented; wastes and expensive "extras" are avoided; misunderstandings are unlikely.

In the Jamesway organization are scores of Barn Planning Experts, whose experience and help are yours for the asking.

For years, these men have studied

dairy barns—construction, lighting, ventilation, drainage, arrangement to save labor; how best to remodel old barns. Every year they visit thousands of dairy barns in every section of the country; every year they help to plan thousands of barns.

The best of their ideas are in a 320-page book on barn building, remodeling, ventilation and equipment; this book will be sent free on request.

Write us now. Tell whether you expect to build or remodel this year; and say what barn problems are bothering you. Perhaps we can help you solve them. If you want the book, ask for "THE JAMESWAY BOOK No. 24."

James Manufacturing Company
Ft. Atkinson, Wisconsin



For Dairy Barns, Hog, Beef, Horse
and Sheep Barns; Poultry Houses, etc.

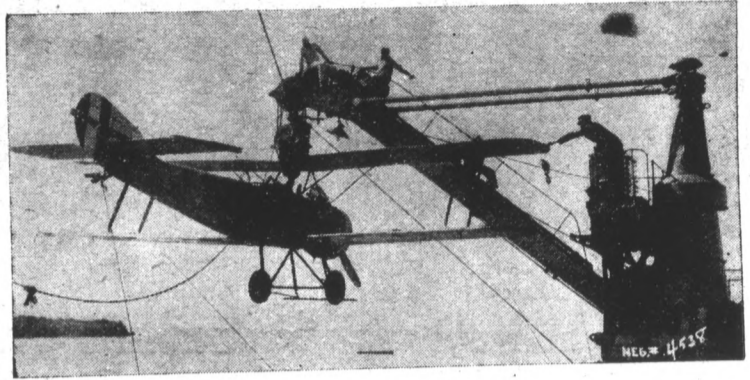
Jamesway

Labor-Saving, Money-Making Equipment

WORLD EVENTS IN PICTURES



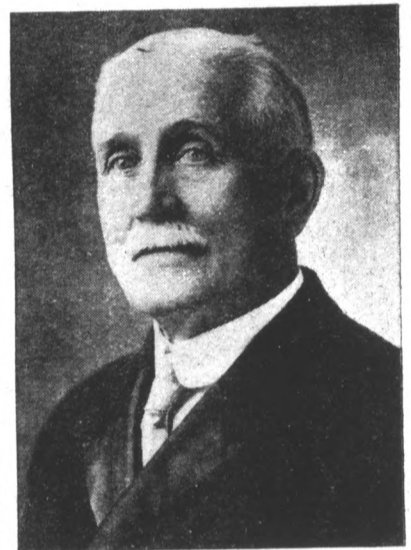
These four girls, considered the best silk reelers in Japan, have just arrived in the United States, as members of the Japanese Mission to the International Silk Exposition to be held in New York City, to show Americans how silk is manufactured in their country. In Japan they earn about fifty cents a day for ten hours' work, plus board and room.



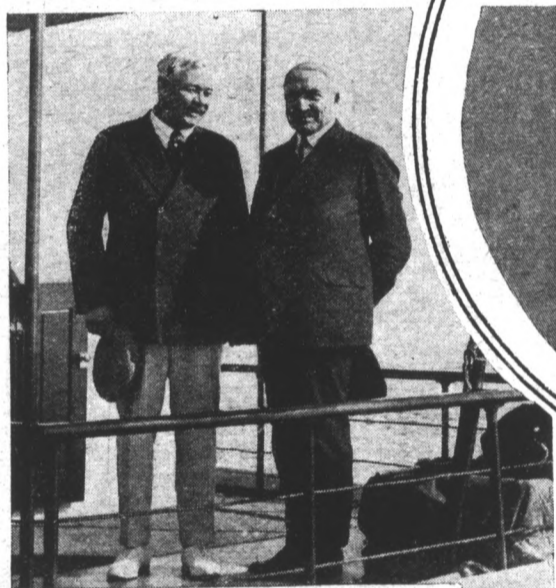
Aircraft will play an important part in the coming battle maneuvers of the American fleets. Scout plane being hoisted onto a battleship.



Miss Martha C. Sears, business advisor for women, at the Bank of the U. S., New York City.



Rev. J. J. Muir, pastor of the Temple Baptist Church, Washington, D. C., is the new chaplain of the U. S. Senate.



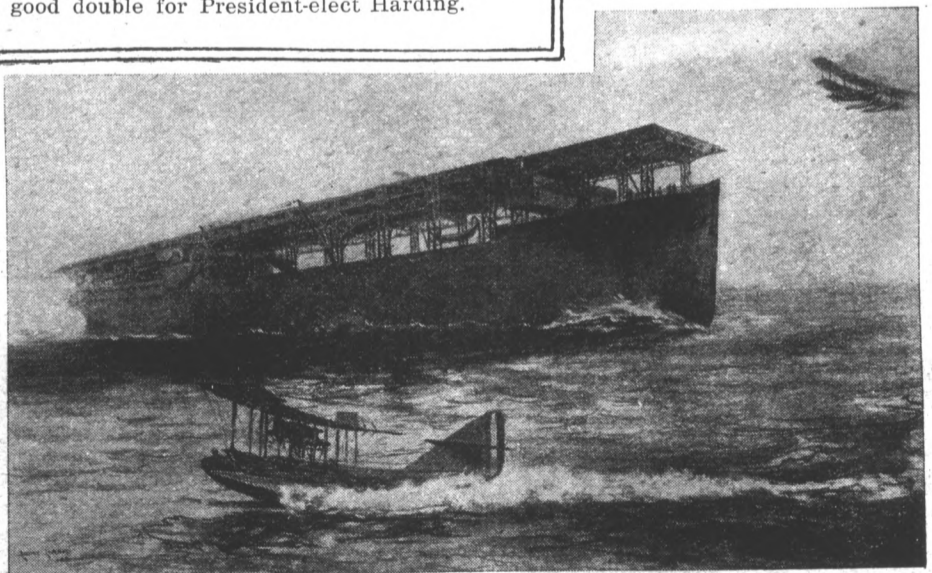
President-elect Harding and Senator Frelinghuysen on the latter's houseboat at St. Augustine, Florida.



R. C. Perkins, a motorman on the "shortest" and most expensive line in the world—the subway running between the senate wing of the Capitol and Senate Office Building—is said to be a good double for President-elect Harding.



Nelson D. Simons, a son of a Poquot Indian, is now in Boston studying to become Massachusetts's only Indian lawyer.



United States coaling ship at the Navy Yard, Norfolk, Va., undergoing alterations to refit her as an aircraft carrier. She has been named the "Langley."

THE VOICE OF THE PACK

By EDISON MARSHALL

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CHAPTER X.

EVEN in the darkest night, there is one light that never brings hope or cannot lead. It is not a twinkling, joyous light like that mysterious will-o'-the-wisp that now and again has lured travelers into the marshes to their death. Nor can any one ever mistake it, or be soothed and cheered by it. It always appears the same way—two green circles, close together, in the darkness.

When Snowbird first heard the step in the thickets beside her, she halted bravely and held her lantern high. She understood at last. The very extremity of the beams found a reflection in two very curious circles of greenish fire: a fire that was old upon the world before man ever rubbed two sticks together to strike a flame. Of course the dim rays had simply been reflected in the eyes of some great beast of prey.

She identified it at once. Only the eyes of the felines with vertical pupils, have this identical greenish glare. The eyes of the wolves glow in the darkness, but the circles are usually just bright points. Of course it was a cougar.

She didn't cry out again. Realizing at last the reality of her peril, her long training in the mountains came to her aid. That did not mean she was not truly and terribly afraid. The sight of the eyes of a hunting animal in the darkness calls up memories from the germ-plasm—deep-buried horrors of thousands of generations past, when such lights glowed all about the mouth of the cave. Besides, the beast was hunting her. She couldn't doubt this fact. Curiosity might make a lion follow her, but it would never beget such a wild light of madness in his eyes as this she had just seen. Only the frenzied pulse of wild blood through the fine vessels of the corneas could occasion such a glow as this. She simply clamped down all her moral strength on her rising hysteria and looked her situation in the face. Her hand flew instinctively to her side, and the pistol leaped in the lantern light.

But the eyes had already blinked out before she could raise the weapon. She shot twice. The echoes roared back, unbelievably loud in the silence, and then abruptly died; and the only sound was a rustling of leaves as the cougar crouched. She sobbed once, then hurried on.

She was afraid to listen at first. She wanted to believe that her pistol fire would frighten the animal from her trail. She knew, under ordinary conditions, that it would. If he still followed, it could mean but one thing—that

some unheard-of incident had occurred to destroy his fear of men. It would mean that he had knowingly set upon her trail and was hunting her with all the age-old remorselessness that is the code of the mountains.

For a little while all was silence. Then out of the hush the thickets suddenly crashed and shook on the opposite side of the trail. She fired blindly into the thicket. Then she caught herself with a sob. But two shells remained in her pistol, and they must be saved for the test.

Whisperfoot the cougar, remembering the lessons of his youth, turned from the trail when he had first heard Snowbird's step. He had crouched and let her pass. She was walking into the wind; and as she was at the closest point a message had blown back to him.

The hair went straight on his shoulders and along his spine. His blood, running cold an instant before from fear, made a great leap in his veins. A picture came in his dark mind: the chase for a deer when the moon had set, the stir of a living thing that broke twigs in the thickets, and the leap he had made. There had been blood, that night—the wildness and the madness and the exultation of the kill. Of course there had been terror first, but the terror had soon departed and left something lying warm and still in the thickets. It was the same game that walked his trail in front—game that died easily and yet, in a vague way he did not understand, the noblest game of all. It was living flesh, to tear with talon and fang.

All his training, all the instincts imbued in him by a thousand generations of cougars who knew this greatest fear, were simply obliterated by the sudden violence of his hunting-madness. He had tasted this blood once, and it could never be forgotten. The flame leaped in his eyes. And then he began to stalk.

A cougar, trying to creep silently on its game, does not move quickly. It simply steals, as a serpent steals through the grass. Whisperfoot stalked for a period of five minutes, to learn that the prey was farther away from him at every step.

He trotted forward until he came close, and again he stalked. Again he found, after a few minutes of silent creeping through the thickets, that he had lost distance. Evidently this game did not feed slowly, like the deer. It was to be a chase then. Again he trotted within one hundred feet of the girl.

Three times more he tried to stalk before he finally gave it up altogether.

This game was like the porcupine—simply to be chased down and taken. As in the case of all animals that hunt their game by overtaking it, there was no longer any occasion for going silently. The thing to do was to come close and spring from the trail behind.

Though the fear was mostly gone, the cougar retained enough of that caution that most wild animals exhibit when hunting a new game so that he didn't attempt to strike Snowbird down at once. But as the chase went on, his passion grew upon him. Ever he crept nearer. And at last he sprang full into the thickets beside her.

At that instant she had shot for the first time. Because the light had left his eyes before she could find aim, both shots had been clean misses. And terrible as the reports were, he was too engrossed in the chase to be frightened away by mere sound. This was the cry the man-pack always made—these sudden, startling sounds in the silence. But he felt no pain. He crouched a moment, shivering. Then he bounded on again.

The third shot was a miss too: in fact, there had been no chance for a hit. A sound in the darkness is as unreliable a target as can possibly be imagined. And it didn't frighten him as much as the others.

Three times he crouched, preparing for a spring, and three times his tawny tail began that little up-and-down motion that is always the warning before his leap. But each time, as he waited to find his courage, the game had hurried on.

Now she had her back to a tree and was holding the lantern high. It glinted on his eyes. And the fourth time she shot, and something hot and strange singed by close to his head. But it wasn't the pain of one quill from a porcupine, and it only increased his anger. He waited, crouching, and the girl started on.

She was making other sounds now—queer, whimpering sounds not greatly different from the bleat that the fawn utters when it dies. It was a fear-sound, and if there is one emotion with which the wild beasts are acquainted, in all its phases, it is fear. She was afraid of him then, and that meant he need no longer be in the least afraid of her. His skin began to twitch all over with that terrible madness and passion of the flesh-hunters.

This game was like the deer, and the thing to do was lie in wait. There was only one trail. He was simply following his instincts, no conscious intelligence, when he made a long circle

about her and turned back to the trail two hundred yards in front. He wasn't afraid of losing her in the darkness. She was neither fleet like the deer nor courageous like Woolf, the bear. He had only to wait and leap from the darkness when she passed.

And because this was his own way of hunting, because the experiences of a thousand generations of cougars had taught him that it was the safest way, that even an elk may be downed by a surprise leap from ambush, the last of his fear went out of him. The step drew nearer, and he knew he would not again be afraid to give his stroke.

When Dan Failing, riding like mad over the mountain trail, heard the third shot from Snowbird's pistol, he felt that one of the debts he owed had come due at last. He seemed to know, as the darkness pressed around him, that he was to be tried in the fire. And the horse staggered beneath him as he tried to hasten.

He showed no mercy to his mount. Horseflesh isn't made for carrying a heavy man over such a trail as this, and she was red-nostriled and lathered before half a mile had been covered. He made her leap up the rocks, and on the fairly level stretches he loosed the reins and lashed her into a gallop. Only a mountain horse could have stood that test. To Dan's eyes, the darkness was absolute; yet she kept straight to the trail. He made no attempt to guide her. She bounded over logs that he couldn't see, and followed turn after turn in the trail without ever a misstep.

He gave no thought to his own safety. His courage was at the test, and no risk of his own life must interfere with his attempt to save Snowbird from the danger that threatened her. He didn't know when the horse would fall with him and precipitate him down a precipice, and he was perfectly aware that to crash into a low-hanging limb of one of the great trees beside the trail would probably crush his skull. But he took the chance. And before the ride was done he found himself pleading with the horse, even as he lashed her sides with his whip.

The lesser forest creatures sprang from his trail; and once the mare leaped high to miss a dark shadow that crossed in front. As she caught her stride, Dan heard a squeal and a rattle of quills that identified the creature as a porcupine.

By now he had passed the first of the worst grades, coming out upon a long, easy slope of open forest. Again he urged his horse, leaving to her keen senses alone the choosing of the path

AL ACRES—Apparently Some Explanation is Necessary.

—By Frank R. Leet



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Economy is the Basic Principle of Success

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To do without the things we really need in our home and business, is not economy. Saving carried to an extreme, is an evidence of short-sightedness. Economy does not look upon money as an idol at whose shrine men should kneel, but as a useful agent. It should be the servant always, the master, never.

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between the great tree trunks. He rode almost in silence. The deep carpet of pine needles, wet from the recent rains, dulled the sound of the horse's hoofs.

Then he heard Snowbird fire for the fourth time; and he knew that he had almost overtaken her. The report seemed to smash the air. And he lashed his horse into the fastest run she knew—a wild, sobbing figure in the darkness.

"She's only got one shot more," he cried. He knew how many bullets her pistol carried; and the danger—whatever it was—must be just at hand. Underbrush cracked beneath him. And then the horse drew up with a jerk that almost hurled him from the saddle.

He lashed at her in vain. She was not afraid of the darkness and the rocks of the trail, but some Terror in the woods in front had in an instant broken his control over her. She reared, snorting; then danced in an impotent circle. Meanwhile, precious seconds were fleeing.

He understood now. The horse stood still, shivering beneath him, but would not advance a step. The silence deepened. Somewhere in the darkness before him a great cougar was waiting by the trail, and Snowbird, hoping for the moment that it had given up the chase, was hastening through the shadows squarely into its ambush.

Whisperfoot crouched lower; and again his long serpent of a tail began the little vertical motion that always precedes his leap. He had not forgotten the wild rapture of that moment he had inadvertently sprung on Landy Hildreth—or how, after his terror had died, he had come creeping back. He hunted his own way, waiting on the trail; and his madness was at its height. He was not just Whisperfoot the coward, that runs at the shadow of a tall form in the thickets. The consummation was complete, and that single experience of a month before had made of him a hunter of men. His muscles set for the leap.

So intent was he that his keen senses didn't detect the fact that there was a curious echo to the girl's footsteps. Dan Failing had slipped down from his terrified horse and was running up the trail behind her, praying that he could be in time.

Snowbird heard the pat, pat of his feet; but at first she did not dare to hope that aid had come to her. She had thought of Dan as on the far-away marshes; and her father, the only other living occupant of this part of the Divide, might even now be lying dead in his house. In her terror, she had lost all power of interpretation of events. The sound might be the cougar's mate, or even the wolf pack, jealous of his game. Sobbing, she hurried on into Whisperfoot's ambush.

Then she heard a voice, and it seemed to be calling to her. "Snowbird—I'm coming, Snowbird," a man's strong voice was shouting. She whirled with a sob of thankfulness.

At that instant the cougar sprang. Terrified though she was, Snowbird's reflexes had kept sure and true. Even as the great cat leaped, a long, lithe shadow out of the shadow, her finger pressed back against the trigger of the pistol. She had been carrying her gun in front of her, and she fired it, this last time, with no conscious effort. It was just a last instinctive effort to defend herself.

One other element affected the issue. She had whirled to answer Dan's cry just as the cougar left the ground. But she had still been in range. The only effect was to lessen, in some degree, the accuracy of the spring. The bullet caught the beast in mid-air; but even if it had reached its heart, the momentum of the attack was too great to be completely overcome. Snowbird only knew that some vast, resistless

power had struck her, and that the darkness seemed to roar and explode about her.

Hurled to her face in the trail, she did not see the cougar sprawl on the earth beside her. The flame in the lantern almost flicked out as it fell from her hand, then flashed up and down, from the deepest gloom to a vivid glare with something of the effect of lightning flickering in the sky. Nor did she hear the first frenzied thrashing of the wounded animal. Kindly unconsciousness had fallen, obscuring this and also the sight of the great cat, in the agony of its wound, creeping with broken shoulder and bared claws across the pine needles toward her defenseless body.

But the terrible fangs were never to know her white flesh. Someone had come between. There was no chance to shoot: Whisperfoot and the girl were too near together for that. But one course remained; and there was not even time to count the cost. In this most terrible moment of Dan Failing's life, there was not even an instant's hesitation. He did not know that Whisperfoot was wounded. He saw the beast creeping forward in the weird dancing light of the fallen lantern, and he only knew that his flesh, not hers, must resist its rending talons. Nothing else mattered. No other considerations could come between.

It was the test; and Dan's instincts prompted coolly and well. He leaped with all his strength. The cougar bounded into his arms, not upon the prone body of the girl. And she opened her eyes to hear a curious thrashing in the pine needles, a strange grim battle that, as the lantern flashed out, was hidden in the darkness.

And that battle, in the far reaches of the Divide, passed into a legend. It was the tale of how Dan Failing, his gun knocked from his hands as he met the cougar's leap, with his own unaided arms kept the life-giving breath from the animal's lungs and killed him in the pine needles. Claw and fang and the frenzy of death could not matter at all.

Thus Failing established before all men his right to the name he bore. And thus he paid one of his debts—life for a life, as the code of the forest has always decreed—and in the fire of danger and pain his metal was tried and proven.

CHAPTER XI.

THE Lennox home, in the far wilderness of the Umpqua Divide, looked rather like an emergency hospital for the first few days after Dan's fight with Whisperfoot. Its old sounds of laughter and talk were almost entirely lacking. Two injured men and a girl recovering from a nervous collapse do not tend toward cheer.

But the natural sturdiness of all three quickly came to their aid. Of course Lennox had been severely injured by the falling log, and many weeks would pass before he would be able to walk again. He could sit up for short periods, however; had the partial use of one arm; and could propel himself—after the first few weeks—at a snail's pace through the rooms in a rude wheel chair that Bill's ingenuity had contrived. The great livid scratches that Dan bore on his body quickly began to heal; and before a week was done, he began to venture forth on the hills again. Snowbird had remained in bed for three days; then she had hopped out, one bright afternoon, swearing never to go back into it again. Evidently the crisp, fall air of the mountains had been a nerve tonic for them all.

Of course there had been medical attention. A doctor and a nurse had motored up the day after the accident; the physician had set the bones and departed, and the nurse remained for

a week, to see the grizzled mountaineer well on the way of convalescence. But it was an anxious wait, and Lennox's car was kept constantly in readiness to speed her away in case the snows should start. At last she had left him in Snowbird's hands, and Bill had driven her back to the settlements in his father's car. The die was now cast as to whether or not Dan and the remainder of the family should winter in the mountains. The snow clouds deepened every day, the frost was heavier in the dawns, and the road would surely remain open only a few days more.

Once more the three seemingly had the Divide all to themselves. Bert Cranston had evidently deserted his cabin and was working a trap-line on the Umpqua side. The rangers left the little station, all danger of fire past, and went down to their offices in the federal building in one of the little cities below. Because he was worse than useless in the deep snows that were sure to come, one of the ranch hands that had driven up with Bill rode away to the valleys the last of the live stock—the horse that Dan had ridden to Snowbird's defense.

Nothing had been heard of Landy Hildreth, who used to live on the trail to the marsh, and both Lennox and his daughter wondered why. There were also certain officials who had begun to be curious. As yet, Dan had told no one of the grim find he had made on his return from hunting. And he would have found it an extremely difficult fact to explain.

It all went back to those inner springs of motive that few men can see clearly enough within themselves to recognize. Even the first day, when he lay burning from his wounds, he worked out his own explanation in regard to the murder mystery. He hadn't the slightest doubt but that Cranston had killed Hildreth to prevent his testimony from reaching the courts below. Of course any other member of the arson ring of hillmen might have been the murderer; yet Dan was inclined to believe that Cranston, the leader of the gang, usually preferred to do such dangerous work as this himself. If it were true, somewhere on that tree-clad ridge clues would be left. By a law that went down to the roots of life, he knew, no action is so small but that it leaves its mark. Moreover, it was wholly possible that the written testimony Hildreth must have gathered had never been found or destroyed. Dan didn't want the aid of the courts to find these clues. He wanted to work out the case himself. It resolved itself into a simple matter of vengeance: Dan had his debt to pay and he wanted to bring Cranston to ruin by his own hand alone.

While it was true that he took rather more than the casual interest that most citizens feel in the destruction of the forest by wanton fire, and had an actual sense of duty to do all that he could to stop the activities of the arson ring, his motives, stripped and bare, were really not utilitarian. He had no particular interest in Hildreth's case. He remembered him simply as one of Cranston's disreputable gang, a poacher and a fire bug himself. When all is said and done, it remained really a personal issue between Dan and Cranston. And personal issues are frowned upon by law and society. Civilization has toiled up from the darkness in a great measure to get away from them. But human nature remains distressingly the same, and Dan's desire to pay his debt was a distinctly human emotion. Sometime a breed will live upon the earth that can get clear away from personal vengeance—from that age-old code of the hills that demands a blow for a blow and a life for a life—but the time is not yet. And after all, by all the standards of men as men, not as read in idealistic philosophies, Dan's debt was entirely real. By the light

held high by his ancestors, he could not turn his other cheek.

Just as soon as he was able, he went back to the scene of the murder. He didn't know when the snow would come to cover what evidence there was. It threatened every hour. Every wind promised it. The air was sharp and cold, and no drop of rain could fall through it without crystallizing into snow. The deer had all gone, and the burrowing people had sought their holes. The bees worked no more in the winter flowers. Of all the greater forest creatures, only the wolves and the bear remained—the former because their fear of men would not permit them to go down to the lower hills, and the latter because of his knowledge that when food became scarce, he could always burrow in the snow. No bear goes into hibernation from choice. Wise old bachelor, he much prefers to keep just as late hours as he can—as long as the eating places in the berry thickets remain open. The cougars had all gone down with the deer, the migratory birds had departed, and even the squirrels were in hiding.

The scene didn't offer much in the way of clues. Of the body itself, only a white heap of bones remained; for many and terrible had been the agents at work upon them. The clothes, however, particularly the coat, were practically intact. Gripping himself, Dan thrust his fingers into its pockets, then into the pockets of the shirt and trousers. All papers that would in any way serve to identify the murdered man, or tell what his purpose had been in journeying down the trail the night of the murder had been removed. Only one explanation presented itself. Cranston had come before him, and searched the body himself.

Dan looked about for tracks, and he was considerably surprised to find the blurred, indistinct imprint of a shoe other than his own. He hadn't the least hope that the tracks themselves would offer a clue to a detective. They were too dim for that. The surprising fact was that since the murder had been committed immediately before the fall rains, the water had not completely washed them out. The only possibility remaining was that Cranston had returned to the body after the week's rainfall. The track had been dimmed by the lighter rains that had fallen since.

But yet it was entirely to be expected that the examination of the body would be an afterthought on Cranston's part. Possibly at first his only thought was to kill and, following the prompting that has sent so many murderers to the gallows, he had afterwards returned to the scene of the crime to destroy any clues he might have left and to search the body for any evidence against the arson ring.

Dan's next thought was to follow along the trail and find Cranston's ambush. Of course, it would be in the direction of the settlement from the body, as the bullet had entered from the front. He found it hard to believe that Hildreth had fallen in the exact spot where the body lay. Men journeying at night keep to the trail, and the white heap itself was fully forty feet back from the trail in the thickets. Perhaps Cranston had dragged it there to hide it from the sight of any one who might pass along the lonely trail again; and it was a remote possibility that Whisperfoot, coming in the night, had tugged it into the thickets for dreadful purposes of his own. Likely the shot was fired when Hildreth was in an open place on the trail; and Dan searched for the ambush with this conclusion in mind. He walked back, looking for a thicket from which such a spot would be visible. Something over fifty yards down he found it; and he knew it by the empty brass rifle cart-
(Continued on next page).

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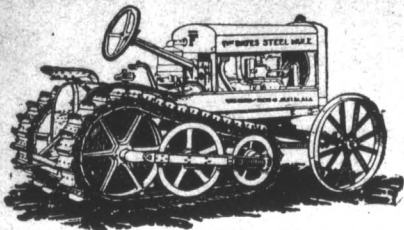
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Goodwill Everywhere

—Our Weekly Sermon
By N. A. McCune

SUPPOSE we start with marriage. A happy marriage depends, of course, on love. And love is goodwill on fire. Underneath this goodwill is the strong foundation of respect. If there is to continue the happy bond that was created at the altar, the husband must have respect for the person and the rights of his wife, and she will maintain a similar attitude toward him. If that is so, he will not spend all his evenings at the lodge or the corner store, and she will not save up all her smiles and graces for afternoon card parties. He will not spend the money needed for other things for tobacco and cigarettes, and she will not waste a young fortune every year in the garage can. If it is true that one marriage in eight ends in divorce in America, and in some localities worse than that, it is evident that there is room for applying the oil of goodwill, to some parts of the machinery of the marriage mill. Goodwill works, in the home. If one marriage in eight fails, seven in eight succeed, and that is not to be overlooked.



DOES childhood have a square deal in America? It does not look that way. We used to read with wrath and contempt how the English worked little children in the Lancashire cotton mills, until the little tots fell over from fatigue. But now we can apply our wrath and contempt to ourselves. We are told that one-fifth of American children between the ages of ten and fifteen now earn their own living. Several of the largest states report a startling increase in child labor during the past year. Thousands of children are remaining out of school the entire year, or most of it, to work on farms. Father may be in desperate need of farm labor, but that is not the way to build up a strong American agriculture. Taking it out of the child and putting it into the check book is like a man picking up money that he has lost through a hole in his pocket, and imagining he is getting rich. In one state last year there were 1,691 accidents to children under sixteen. That is not democracy. To send two million soldiers to fight

for democracy in Europe, and lose it on our own doorstep, would be laughable, if it were not tragic. A large body of intelligent people is endeavoring to apply good will to the problem of the working child in the United States, and the number of such persons should become a mighty army. Ill-treated childhood means a weakened adulthood and the weakened adult means a decadent state, a nation looking backward.

MILITARY preparation: There appears to be some goodwill slowly coming to life, on this most pressing of all problems of the present time. If Christianity can be introduced into the breasts of the war lords, the war will not have been fought in vain. The United States has been proposing a ship building budget of seven hundred millions for the present year, with a national deficit staring us in the face, of two billions. Has the war taught us nothing? Is this insane business of taking the very cream of the nation's income and spending it for guns and ships to go on forever? If so, it is no exaggeration to say that the great war was practically fought to no purpose. We are guilty of the wicked folly we sought to suppress in others. It is said that the cost of one battleship is greater than the cost of the state university in all its history. The amount of money spent in one year on militarism would enable the world to make a fight with disease the like of which has never been known. But there are signs of an awakening good will here. With the dailies of great cities showing forth the folly of militarism, and with military men themselves crying it down, with a bankrupted world showing us what we would otherwise never learn, it looks as though the day of vast fleets and armies was drawing to a close. The time must come when nations will maintain the same attitude

toward each other that Christian men maintain toward one another. That will be good will on a world scale.

TOLERANCE: "John said unto Him, Teacher, we saw one casting out demons in thy name. And we forbid him, because he followed not us. And Jesus said unto him, forbid him not, for there is no one that can do a mighty work in my behalf and be able to speak lightly of me." Much history is the history of intolerance. But that is not of Christ. He said we are to love God with our four-fold powers—mind, body, spirit, soul, and our neighbor as ourself. That attitude is not past, but we hope it is slowly dying, that it will, like the monsters of the ice age, become an extinct species. There is much talk of the organized forces of Christianity getting together. In fact, they are already together in ways not commonly supposed. But they must in time come closer, and there will be one Lord and one faith, according to the Bible ideal. But tolerance ought never to mean the want of strong belief in what is right and wrong. It is possible to believe everything, and so believe nothing. A man said to me once, "I don't care what a man's religion is, so long as he lives it." He might as well have said, "I don't care what a man's politics are, so long as he lives them." Bolshevism is one kind of politics. Would he like to have his neighbors become Bolsheviks, and appropriate his farm and his home? Anarchy is one form of politics. Would he like to see his house in flames, some night? It does matter mightily what a man believes, whether it be in religion or politics. To tolerate others' opinions is good, but there are some things we must not tolerate. Intolerance becomes a virtue, beyond a certain point, and I am not certain but we need an inoculation of intolerance today. And goodwill is always intolerant, yet always tolerant. Christ was the most tolerant of leaders, yet against wrong, injustice, spiritual blindness, class hate, he was a flame of intolerance. It is all a matter of being tolerant at the right place.

The Voice of the Pack

(Continued from preceding page.)
ridge that lay half buried in the wet leaves. The shell was of the same caliber as Cranston's hunting rifle. Dan's hand shook as he put it in his pocket. Encouraged by this amazing find, he turned up the trail toward Hildreth's cabin. It might be possible, he thought, that Hildreth had left some of his testimony—perhaps such rudely scrawled letters as Cranston had written him—in some forgotten drawer in his hut. It was but a short walk for Dan's hardened legs, and he made it before mid-afternoon. The search itself was wholly without result. But because he had time to think as he climbed the ridge, because as he strode along beneath that wintry sky he had a chance to consider every detail of the case, he was able to start out on a new tack when, just before sunset, he returned to the body. This new train of thought had as its basis that Cranston's shot had not been deadly at once; that wounded, Hildreth had himself crawled into the thickets where Whisperfoot had found him. And that meant that he had to enlarge his search for such documents as Hildreth had carried to include all the territory between the trail and the location of the body. It was possibly a distance of forty feet, and getting down on his hands and knees, Dan looked for any break

in the shrubbery that would indicate the path that the wounded Hildreth had taken. And it was ten minutes well rewarded, as far as clearing up certain details of the crime. His senses had been trained and sharpened by his months in the wilderness, and he was able to back-track the wounded man from the skeleton clear to the clearing on the trail where he had first fallen. But as no clues presented themselves, he started to turn home. He walked twelve feet, then turned back. Out of the corner of his eye it seemed to him that he had caught a flash of white, near the end of a great, dead log beside the path that the wounded Hildreth had taken. It was to the credit of his mountain training alone that his eye had been keen enough to detect it; that it had been so faithfully recorded on his consciousness; and that, knowing at last the importance of details, he had turned back. For a moment he searched in vain. Evidently a yellow leaf had deceived him. Once more he retraced his steps, trying to find the position from which his eye had caught the glimpse of white. Then he dived straight for the rotten end of the log. Into a little hollow in the bark, on the underside of the log, some hand had thrust a small roll of papers. They were rain soaked now, and the ink had dimmed and blotted; but Dan realized their significance. They were the com-

plete evidence that Hildreth had accumulated against the arson ring—letters that had passed back and forth between himself and Cranston, a threat of murder from the former if Hildreth turned state's evidence, and a signed statement of the arson activities of the ring by Hildreth, himself. They were not only enough to break up the ring and send its members to prison; with the aid of the empty shell and other circumstantial evidence; they could in all probability convict Bert Cranston of murder. For a long time he stood with the shadows of the pines lengthening about him, his gray eyes in curious shadow. For the moment a glimpse was given him into the deep wells of the human soul; and understanding came to him. Was there no balm for hatred even in the moment of death? Were men unable to forget the themes and motives of their lives, even when the shadows closed down upon them? Hildreth had known what hand had struck him down. And even on the frontier of death, his first thought was to hide his evidence where Cranston could not find it when he searched the body, but where later it might be found by the detectives that were sure to come. It was the old creed of a life for a life. He wanted his evidence to be preserved—not that right should be wronged, but so that Cranston would be prosecuted and convicted and made

to suffer. His hatred of Cranston that had made him turn state's evidence in the first place had been carried with him down into death.

As Dan stood wondering, he thought he heard a twig crack on the trail behind him, and he wondered what forest creature was still lingering on the ridges at the eve of the snows.

CHAPTER XII.

THE snow began to fall in earnest at midnight—great, white flakes that almost in an instant covered the leaves. It was the real beginning of winter, and all living creatures knew it. The wolf pack sang to it from the ridge—a wild and plaintive song that made Bert Cranston, sleeping in a lean-to on the Umpqua side of the Divide, swear and mutter in his sleep. But he didn't really waken until Jim Gibbs, one of his gang, returned from his secret mission.

They wasted no words. Bert flung aside the blankets, lighted a candle, and placed it out of the reach of the night wind. It cast queer shadows in the lean-to and found a curious reflection in the steel points of his eyes. His face looked swarthy and deep-lined in its light.

"Well?" he demanded. "What did you find?"

"Nothin'," Jim Gibbs answered gutturally. "If you ask me what I found out I might have somethin' to answer."

"Then—" and Bert, after the manner of his kind, breathed an oath—"what did you find out?"

His tone, except for an added note of savagery, remained the same. Yet his heart was thumping a great deal louder than he liked to have it. He wasn't amused by his associate's play on words. Nor did he like the man's knowing tone and his air of importance. Realizing that the snows were at hand, he had sent Gibbs for a last search of the body, to find and recover the evidence that Hildreth had against him and which had not been revealed either on Hildreth's person or in his cabin. He had become increasingly apprehensive about those letters he had written Hildreth, and certain other documents that had been in his possession. He didn't understand why they hadn't turned up. And now the snows had started, and Jim Gibbs had returned empty-handed, but evidently not empty-minded.

"I've found out that the body's been uncovered—and men are already searchin' for clues. And moreover—I think they've found them." He paused, weighing the effect of his words. His eyes glittered with cunning. Rat that he was, he was wondering whether the time had arrived to leave the ship. He had no intention of continuing to give his services to a man with a rope-noose closing about him. And Cranston, knowing this fact, hated him as he hated the buzzard that would claim him in the end and tried to hide his apprehension.

"Go on. Blat it out," Cranston ordered. "Or else go away and let me sleep."

It was a bluff; but it worked. If Gibbs had gone without speaking, Cranston would have known no sleep that night. But the man became more fawning.

"I'm tellin' you, fast as I can," he went on, almost whining. "I went to the cabin, just as you said. But I didn't get a chance to search it—"

"Why not?" Cranston thundered. His voice reechoed among the snow-wet pines.

"I'll tell you why! Because someone else—evidently a cop—was already searchin' it. Both of us know there's nothin' there anyway. We've gone over it too many times. After a while he went away—but I didn't turn back yet. That wouldn't be Jim Gibbs. I shadowed him, just as you'd want me to. And he went straight back to the body." (Continued next week).

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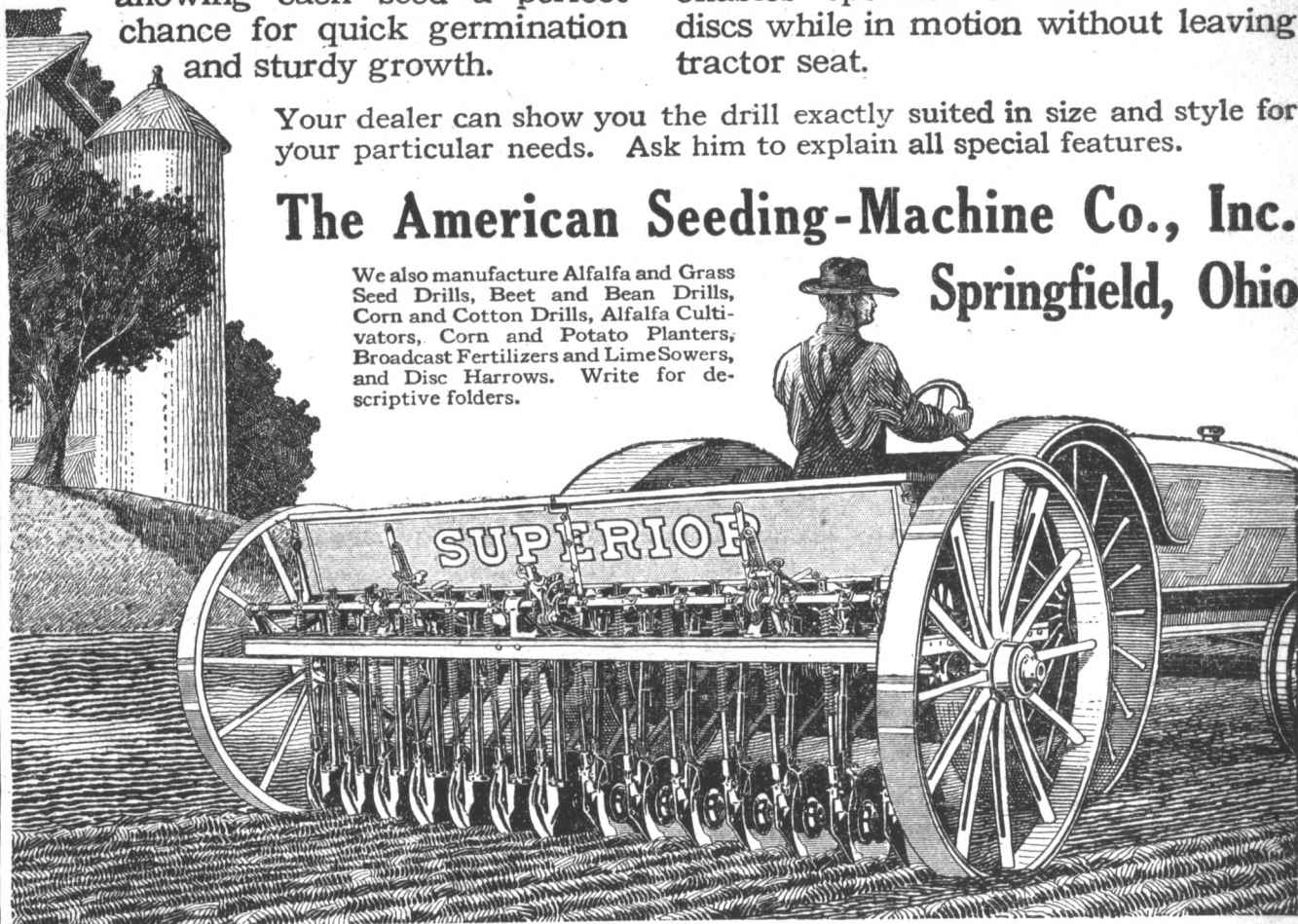
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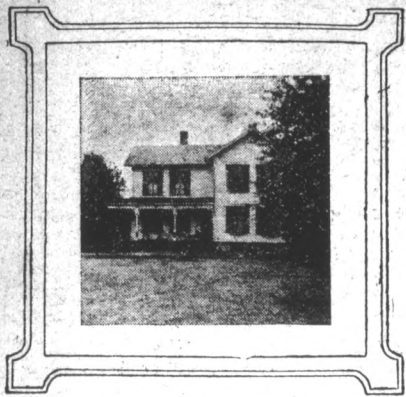
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Woman's Interests



Are They Really "Trifles"?

IT'S rather humbling to the Great Soul who wants to think of life as something big and wonderful to be constantly reminded that life, after all, is made up of a multitude of little things. It's only occasionally that the really big and dramatic event happens along, and the thing which makes it big and dramatic is its rarity. Every day living is just a succession of trifles. And yet those trifles may have a very important bearing on the sum total of life.

Mary Brown always had a backache. As a result she always felt irritable. She snapped at Father Brown and scolded and slapped the little Browns, and altogether the Brown family life wasn't exactly what you would call happy. One day Mary's cousin came to make a visit and, as all desirable visitors do, she rolled up her sleeves and started to wash dishes. But after she'd washed a couple, she stopped, hunted up a basin just three inches deep, and slipped it under the dishpan. "What's the idea?" asked Mary.

"This sink is too low. I should think you'd break your back, humping over

it three times a day," said the cousin. Mary suddenly saw light. The very little matter of a sink three inches too low, had kept her cross and half ill for years.

Dora Jones had headache most all the time. Dora loved to do needlework, but she never got time for it in daylight, there was so much to do about the house and in the garden and with the poultry. So she left the embroidering until evening. Then she lit the biggest lamp, and sat down directly facing it. Now Dora should have known better. They teach school children all about how harmful it is to face a direct light. But it was such a little thing, Dora thought it foolish to bother about such a trifle, when she could see so much better with her face to the light. Finally she went to a doctor about those headaches. He asked no end of questions, and finally found out about that light. Dora had to give up fancy work for six months, and when she took it up again, she had the light behind her. She hasn't had headache in ages, so she says.

Mrs. Swiftly was always having to

throw out canned fruit and bits of ketchup, half glasses of relishes, and pickles and things. She never took time to empty the fruit back in the can, if any was left from the table, or to wipe off the top of the jar and screw the top on tightly. She was always going to use the leftovers up, but there was always such a little bit, she would leave them standing around until they spoiled and had to be thrown out.

One winter Grandma Swiftly, who lived with her son, kept track of the "little things" her daughter-in-law threw out. By spring nine quarts of fruit, five bottles of ketchup, three dozen pickles, and four quarts of various relishes had been wasted. If Mrs. Swiftly had had to buy that stuff at store prices it would have taken enough money to have paid for a pair of shoes for both children, or a good all-wool blanket, or to buy at least half the dishes Mrs. Swiftly really needed and thought she couldn't afford.

Jimmie Wilson didn't get ahead in school. He was listless, and inattentive, and looked pinched and half-fed.

Jimmie ate a cold lunch every day at school. Most of the children did the same thing, there was no regular hot lunch planned at that school. A few children brought hot soup, or cocoa or milk in a thermos bottle, but most of them just ate cold food. A home-demonstration agent told Jimmie's mother that she believed it was the cold lunch that kept Jimmie back in his work. But Jimmie's mother could not see it. The rest of the children ate cold lunches and kept up. Jimmie must be just plain lazy.

Finally the H. D. A. talked so much, Mrs. Wilson agreed to see that Jimmie had something hot every day at noon. In six months' time, Jimmie had picked up amazingly in looks, health and scholarship. It was just a matter of a hot drink to warm up those cold sandwiches, but that mere trifle changed Jimmie's whole life. For instead of leaving school with half an education, he is developing into a real student.

Life's a queer thing, isn't it? Such little bits of senseless things make a great big difference in the general scheme.

DEBORAH.

A Few One Dish Meals

OFTEN on the bill of fare in the past two years the words "Farmer Style" has appeared. Invariably the term has meant one of two things, one-dish cookery, or everything served at once, the ceremony of removal of dishes between courses being omitted.

If you will use that combination baker and serving dish, the casserole, you eliminate two or three cooking dishes, and the same number of serving dishes

canned peas. If there is a stray stalk of celery about it is cut fine and added. The whole is then poured into the casserole, and the dish covered and set in the oven, where a moderate fire is kept for one hour. This is the entire meal, with the exception of bread and butter and a light dessert.

Hot Tamale is another one-dish meal. For this you need corn meal mush, not too thick, a pound of hamburger, or a pint of cold cooked beef run through

Goulash, though a "top of the stove dish," may be transferred to the oven.

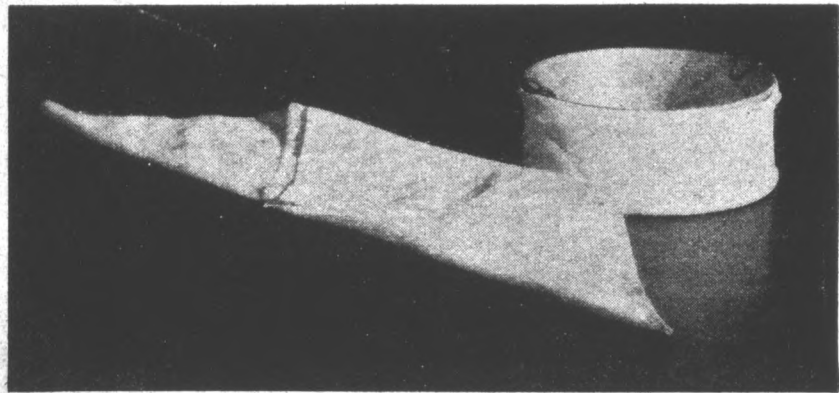
To make this, cut three pounds of veal in inch cubes, and brown in one cup of drippings in which three large onions sliced have been fried. Add the veal, and cook on top of the stove until the veal browns. Then transfer to casserole, add one-half cup of boiling water, one teaspoonful of salt, one-half teaspoon of black pepper, one-half teaspoon of paprika, and cook till meat begins to get tender. Add three large potatoes diced, and when these things are done, one cup of thin cream. Cook five minutes after the cream is added.

"Hopping John" is a substitute dish both for meat and potatoes, peas taking the place of meat as a protein, and rice furnishing the starch. Soak one quart of peas over night, and in the morning, cook till tender in salted water. When tender, put in casserole with one quart of cold boiled rice three tablespoons of butter and two teaspoons of salt, and pour over all a pint of tomato sauce. Cook a half hour in a moderate oven. A bit of salt

pork boiled with the peas improves the flavor.

Braised beef requires a large casserole, as it is best when five or six pounds of beef are cooked. Brown the beef all over in a hot frying pan with a moderate amount of drippings. Put a half cup each of small cubes of salt pork, carrot, onion and celery in the casserole and place the beef on these. Then add a pint of stock or hot water, a bay leaf and bit of red pepper. Cover the meat with cubed vegetables, add a half teaspoon of salt, put the cover on the casserole and bind the joining of dish and cover with a strip of cloth covered with flour paste. Cook in a very slow oven six hours. When done, remove to platter, thicken the sauce in the casserole, first straining out the vegetables. The vegetables may be served from the platter with the meat. This dish can not be served from the casserole, as the meat must be carved.

The brown earthenware casserole may take the place of a bean pot for Boston baked beans. Soak one pint of beans over night. In the morning wash and rinse thoroughly, and parboil in



Cover the Basin or Pan with Folded Napkin Pinned Securely Around it, Before Placing on the Table.

for the table, as you take the casserole directly from the range to the table. They may be bought of glass or crockery in two shades of brown and if the contents are daintily prepared and cooked to just the right shade of brown the dish adds a touch of beauty to any table.

A favorite dish in one household is called "Steak a la Mother," in honor of the proud discoverer. It consists of round steak cut in pieces convenient for serving—first pounding flour into the steak. This is then browned in the frying pan, in drippings in which a small onion chopped has been browned. Potatoes peeled and cut in eights, cutting the potato crosswise first, are added, a pint of tomatoes, and a cup of

the chopper with the coarse knife, and a quart of tomatoes. Line your casserole with mush. Turn the hamburger into a frying pan with a tablespoon of drippings and stir until it turns color. Then add the tomatoes, salt and pepper to taste, pour into the casserole, and cover with mush. This takes about forty-five minutes in the oven.

The old-fashioned shepherd's pie—meat diced and poured into gravy, the whole covered with a crust of mashed potatoes—may be converted into a whole dinner by adding diced vegetables to the meat. Anything you have may be used, carrots, turnips, onion, celery. This gives the needed vegetable along with the meat, potatoes and



The Casserole with Inside Crockery Dish Combines Baker and Server and Keeps the Food Warm.

soda water. Pour off this water and rinse thoroughly in hot water. Put one-half the beans in the casserole. Pour scalding hot water over one-fourth pound of salt pork and cut the rind through in half-inch strips. Put in the bean pot, and add rest of the beans. Mix one tablespoon of mustard, one teaspoon of salt, and one tablespoon of molasses, or sugar, with a cup of hot water and pour on beans. Add hot water to cover. Cover the casserole and place in moderate oven for eight hours. Remove the cover the last hour to allow beans to brown.

The absence of a casserole need not keep you from one-dish cookery. A deep basin, or a small-sized milk pan, if clean and well preserved, may be used instead. It is claimed by some that the crockery gives a better flavor, but the sauce of a good appetite will make up for whatever the basin lacks. Cover the basin with clean napkin, folded as a triangle, and then refolded to the depth of the basin, before placing on the table. A. L. L.

MIDWINTER VEGETABLES.

BY L. M. THORNTON.

In midwinter the housewife goes through the vegetable cellar only to find that more of certain kinds of vegetables have been used than she expected and less of others. Some are bound to go to waste unless ways can be found of conserving them. Those are the days when the following recipes are welcome ones:

Spiced Celery.—Cut off and discard the roots and leaves from six bunches of celery. Separate the branches, wash, dry and chop. In an agate pan put two scant cupfuls of sugar, one teaspoonful of salt, one half teaspoonful of mustard, one cupful of vinegar, one half teaspoonful of cloves, one-half teaspoonful of cinnamon, one-half teaspoonful celery seed, one small pepper chopped, one pint stewed tomato and one-half teaspoonful nutmeg. Add the chopped celery, cook until it is tender and seal in fruit jars.

Sweet Pickled Carrots.—Wash and scrape skin from twenty-four medium-sized carrots. Boil in salted water until they can be pierced with a fork. Make a syrup of one quart of cider vinegar, four cupfuls of brown sugar, one teaspoonful each of cloves, cinnamon and cassia buds. Let boil until it thickens, slice in the drained carrots, cover and cook one-half hour and put in jars and seal.

Beet Relish.—Chop one quart of cooked beets, and the same of uncooked cabbage. Add one cupful of horseradish, one cupful of sugar, one-fourth teaspoonful cayenne pepper, one tablespoonful of mustard, two cupfuls of cider vinegar, and one teaspoonful of salt. Mix and cook for twenty minutes. Put in fruit jars and seal.

Apple Relish.—Core, pare, and chop twelve good-sized apples, (those that have begun to decay can be used by trimming carefully), add two chopped onions, three green peppers chopped, two cupfuls of cider vinegar, one and one-half cupfuls of brown sugar, one lemon, one-half tablespoonful powdered ginger, one-half tablespoonful of salt, and one cupful of seeded raisins. Mix thoroughly, cook for two hours, bottle and seal.

HELPING THE HOME-MAKERS.

MISS AURELIA POTTS, assistant state leader of home demonstration agents in the upper peninsula, of whom there are five, recently addressed the assembly of the Northern State Normal School. In view of the fact that numbers of the students of the school will eventually teach in rural communities in northern Michigan, it is deemed important that they should familiarize themselves with the work which Miss Potts has in charge.

Among other things the importance

of milk in the diet was emphasized. She told how in many instances school children had had their health and the quality of their school work improved through the drinking regularly of a pint or more of milk daily. This phase of the work of the "H. D. A." is being at present emphasized by Miss Pratt, home demonstration agent for Chippewa county.

The need and way to economize in this period of high prices was illustrated by a display of garments tastefully made from cast-off clothes and cloth flour-sacks which attracted much interest. Women had been taught how to make paper dress-forms at a cost of fifty cents, the speaker related, where such goods, of metal, when store handled, would cost \$14 or more. Miss Potts told how, in working among women of foreign birth, she frequently was surprised to discover that they knew arts and handicrafts superior to those with which she was acquainted, and she suggested that an exhibit of such things in a sort of "gift of the nations" exposition might well be held in every community. Assurances were given that the Marquette County Historical Society and department of sociology of the Northern State Normal School would cooperate in such an exhibition later on. It was believed that this would prove extremely interesting and instructive.—L. A. C.

FREE PAMPHLETS FOR MOTHERS.

If your Mothers' Club is looking for a subject for study, why not make a study of your profession? There are a number of books and pamphlets which may be secured free, and which contain valuable information for mothers regarding the care and feeding of the entire family.

Write the Children's Bureau, Washington, D. C., for these free bulletins: "Prenatal Care," by Mrs. Max West; "Infant Care," by Mrs. Max West; "Child Care," by Mrs. Max West; "Maternal Mortality," by Dr. G. L. Meigs.

The following may be secured free by writing the Department of Agriculture, Washington, D. C.: "Food for Young Children," by C. L. Hunt; "School Lunches," by C. L. Hunt.

The College of Agriculture, University of Wisconsin, Madison, Wis., has for free distribution a bulletin entitled "What to Feed the Children."

"Prevention of Disease and Care of the Sick," by Dr. W. G. Stimpson, may be secured free by writing the United States Public Health Service, Washington, D. C.

In addition to these free pamphlets, the following low-priced books are helpful: "Dietary for Children," by M. L. Furst and S. S. Vanderbilt, ten cents, from the National Federation of Day Nurseries, New York City. "How to Take Care of the Baby," by Dr. Francis Tweddell, seventy-five cents, from Bobbs-Merrill Co., Indianapolis, Ind. "Care and Feeding of Children," by Dr. L. E. Holt, eighty-five cents, from D. Appleton & Co., New York. "American Red Cross Textbook on Elementary Hygiene and Home Care of the Sick," by J. A. Delano and Isabel McIsaac, may be procured from P. Blakiston's Son & Co., Philadelphia, Pa., for \$1.00 per copy.

For help in organizing your work, or for a speaker, write the Extension Department of the Michigan Agricultural College, East Lansing, Michigan.

If a button comes off when you are far from needle and thread, take a small piece of string of a suitable color, and working from the under side thrust it through the garment, using a hairpin as you would a bobinet in fancy work; slip the button on the string, work the string again through the goods and tie the two ends firmly together. This is much better than trusting to the holding qualities of a pin.—Mrs. L. T.



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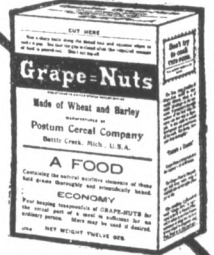
will help you out, for it is cheap as to cost and it can be made up into more different kinds of good things to eat than anything else.

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Our Boys' and Girls' Department

POLLED HEREFORD CATTLE

THE ambitions of a boy or girl are a pretty good indication of what the boy or girl will accomplish in later life. When we see a lad or lass who wants to have the best garden, the best pig or calf or lamb or colt, the best loaf of bread or the best ear of corn in the community, we feel certain that young man or young woman will grow into a citizen of whom the neighbors will be proud, one that will be a credit to his or her home community and to the state and country.

During the past few years the older folks have been giving the boys and girls a better chance to show what they can do than formerly. There are pig clubs and calf clubs and corn clubs and canning clubs and a lot of other sort of clubs where the young folks can enter into contests with each other to see who really is the best live stock feeder or the best judge of live stock or the best corn grower or the best cook. This has given the young folks just the opportunity they needed to prove what they really can do when they have a fair chance to work out their own ideas.

It is to these ambitious, wide-awake, prize-winning young men and women that this story of the Polled Hereford cattle is written. If it helps even a single boy or girl to make up his or her mind that there shall be better beef cattle in the community, it will have served its purpose.

Let us start with the admission that all the modern improved breeds of pure-bred stock are good, each in its place. In a broad sense there is no "best breed," but for each boy or girl there is a "best breed." The best breed for you is the one you like the best and can make do the best. You know that a big part in success is played by enthusiasm. Unless you can be enthusiastic over your cattle, and ready at every chance to explain their good points and tell how you are working to overcome what faults they have; unless you like them so well that you want every other boy and girl in the neighborhood to raise the same kind, then it will be better for you to change to some other breed that you will like better. But if you like the kind of stock you are raising then you will make a success with them, unless they have some fault that makes it impossible for them to do well under your conditions.

FOR the benefit of the boys and girls who have not made up their minds about what breed of beef cattle they would raise if they were starting to form a little herd of their very own, and for the boys and girls who have not been doing very well with the cattle they already are working with, I want to tell about the points that the breeders of Polled Herefords claim in favor of that breed.

In the first place what are Polled Herefords? Most of you have seen the horned Herefords, either in your neighborhood or at the county or state fair. You remember the big red cattle that have the white faces, white feet and underline, and white bush on the tail. Some folks call them the "Whiteface" cattle on account of this arrangement of the colors. You will remember that they have the biggest horns of any of the beef breeds. Perhaps when you

One of the Series of Breed Articles Prepared by the Leading Advocates of the Respective Breeds

By B. O. Gammon

were just little folks you were sort of afraid of those long sharp horns and remember the Hereford cattle on that account. Well, the Polled Herefords are just like those horned Herefords, except that they never have horns. The word "polled" you know, means hornless. About twenty years ago there was a Hereford calf born that did not have any horns and although there was nothing done to stop the horns from growing yet they failed to grow. This calf was raised to maturity and it was found that the calves raised from horned cows, when they were sired by this hornless bull, failed to develop horns. When this was discovered men began to look for other Hereford cattle without horns and found quite a number, about twenty head in all, and bought them for a foundation herd. From that beginning the hornless or Polled Hereford has been developed.

If you had some money and your parents told you that you might buy one or two or more pure-bred cattle, about the first question that would come to

your mind would be, "What breed of cattle shall I buy?" You would perhaps go to your father and mother for advice, or go to the county agent or write to the Michigan Farmer to learn what breed of cattle you should buy. And if you did this these good people would say to you that you must try to make up your own mind about that matter. They would tell you that the men who make the greatest success in life are those who have developed the best business judgment and that to develop judgment one must make up one's own mind and then have confidence in his own decisions. So they would probably all advise you to learn everything you could from books and papers and teachers about beef cattle in general and each of the various breeds in particular; also to look around and see what the conditions are under which you will be trying to raise these cattle. Then you would choose the breed which you believed would best fit into the conditions that prevail in your neighborhood.

This would lead to a lot more ques-

tions which you would want the answers to, and after you had the list made up I suspect the following questions would be on the list:

What breed is being most largely raised in this community?

Are they proving profitable for their owners?

Is there a good demand for them?

Why do the neighbors prefer this particular breed?

Have other breeds been tried here and failed, or has this breed grown numerous because no one has ever tried any other?

What are the cheapest and most common cattle feeds in this community?

What breed will make the best use of these feeds?

Is this locality suited to growing beef cattle from the time they are born until they are ready for market?

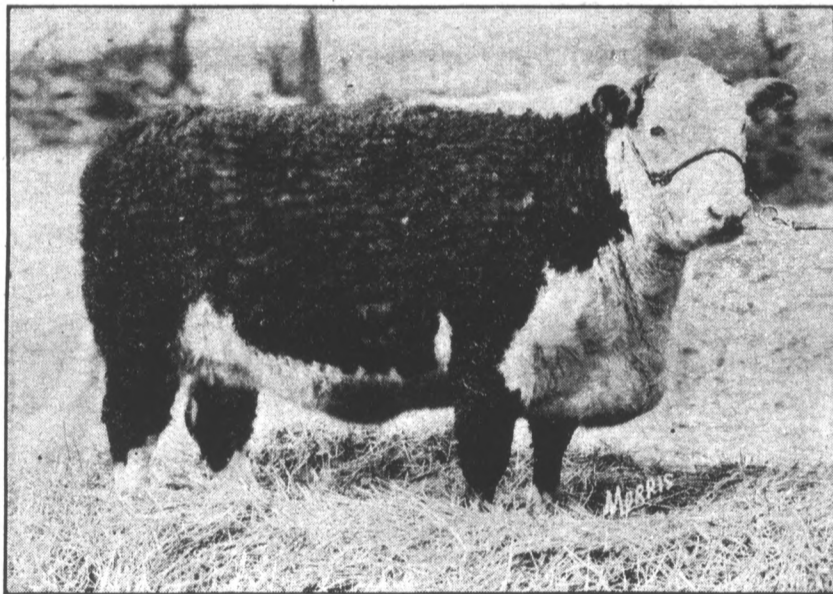
Or do the farmers here just raise the calves until they are ready to fatten for market and then ship them elsewhere to be finished?

If I am going to ship my cattle to a certain market, either to sell as feeders or to sell for slaughter what breed of cattle is in best demand at that market?

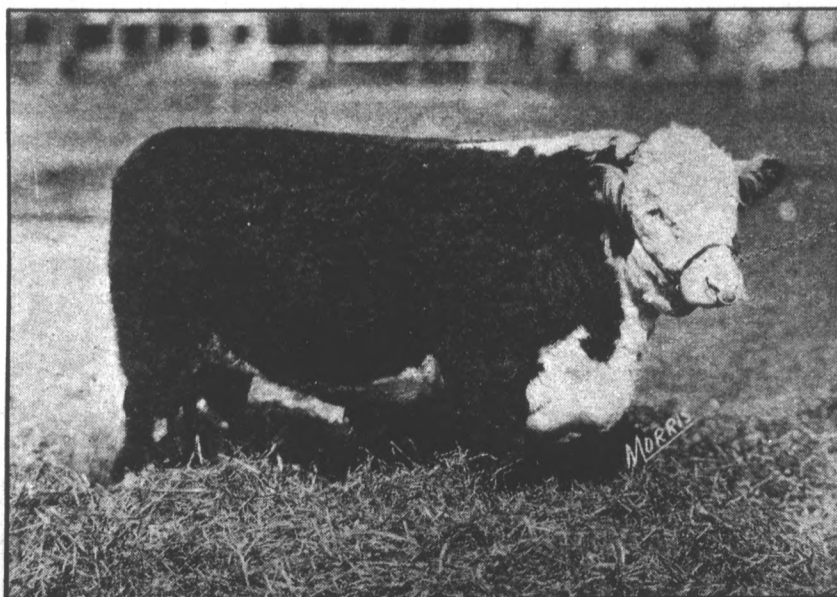
What are the conditions of climate in this country, are there severe winters, very hot summers, long drouths, lots of flies or other insects to worry the cattle?

What about the health conditions as regards cattle?

All these and a whole lot more questions would come up for an answer. After you had found the best answers you could to these questions you would look for the breed that would be most apt to be profitable under the conditions.



Pearl 11873, One of the Good Polled Hereford Cows.



Fairmount 13936, a Famous Polled Hereford Bull.

SUPPOSE we see about Polled Herefords for the conditions that one finds on the average Michigan farm. Suppose we see how this breed will fit into the plan of the average farmer in Michigan. In the first place, there is a lot of grass, coarse fodder of various sorts, etc., on most farms. We will want a breed that will make good use of the pastures and eat the fodders and other rough feeds and do well on them. We find that the horned Herefords that were the fore-runners of the Polled Herefords, were the first developed on the pastures of Herefordshire, England, and that for nearly fifty years they have been very popular and profitable on the ranges of the western states where grass is about all they get to eat. So we can set it down that they will make good use of grass and coarse fodders.

Then we will remember that the winters are long and pretty cold in Michigan, so we will want cattle with heavy, warm coats of hair and we will find that the deep, mossy curly coat of the Polled Hereford will be just the thing to keep out the storms of the Michigan winter. We will also find that this same thick coat will prevent much of the annoyance from flies and other insects in the summer, which is a big advantage, for we know that cattle do better when they are not busy all the time trying to keep away from the bites and stings of insects.

Because the winters get pretty cold and the summers get pretty hot, we will want a kind of cattle that are vigorous and really don't pay much atten-

tion to the extremes of the weather and we will find again that this is one of the things that has made the Hereford so popular out in the west where the winters are long and cold and the summers are dry and hot. So we will mark up another score for the Polled Herefords.

If we go to the stockyards where the fat cattle are slaughtered we will find that the ones with Whitefaces are sleek and fat and that the butchers tell us they have a very high-grade of meat when butchered. We will find that the men who fed these fat Herefords say that they made good gains all the time they were on feed and made good use of all the grain and other expensive feed they ate. So we will mark another credit mark for the Polled Herefords.

We will want to know about the disposition of the cattle we are going to buy, because we do not want our parents, our brothers and sisters, our favorite colt, or sheep or pig to be injured by our cattle. We will find that because these Polled Herefords do not have any horns they are not nearly so dangerous as the horned cattle of other breeds. And we will find that they have nice, quiet dispositions, usually, also, and this will be another point in their favor.

We will be attracted to the Polled Herefords because they look so much alike. All are red with the clear white faces, breasts, bellies, feet and legs and brush of tail. All are hornless, so their heads look alike and the whole herd will look almost as much alike as a band of sheep. When we go to market we will find that the buyers there pay more for a carload of uniform cattle than for a car of mixed ones, so we will feel that this uniformity of color, type and markings is a real advantage in favor of the Polled Herefords.

If there are people in the neighborhood now raising Polled Herefords and we visit them we will doubtless find that they are all enthusiastic about their cattle. We will find that they get good prices and sell the calves before they are very old and that when they go out to the big sales and fairs they find a lot of other folks there who are breeding the Polled Herefords and that these other folks are a nice, honest, neighborly lot of people who are always willing to help answer the questions that are always coming up in the business. This brotherly spirit among the breeders will appeal to us because we will want friends when we get started and will want to feel that there is somebody ready to help us solve our hard problems.

Of course, if we take the other breeds we will find that lots of the things we found out about Polled Herefords are also true of the other kinds of cattle, but really, young folks, let me tell you out of an experience of nearly twenty years with the Polled Herefords, I like them best of all and I think you will like them too, if you will try them.

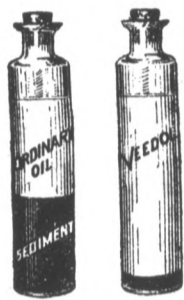
And if you do decide to try them, or if you want any more information about them, I will be glad to write you a letter any time and send you printed matter with pictures of these cattle and tell you who has them for sale in your state. Just write to me through the editor of the Michigan Farmer or send the letter direct to Des Moines, Iowa.

Herons, storks, and similar birds rely on their long dagger-like bills, which they draw back and then shoot out with javelin swiftness. Even a big hawk or an eagle is none too anxious to try conclusions with the veterans of these species.—C. M.

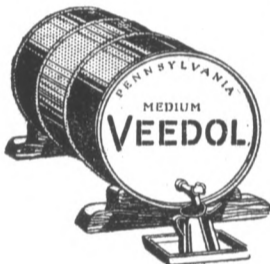
Young hogs should be sprayed and dipped freely to keep them free from parasites and skin-diseases.



90% of tractor engine trouble is due to inferior oil



Ordinary oil after use Veedol after use
Sediment formed after 50 hours of running in a tractor



"If my tractor should stop during this ploughing season," a farmer said the other day, "the delay would cost me anywhere from three hundred to fifteen hundred dollars." Your own situation may never be so acute—yet a "layup" at ploughing season is always expensive.

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Get My Low Prices of fruit trees, berry plants and small fruit plants. It will save you money. Perfection cutout \$15 per 100. **FEATHER'S NURSERIES**, Baroda, Mich.

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And allowed to points beyond. I ship quick from Buffalo, Minneapolis, Kansas City or Racine. With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating, you can make a big income. You can also share in my Personal Prize Offers of \$1000 in Gold without cost or obligation. Get an early start—Save Valuable Time Order Now, or write today for my Free Book, "Hatching Facts" a complete guide to success raising poultry. Jim Rohan, Pres. Belle City Incubator Co., Box 14 Racine, Wis.



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Find Out What an Incubator is Made of Before You Buy. We will gladly send you samples of materials we use. Get our Catalog and samples before buying. We give 30 Days' Trial—10-Year Guarantee. These two well-made, nationally known machines—



Both Freight Paid \$18²⁵ East of Rockies Only

Wisconsin are made of genuine California Redwood. Incubators have double walls, air space between, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. Send today for our new 1921 catalog, free and postpaid. Large Size 180-EGG INCUBATOR AND BROODER, BOTH \$22.50.
WISCONSIN INCUBATOR CO. Box 82 Racine, Wis. MONEY BACK IF NOT SATISFIED

You Take No RISK With An Ironclad \$19¹⁵ Both 30 Days Trial Freight Paid 10 Yr. Guarantee

Think of It! You can now get this famous Iron Covered Incubator and California Redwood Brooder on 30 days trial, with a 10-year guarantee, freight paid east of the Rockies.

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Incubator is covered with galvanized iron, triple walls, copper tank, nursery, egg tester. Set up ready to run. Brooder is roomy and well made. Order direct from this advertisement—money back if not satisfied or send for free catalog.
IRONCLAD INCUBATOR CO. Box 85 Racine, Wis. Made of Redwood covered with Galv. Iron (9)

\$12⁷⁵ FOR A BADGER 140 EGG INCUBATOR

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BADGER INCUBATOR CO. BOX 136 RACINE, WIS.

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140-Egg Size—Guaranteed—has double walls, copper tank, full-size nursery, automatic regulation thermometer held so that chicks cannot break it when hatching. Detroit Brooders, too. Double walled, hot water heated. Write for special low price on both machines.
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DAY OLD CHICKS

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

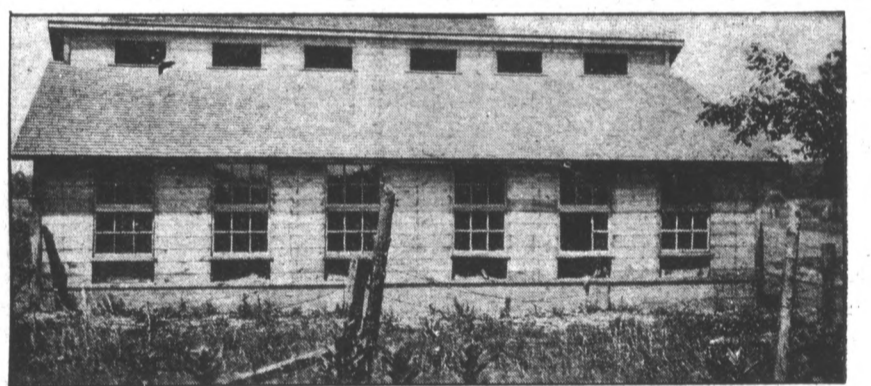
Home Grown Poultry Feeds

THE profit from the farm flock depends in a large measure upon the skill of the owner in producing home-grown grains and green feeds. Such a system of feeding will reduce the cost of maintaining the flock, and at the same time make possible a system of management which practically does away with diseases and changes the business from one of chance to one of assured success. The specialized poultry-keeper is finding the cost of grain and prepared feeds almost prohibitive, and at present there is little inducement for one to go into the business unless he can grow a portion of the feed supply. Just how much time one can afford to spend in growing crops specially for the fowls is a debatable question, but one thing is certain, some sensible system of crop growing must be practiced to furnish considerable of the feed supply for the year.

On any reasonably fertile soil grain feeds can be produced cheaper than they can be purchased, and a second saving can be made by converting these crops into efficient rations. The fact that feed crops are being grown for the fowls enables the owner to practice a more sensible system of flock handling than is possible when this phase of the business is neglected. With plenty of land available there can be no excuse for the man who claims that he can buy grain, forage and vegetable feeds cheaper than he can grow them. It is quite true that some of the crop yields will be low, but there is absolutely no excuse for not harvesting good crops from fertile soils if one applies modern methods.

It is often profitable to purchase limited quantities of prepared feeds, such as chick feed and fattening feed which are carefully mixed and produce excellent results, but their extensive use makes such inroads upon the income that they must be used only as a complement to other cheaper feeds. The logical solution is to grow more grain and use more judgment in preparing it for feeding.

On most farms skim-milk and insect life make up the bulk of animal protein available for poultry rations. It is, however, one of the most essential elements of the ration, and if satisfactory results from other feeds are obtained it must be supplied in reasonable amounts. As a rule beef scraps and ground bone furnish the cheapest animal protein. Grit, shell and some of the ground grains must be purchased, unless one has the facilities for grinding the home-grown grains. But even when it is necessary to buy some of these special protein feeds the bulk of the ration may well consist of home-grown feeds. The saving in the cost of feeding will more than offset any lack of efficiency in the ration, and the birds will be more healthy and vigorous than is the case when fed only mixed and prepared feeds. If birds have free range surprising results are often obtained from very ordinary rations. During the season when insect life is unusually plentiful, there is scarcely a method of feeding, unless it is extremely abnormal, that will produce as good egg production or maintain as good growth of the young stock. After experimenting for several years with different crops the writer



A Substantial Farm Poultry House.

Corn, oats, wheat, buckwheat, clover, alfalfa, beets and cabbage are easy to raise and all have a place in making up economical rations for the farm flock. At present prices of grain and mixed feeds there should be no need to urge the owner of the farm flock to produce as much home-grown feed as possible, and then to convert it into properly proportioned rations right on the farm. The farmer who has grain feed available will find it possible to produce eggs which have a higher cash value than the market price of grain. Moreover, where sufficient land is used for growing a large portion of the feed for the flock the birds are assured of clean range which is one of the essentials of success in the poultry business.

Alfalfa cut before it is in the woody stage and properly cured will come out of the mow as green as any grass you ever saw. It contains very little indigestible fiber and is greatly relished by the hens. It is the second and third cuttings that furnish the fine-stemmed, fine leaves that give such delicious mashes for the hens. It is no wonder that many poultry-keepers have reported unsatisfactory results from feeding alfalfa when they have used the common article called alfalfa hay. The writer has always had the best results feeding alfalfa in the dry mash. The hens like it, pick it out when they can because they prefer it to some of the other materials. They will not do this when the alfalfa you use is brown, dry, woody and indigestible. Cut at the right time, properly cured and stored, the second and third cuttings will make an ideal feed for eggs, as

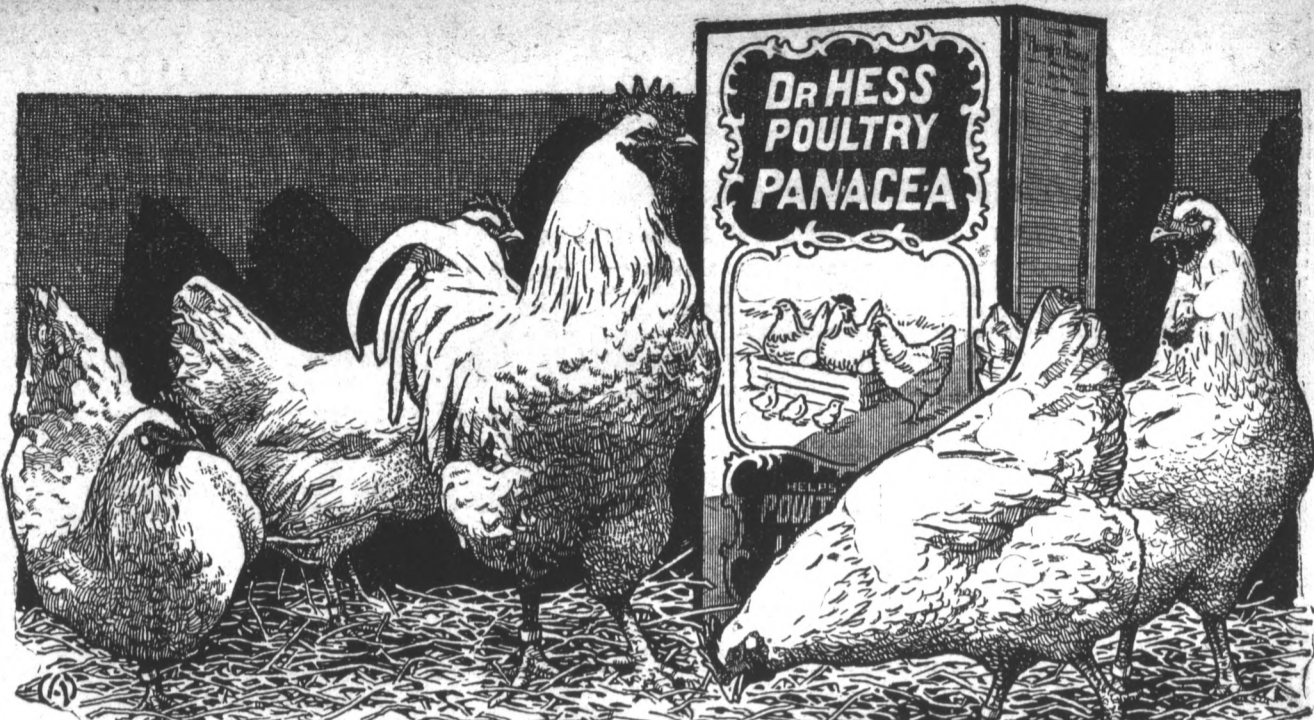
well as growing strong and robust chicks. The modern poultryman cannot afford to overlook this valuable crop when planning his year's feeding operations.

EVERY poultryman appreciates the value of corn in feeding for winter eggs, and there is little danger of feeding too much of it so long as good alfalfa and other protein supplements are fed along with it. Wheat, when prices are low, is an excellent feed. Oats and barley may be fed along with corn and alfalfa to good advantage. Buckwheat is an ideal grain feed for laying hens, and may be grown on many fields where soil conditions are unfavorable for other grain crops. On account of its adaptability for late seeding many farmers use it as a catch crop to sow when other crops fail or when weather conditions render early grain crops too hazardous. It responds wonderfully well to light applications of fertilizers, and for that reason will make a good yield on fields where other crops would fail. If straw is not available millet may be grown to advantage and used for litter in the scratching run. The hens enjoy picking at the fine seeds, and the straw affords good scratching material.

In planning the year's food supply the farmer-poultryman cannot afford to lose sight of the dairy cow as a valuable complement to the farm flock. Skim-milk is a valuable source of animal protein, and two or three good cows fit in nicely with the work of caring for the fowls. For growing chicks and laying hens many feeders have found it possible to derive a feeding value of from fifty cents to one dollar per hundred pounds from skim-milk. Besides the first cuttings of alfalfa, cornstalks and odds and ends of other feeds which are not suited for the poultry reduce the cost of feeding the cows to a minimum. Then, too, the cows go a long way toward putting the farm on a paying basis. Likewise many dairy farmers have found a flock of from two hundred to four hundred laying hens a valuable addition to the live stock equipment of their farms.

A SMALL plot of winter wheat or rye sowed near the laying-house will afford some choice picking for the fowls during the late autumn and early spring, besides plowing the ground will prove of great benefit in keeping the range free from disease. Likewise plans should be made to provide a green range for the young chicks during the spring and early summer. Plots of red clover or alfalfa will furnish tender green feed at all times during the growing season. On most farms, however, abundant range is available without making special provision for the flock during the spring and summer months.

In laying out poultry runs it is always well to keep this point in mind and plan the layout so that by removing the end posts and netting the crops in the yards can be planted the long ways of the yard and cultivated with a horse. Long rows will enable one to plant and cultivate the crop with a minimum of disagreeable hand-work. If corn is grown after corn for two or three years it will pay to cultivate between the rows about the time the corn is fit to harvest and sow rye in the runs. This not only furnishes excellent grazing for the flock, but serves as a cover crop and adds considerable vegetable matter to be turned under for the next year's crops. Small grain crops may also be grown in the runs, but as these crops occupy the ground all the time when the hens need the range they are not so suitable as the corn crop. In localities where plums and cherries thrive it will pay well to start small fruit plantations in the runs, rather than to attempt to grow field crops.



Condition Your Breeders

Mating Time Is Here

Make sure that the parent stock, your hens and roosters, are in the pink of condition at mating time.

Then they will impart health and vigor to the offspring. See to it that your breeders receive in their daily ration

Dr. Hess Poultry PAN-A-CE-A

It puts the Breeders in Fine Condition

You get strong livable chicks.—Chicks with power of resistance—Chicks that will not fall a prey to every little-chick ailment—Chicks that will develop into early broilers—Pullets that will develop into fall and winter layers.

SPEED UP EGG PRODUCTION during winter with Dr. Hess Poultry Pan-a-ce-a. It contains tonics that promote a hen's digestion, tonics that tone up the dormant egg organs—so that the proper amount of food goes to egg production—and not all to flesh and fat and laziness—when it's action and eggs you want.

Always buy Pan-a-ce-a according to the size of your flock. Tell your dealer how many hens you have. He has a package to suit. Good results guaranteed.

30c, 75c and \$1.50 packages. 25 lb. pail, \$3.00. 100 lb. drum, \$10.00. Except in the far West and Canada.

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Lakewood's Peerless Layers

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Leghorns, Rocks, Reds, Wyandottes
Lakewood, Farm, Box B, Holland, Mich.



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LOOK! 1,000,000 for 1921.

Postage PAID. 95% live arrival guaranteed. FREE feed with each order. 40 breeds chicks, 4 breeds ducklings. Select and Exhibition grades. A hatch every week all year. Book your order NOW for early spring delivery. Catalogue free, stamps appreciated. NABOB HATCHERIES, Gambier, Ohio

BARRED Plymouth Rock cockerels for sale, some nice thrifty birds from prizewinning stock \$4 and \$5. George H. Campbell, R. 5, Box 70, Ypsilanti, Mich.

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

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

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

DAY OLD CHICKS

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

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

High Class Egg Leghorns And All Standard Breeds
Both Chicks and Hatching Eggs from all breeds guaranteed, and delivered post paid.

STATE FARMS ASSOCIATION, Kalamazoo, Michigan

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Unquestionably America's Greatest Value in Milkers—simplest—most sanitary—most efficient—safest made. Pump-pulsator type—gives complete vacuum release on teat. Smooth natural action of calf.

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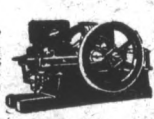
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With the famous full-swing **DOLLY**. Washes quicker—safer for any clothes. Hand and Power (electric or engine) with handy swinging wringers. Single and double tub models. Get the facts.



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Hubers Reliable Chicks—700,000 For 1921.

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



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

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

Look! 100,000 for 1921. Day Old Chicks. Barred Rocks; S.C.W. Leghorns, American and English; and Anconas. Write for free catalog. Fairview Hatchery, R. 2, Zeeland, Mich.

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BABY CHICKS, bred from stock with high egg records and show room quality. None better for filling the egg basket. Catalogue free. Ohls White Leghorn Farms, Marion, Ohio

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Choice Rose Comb cockerels—hen-hatched, farm raised, big thrifty, prize winning strains. \$5, \$7.50 and \$10.00. We raise only R. C. Reds.

BIDWELL STOCK FARM,

Box D, Tecumseh, Michigan

Rhode Island Reds R. C. Large fancy cockerels at \$3 each. Address **BURT SISON**, Inlay City, Mich.

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.

R. C. Br. Leghorn Eggs, \$1.50 for 15. Pekin duck, \$1.50 for 8. W. Chinese geese eggs, 40c each. Mrs. Claudia Betts, Hillsdale, Mich.

SELECTED WINTER LAYERS S. C. WHITE LEGHORN EGGS FOR HATCHING, laid by hens that averaged over two hundred eggs each last season. 15 Eggs \$3.00; 30 \$5.50; 100 \$15.00. **BABY CHICKS**, each week beginning March 1st, 15 \$7.50; 25 \$10.50; 50 \$20.50; 100 \$40.00 no catalogue. Dunningville Poultry Farm, Dunningville, Mich.

S. C. WHITE LEGHORN CHICKS Send for Catalog. **SNOWFLAKE POULTRY FARM**, Route 1, Grand Rapids, Michigan.

S. C. Black Minorca Cockerels, selected stock. Northrup strain \$5.00. Eggs for hatching \$3.00 per 15. This stock lays year round. **C. J. Deedrick**, Vassar, Mich.

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DAY-OLD CHICKS

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DAY-OLD CHICKS

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

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For Sale B. P. R. cockerels from good laying strain \$4 each. **MRS. ERNEST BELLEN**, Whittemore, Mich.

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

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

"Thumb" Farmers Active

FROM up in Huron county, the very tip of the "Thumb," comes the news that a meeting was recently held at Kinde of the Kinde Cooperative Grain Company, and in spite of bad weather and soft roads a large crowd turned out. The meeting was held for the purpose of discussing the financial condition of the association; and, after the resources and liabilities had been gone over very carefully, it was decided to put on a vigorous campaign for the increase of the capital stock, so that the business may be carried on in the future in a more economic manner. This meeting was adjourned from time to time during the month, a report of progress being made at each meeting. Very satisfactory results were obtained and prospects are good for the association to be in active operation at an early date.

A directors' meeting of the Atwater Elevator was attended by the county agent, James R. Campbell, at which it was decided to call a joint meeting of the farm bureau members of the community and the stockholders of the elevator association. This joint meeting was well attended and the method of joining the two organizations was discussed in detail. This organization had already joined the elevator department of the State Farm Bureau, thus making a place of business for the members of the farm bureau in that locality. "Farm bureau members everywhere," said Mr. Campbell, "are commencing to appreciate the value of cooperative elevators and are assisting to finance them on a substantial business basis. The result of these meetings has been an increase of the capital of this association.

A STRICTLY farm bureau meeting was recently held in Ugly to consider the problem of fertilizer supplies for spring use. The majority of farmers believed the present prices too high to be profitably used; but tentative orders were given to be confirmed later if the prices should be reduced to what was considered a reasonable figure. The members are beginning to feel strongly the need of having a place of business of their own in Ugly, and much sentiment was expressed in favor of forming an association, either of their own or as a branch of the Bad Axe association. A later meeting will take up this matter for definite action.

An excellent meeting and a good time was held at an oyster supper given by the Live Stock Shipping Association of Grindstone City, the leading feature of which was the large attendance of the ladies with a bountiful supply of oysters. After a discussion of the shipping association work the question of holding an agricultural institute or school was taken up. It was decided to hold one provided a lady demonstrator could be secured to entertain the women folks. This is a very good feature and should be given more thorough consideration in the future. The county agent was requested to make the necessary arrangements for speakers, and the prospects are bright for some more good times in this community.

Over in Elkton the farm bureau members and the stockholders of the Elkton Cooperative Elevator met together in the Opera House. The condition of the association and its relation to the farm bureau was taken up in much the same manner as was done at the Kinde meeting. Progress of the farm bureau was discussed and the necessity of its members getting earnestly behind their elevator and creamery was brought out. At a later meeting in January it was expected that definite action would be taken in this important matter.

The Sebewaing Cooperative Association at Bach was incorporated under Act 398 of the Public Acts of Michigan for 1913, one of the best acts under which an association can organize and do a general elevator and supply business. It insures the member of receiving his just share of the net profits earned each year, on the amount of business he does with the association. The value of the Sebewaing association property is stated to be in excess of \$28,000, and, in addition to a well built and equipped elevator of 20,000 bushels capacity, there is a bean storehouse 28x30 feet, a warehouse 36x40 feet, and construction has recently been started on another to be 30x50 feet in size. This will give the association room to take care of the rapidly increasing business, consisting of wholesale and retail grain, beans, corn, hay, straw, seeds and all kinds of feeds. In addition stocks of several good brands of spring wheat, winter wheat, rye and buckwheat flour are kept on hand. They also sell hay wire, wire fence, fence posts, binder twine, cement, plaster, wall board, lumber, sash, doors, interior finish, shingles, lath roofing and building paper, gates, tile, sewer pipe, flue linings, coal and coke. The membership in the association numbers three hundred and forty-two and is growing steadily.

Over in Midland, with their membership touching six hundred, cooperative marketing associations have been organized by farmers at Midland, Sanford and Coleman; and it is expected that the membership soon will reach one thousand. A number of communities are yet to be solicited, preliminary action not having been taken. The organizations so far perfected are all owned and controlled by the local farmers, and will be members of the State Elevator Exchange. Arrangements are being made through the county agent for building or buying of necessary elevators and warehouses to take care of a considerable business. In connection with these organizations a stock shipping association will be formed to work with the elevators in marketing the farmers' produce.

About one hundred and fifty farm bureau members of Hemlock and vicinity attended the mass meeting there late in January. The work of the State Farm Bureau's new seed department was the principal subject of discussion. Under the present plan the farmer raises seed, turns it over to the State Farm Bureau that supervised the growing of the seed, and is in turn privileged to buy pedigreed seed that has been raised by other farm bureau members. State farm bureaus will exchange seed to give the farmers an opportunity to buy seed grown in any part of the country.

The St. Charles Farm Bureau Cooperative Shipping Association shipped its third carload of live stock on Wednesday, February 9. The officers of the association announce that from now on shipments will be made every two weeks. Farmers intending to send cattle in the consignments have been advised to take the live stock to St. Charles early in the morning, as the car is scheduled to leave there at about eleven o'clock.

Twenty-five rural schools in Saginaw county have raised \$885.37 for school equipment by entertainments and socials during the year 1920, according to reports sent to the county school commissioner's office. It is believed that a much greater amount has been earned by the various schools, but only twenty-five have reported. Buena Vista school, district No. 2, of which Cecil Pequignot is teacher, leads the list with \$100 raised at one entertainment.

J. C. MILLS.

Farm Bureau Meeting

(Continued from page 178):

fective plans for organizing farmers in the state, and whereas this conflict of opinions is working to the disadvantage of the cooperative movement,

Be it resolved, that it is the sense of the committee that the executive committee of the Michigan State Farm Bureau be requested to recommend that the efforts of the county agent along commercial lines be confined to promoting and perfecting local purchasing and marketing associations, and to assisting those organizations in any manner desirable.

That counties be organized into local units for the purpose of marketing and purchasing to best advantage, local units to secure commodity contracts from their members; and local units to give commodity contracts to State Farm Bureau through different departments of said State Farm Bureau; local units to be organized, advised and assisted when necessary by their County Farm Bureau.

The following is taken from the report of the committee of six; three from the executive committee and three from the county agents' association, as adopted January 24, 1921:

First, that all local business units of the farm bureau be placed on a sound financial basis, with crop and purchasing contracts with the members and incorporated under the laws of Michigan.

Second, that the committee recognizes the necessity of maintaining the County Farm Bureau on an efficient basis, and recommends that the county be continued as a basis of representation to the state delegate body; that at the end of two years, or at such time as may be necessary, membership dues for the support of county and state organizations be collected through local business units; that it may be the duty of the county executive committee to prepare a budget for the support of the County Farm Bureau, which shall be pro-rated over the locals in the county on the basis of business transacted or secured from such other sources as may be available.

Third, that no fee be required after a unit has signed a commodity contract for any department of the Michigan State Farm Bureau.

Fourth, that the County Farm Bureaus recognize the family type of membership as official. Each family membership should carry with it the right of only one vote, but any duly authorized member of the family may vote; either man or woman.

Fifth, that reciprocal arrangements concerning sales purchasing and other services, between the State Farm Bureau and the commodity organizations be worked out, in order to eliminate duplication of effort, strengthen the organizations concerned, in the service to which each is best adapted, and develop a permanent policy to unite the commodity organizations in the state with the farm bureau movement.

Sixth, that the executive committee employ district business managers when needed, to assist in the general business interests and activities of the Michigan State Farm Bureau.

Seventh, that a permanent policy, in order to effectually unite the Michigan State Farm Bureau with the various commodity organizations of Michigan must provide representation and participation in the management of matters affecting their interest.

Eighth, therefore, the committee recommends that the power of the organization movement in Michigan be harmonized and concentrated in the Michigan State Farm Bureau by amending its constitution and by-laws so as to make possible direct representation on the executive committee by the addition of one committeeman chosen by such commodity organizations in the state as may be approved as departments by the executive committee of the Michigan State Farm Bureau.

Ninth, the committee further recommends that a commodity organization in order to qualify as a department, with representation on the executive committee, must be incorporated under the laws of Michigan and be composed of incorporated local cooperative units, whose entire membership is composed of farm bureau members, said units to be adequately financed, and on a sound business basis; such organizations to be fairly representative of the said commodity interest of the state.

Tenth, that reciprocal relations between commodity departments and the Michigan State Farm Bureau must be acceptable to the governing bodies of said departments and the executive

committee of the Michigan State Farm Bureau.

Eleventh, that on the advice of the attorney of the Michigan State Farm Bureau, Charles Nichols, no changes in the constitution of the Michigan State Farm Bureau be made until after the disposal of the proposed corporation laws now pending.

Secretary's Recommendations.

The secretary's recommendations which follow were all adopted by the executive committee excepting the preamble and paragraphs (a) and (b) of section (2). It was over these exceptions that the contest previously mentioned developed.

I submit to you these recommendations which appear to me to be for the best interests of the organization and what the membership demands. Without any question whatsoever, if this organization is to live true to the principles upon which it was sold at a great cost of both effort and money to close to one hundred thousand farmers of the state, it must proceed another year along the same general lines, which, with difficulty, have been followed successfully during the past year. From the time the membership campaign in the state was started until it was terminated temporarily a few weeks ago, the memberships were sold on the basis that the Michigan State Farm Bureau was not to be another organization, but the farmers' organization of the state. It was made plain that it would not be just a promoter but a doer. It was made plain that it would not form any alliances which would divide its strength, that it welcomed cooperation from any group of people striving for improvement of things agricultural, but that it would not in justice to the thousands who put their membership dues into it expend those moneys for the primary benefit of any other than its own members. In the light of the development of the organization, in the last two years—preliminary the first year and active the second—in membership, in finances, in scope of business operations and benefits to members, it is right that its policy and program of work for the next year be absolutely on the same general lines as that of the last two years. We have gained close to one hundred thousand members, and while more are desirable, it is more essential that these members be welded into a solid unit. To accomplish this purpose the following steps are necessary:

1. Begin a definite effort to see that memberships in local farm bureau cooperative associations are farm bureau memberships and that every farm bureau member in Michigan becomes a member of a local farm bureau association. This, besides accomplishing the mentioned object will, at the same time, operate as a membership follow-up machine and a membership fee collection agency.

2. Local farm bureau associations should be organized, properly financed and incorporated, so as to do whatever business the majority of its members may instruct the manager to include in the activities of the association.

(a) A contract should run from the individual member to the local farm bureau association such as is known as a crop agreement or purchasing contract.

(b) A contract should run from the local farm bureau association to the Michigan State Farm Bureau requiring no membership fee other than that all its members are paid-up farm bureau members or will become so within six months' time after the signing of the contract, which would be accompanied by a \$500 note as a guarantee of good faith and business integrity.

(c) One contract should give the use of all of the several departments of the Michigan State Farm Bureau to the local farm bureau association, and this contract shall only become effective after approval by the County Farm Bureau affected or involved.

3. The County Farm Bureau should be so organized that it will have regulation and supervision for the Michigan State Farm Bureau over all farm bureau locals within the county. It should be in position to see that cooperation is effected and maintained between locals, at the same time educating the member in cooperative business methods, standardization and quality production.

4. No commercial business should be done with a local farm bureau association by the Michigan State Farm Bureau after January 1, 1922, unless contractual relations are existing and the

(Continued on page 211).

Crushed stone and water
— and a machine to mix them

THAT is Colt Carbide Lighting-and-Cooking reduced to its simplest terms. And what a wonderful combination! The Colt machine brings carbide (crushed stone) and water together, producing a marvelous gas.

This gas produces the *hottest* cooking-flame known; and a light that is seemingly a miniature of that great orb that rises in the east and sinks in the west.

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The Colt Carbide Lighting-and-Cooking Plant drops a handful of carbide intermittently into a self-contained tank of plain, ordinary water. The water releases the gas from the impregnated stone, and there you are!

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Picture a cool, sweet kitchen, even in sweltering summer, made possible by carbide fuel for the gas-range, the hot-plate and the flat-iron.

Picture your house, barns, outbuildings and driveways a blaze of radiant glory in the pitch black of the country night. And the little old Colt machine making gas as you need it, with the ease and dignity of the old-fashioned windmill!

You want to know what it costs and all about it. We'll tell you gladly, if you'll just send us your name and address on a postcard. *Do that.*

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

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Crystal Poultry Farms
HIGH QUALITY
Baby chix, eggs from heavy laying strains. Prize winners at 1920 New York and Ohio State Fairs. 35 Leading breeds. Prices reasonable. Safe arrival guaranteed. Circular free. Shepard Strong, Crystal Poultry Farms, 7961 Franklin Ave., Cleveland, O.

BABY CHICKS R.I. Red, Barred Rocks, White Wyandottes, White Leghorns. Selected healthy chicks. Order early, have winter layers. First hatch Feb. 28th. Write for price list and circular. DERR & ADAMS, Litchfield, Mich.

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

Big 5lb. Barron White Leghorns
Real winter layers. 703 eggs from 50 pullets in Dec. Free catalog describes them, gives feeding methods, a new way to cull hens and much valuable information. Send for it. A. WAUCHEK, Gobleville, Mich.

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

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

Baby Chicks Anconas 17c, Rocks 20c, B. Leghorns 16c, W. Leg. 15c. All S. C. 5% Dis. in lots of 1000 or more. Parcel Post Paid and safe delivery guaranteed. Catalog free. KNOLLS HATCHERY, R. 3, Holland, Mich.

Barred Plymouth Rock Cockerels, M. A. C. Strain \$5 Mrs. JESSE F. BALL, R. 9, Charlotte, Mich.

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

DAY OLD CHICKS S. C. White Leghorn trap-nested stock where every hen must produce 91 eggs in four winter months. One hundred big thrifty chicks for \$25.00. MACALWHITE POULTRY YARDS, Alex. MacVittie, Proprietor, Caro, Mich.

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

BABY CHICKS Hatching eggs, Barred trap-nested, bred-to-lay, expertly tested for many generations, large illustrated catalogue 25c, stamps for circular. Norman Poultry Plant, Chatsworth, Ill.

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

White Wyandottes Official records, five hens 1074 eggs. Eggs 15, \$3.00 and \$10.00; 100, \$15.00. Catalog free. G. W. SCHOTTMANN, Montrose, Ill.

Bourbon Red Toms early hatched. Large, well-marked birds. Write for prices. CHAS. A. BEATTY, Ailford, Mich.

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

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Probably
The World's Greatest Breeding Bull

Blue Bell, Supreme Champion at the Smithfield Show 1919, and the Birmingham Show 1920, is a daughter of Edgar of Dalmeny.

The Junior Champion Bull, Junior Champion Female, Champion Calf Herd and First Prize Junior Heifer Calf, Michigan State Fair, 1920, were also the get of Edgar of Dalmeny.

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

Send for Illustrated Catalogue.

WILDWOOD FARMS
ORION, MICHIGAN

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

For Sale

Woodcote Trojan-Ericas

We are offering ten cows bred to either IMP. ELCHO OF HARVEYSTOWN, or IMP. EDGARDO OF DALMENY

Write for our 1921 BULL SALE LIST

Woodcote Stock Farm, Ionia, Mich.

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Cows and Heifers Bred to Blackcap Brandon of Woodcote 2nd

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GEO. HATHAWAY & SON, Ovid, 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 F. EITEL, Vermontville, Mich.

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.

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

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The Village Farm Guernseys—offer for sale: The Pride of Sweet Orchard Farms No. 65057. Dropped Dec. 3 1919 ready to head your herd, his full sister now on A. R. test has milked over 2000 lbs. 80 lbs. fat in 50 days. Sire Langwater Wilchester (28658), dam Governor's Minnewaska 24 milking 45 lbs. daily (38158). Sire Langwater Advocate (28144), dam Imp. Gov's Minnewaska (28224). First check of \$250 takes him. Rex Griffin, Herdsman. O.J. Winter, Owner, Sebawaing, Mich.

Guernsey Foundation

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

PAUL LOVE, St. Austell Farms, Jackson, Mich.

FOR SALE CHEAP

Three Guernsey Bulls fourteen months old registered. Five Guernsey Heifers coming two year old and and bred grade stock. JOSEPH A. SCHROEGER, Box 77, Merriman Road, Wayne, Mich.

Registered Guernseys

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

J. M. WILLIAM, No. Adams, 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.

Guernseys, Federal Inspected. Only 1 serviceable age bull left. Born Nov. 1919. Dam's and sire's dams A. R. records over 400 lbs. b. f. Class G. Traces 3 times to Imp. Mashur Sequel. Will ship on approval. Three bull calves under 7 mos. G. W. & H. G. Ray, Albion, Mich.

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

Guernsey Bulls of May Rose Breeding Their dams have records 420 to 650 lbs. fat also a few cows and heifers are offered.

H. W. WIGMAN, Lansing, Mich.

For Sale Six registered Guernsey bulls May Rose breeding ready for service. Cheap if taken soon.

John Ebel, R. 2, Holland, 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 Guernsey yearling bulls Dolly Dimple's May King of Langwater Baking. Priced to sell. Geo. W. Reeves, R. 7, Grand Rapids, Mich.

SON OF A

State Champion

We have for sale a yearling son of "Lucy Canary DeKo" who is State Champion jr. two yr. old for 1919 and 1920. Sired by "Judge Joh. Lyons" who is a son of a 34.63 lb. daughter of King Segis. Write for price and pedigree.

SINDLINGER BROS.

Lake Odessa, Mich.

Reg. Bull Calves. First check for \$30 marked calf from a good dam. Sire's dam is a 23 lb. cow. R. V. Hoyle, R. 3, Mt. Pleasant, Mich.

DUROC SALE
CIRCUIT

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

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

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

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

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

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

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

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

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

W. M. Kelly
For The Michigan Farmer

Sales will Start at 1 o'clock in the Afternoon

Combination Dispersion Sale

40 -- Registered Holsteins -- 40
At Perry, Michigan, Wednesday, March 2, 1921

C. M. Spalding will disperse his entire herd, which has passed a clean test under state and federal supervision.

B. E. Smith and H. O. Loomis will each consign five head. Tuberculin tested and sold with 60-90 day retest privilege.

Sale Managed by
Michigan Holstein-Friesian Association
Old State Block, Lansing, Michigan

The Traverse Herd NOTICE

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.

Two Grandsons of King Of The Pontiacs
Ready for Service

From 31.18 and 28.39 lb. dams

Sire:—King of the Pontiacs Segis No. 169194, who is by King of the Pontiacs and from Hillsdale Segis (a 33 lb. daughter of King Segis) "Nuf Ced."
Dams:—Topsy Clothilde Fobes No. 172906 made 31.18 lbs. butter and 623.8 lb. milk in 7 days.
Sunny Brook Nina Segis No. 43727 at 4 years produced 28.39 lbs. butter and 587.6 lbs. milk in 7 days and 105.94 lbs. butter and 2319.6 lbs. milk in 30 days.
These bulls are nicely marked and good individuals. Herd under federal supervision. Come and see them. For pedigree and information write Mr. Fred Alt, Mgr.

James B. Jones Farms,
Romeo, Mich.

Here Is A Good One.

Born June 2nd, by Maplecrest De Kol Hengerveld, A sire having three sisters each with records of over 1200 pounds of butter in a year, two of them former world champions.
Calf's dam by an own brother to Highland Hartog De Kol with a yearly record of 1247.55. This combination of breeding has produced many 1000 to 1200 cows. If progeny counts, where can you equal it?
Priced \$100.00 for quick sale.
Hillcrest Farm, Mgr F. B. Lay, Kalamazoo, Mich.

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

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

2 Heifer calves sire a 27 lb. son of Maple Crest Korn-dyke Heng. Their dams have 19 lb. 2 yr. old sister and a 27 lb. sire. Terms \$75 down \$50 a year.
A. L. McLAULIN, Redford, Mich.

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

For Sale \$450.00

Cash or Terms
A show bull from A. R. O. Dam born December 15, 1918. Sired by our Show Bull
MODEL KING SEGIS GLISTA
Whose grand dam, GLISTA ERNESTINE, has six times made better than thirty pounds of butter. Buy now in order to have 1921-22 winter calves.
GRAND RIVER STOCK FARMS
315 N. East Ave. Corey J. Spencer, Owner Jackson, Mich.
Under State and Federal Supervision

Federal Accredited Herd Bull For Sale Old enough to service. Dam records, 7 da. milk 467.80, butter 20.85, 305 da. milk 15,115.3, butter 648. She has 2 A. R. O. daughters. His sire a 24 lb. grandson of Olantha Johanna Lad, and three heifer calves 7 mos. old not related to bull. All for \$500.
Vernon Clough, Parma, Mich.

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

Angus Show and Sale

THE Michigan Aberdeen-Angus Breeders' Association, one of the most successful and wideawake state live stock breeders' associations of the country held a two-days' annual meeting at the Michigan State Agricultural College at East Lansing, Michigan, on January 13-14, during the State Live Stock Breeders' Week at that institution. The two-days' session opened with the annual meeting of the Angus Breeders' Association on the afternoon of the thirteenth, which was attended by a large and enthusiastic body of breeders from all over the state. This was followed by a banquet at the Hotel Kerns. The following day a show of Aberdeen-Angus cattle was held in the judging pavilion of the college, which was followed by a sale of pure-bred Angus cattle contributed by the leading breeders in the state. At the association meeting Mr. Alexander Minty gave a talk on the growth and development of the association. Dr. K. J. Seulke, of the American Aberdeen-Angus Breeders' Association discussed marketing of pure-bred live stock. Other subjects discussed were date and location of the annual spring sale, futurity classes at the state fair, community showing and advertising.

The following officers were re-elected for the coming year: President, Alexander Minty, Ionia, Mich.; vice-president, James Curry, Marlette, Mich.; secretary-treasurer, Ward Hathaway, Ovid, Mich.

At the show the following day James Curry, of Marlette, Michigan, won the aged cow class with the cow Rose 3 of Burnbrae, that later sold to the Michigan Agricultural College for their breeding herd. The class for females one year and under was won by Wildwood Farms on Heatherless of Wildwood. She also was later purchased by the college. In the class for bulls any age Woodcote Stock Farm won first with Enthusiast of Woodcote, which later was sold to head the herd of M. C. Baker, of Flint, Michigan.

The sale which followed was one of the cleanest and snappiest strictly cash sales seen for many months, and while the average of \$228 on thirty-one head was not extremely high, the majority of the cattle sold well, and many new herds were founded. Michigan and Ohio buyers took the entire offering, although New York and Connecticut bidders were the runners-up on quite a few of the tops, going home empty-handed. Colonel J. P. Hutton cried the sale in a masterly fashion and deserves much credit for its success.

The following is a detailed report of the animals selling for \$200 and upward:

- Cows.**
Blackcap of Wildwood, to G. R. Martin & Son, Crosswell, Mich., \$700.
Blackcapper Lady 3rd, to Mrs. Catherine Van Cleave, Thompsonville, Mich., \$625.
Heatherless of Wildwood, to Michigan Agricultural College, \$470.
Erica of Woodcote 28th, to F. S. Smith, Hart, Mich., \$240.
Erica of Woodcote 3rd, to J. A. Brown, Detroit, Mich., \$280.
Mildred 3rd of Marlette, to F. S. Smith, Hart, Mich., \$375.
Rose 3rd of Burnbrae, to Michigan Agricultural College, \$350.
Rosamond of Ravensdowne, to A. H. Simcox, Ithaca, Mich., \$200.
Cloverly's Kate, to J. A. Brown, \$215.
Princess of Sprucewood, to J. A. Brown, \$225.
Black Edgar of Wildwood, to Murray McCollum, Unionville, Mich., \$360.
Enthusiast of Woodcote, to M. C. Baker, Flint, Mich., \$575.

COMING POLAND-CHINA SALE.

MR. E. J. MATHEWSON, of Burr Oak, Michigan, holds a Poland-China bred sow sale at his farm February 24. Many know and appreciate the quality of his offering which consists of forty head of big tried sows,

five gilts and five herd sire prospects. Mr. Mathewson has recently added two excellent herd boars to his herd. One of these young boars, Great Monster, is a son of Champion Shively's Monster. He weighed three hundred pounds at eight months of age; is a long and tall pig and possesses wonderful bone and finish. He is one swell pig and excellent judges of the breed predict that he will develop into one of the best sires of the breed. Mr. Mathewson is also using Big Bone Defender, one of the largest Poland China boars in the state.

In order to make his sale of interest to breeders from other parts of the state, Mr. Mathewson decided to put some of his best tried sows in the sale. These sows are a choice lot of individuals and will make the offering very attractive to breeders as well as farmers. Last year Mr. Mathewson sold a carload of bred sows to be used for breed promotion work in North Carolina. W. M. McFadden, secretary of the Poland-China Record Association, purchased these sows and made the selections.

MOLDY SILAGE.

What makes our silage mold? Especially when we leave it over a day. All through our silage so far we find little chunks of silage and when we break it open it is all red inside and we find blue mold in it. Some folks said there was not enough juice in it. But our corn was riper a year ago than it was this year and it did not mold. Is a small handful of salt morning and night fed in the chop too much for a cow?

Sanilac Co.

E. D.

I think your friends have informed you correctly about the cause of mold in your silo. There was not a sufficient amount of moisture and it was not evenly distributed through the silo or there would have been no mold. Of course, if you take ensilage out of the silo and leave it exposed it will begin to mold in a short time. Ensilage should always be fed as soon as possible after taken from the silo. You can hardly tell from the looks of your corn this year and the next year about the per cent of moisture which it contains. The corn could be green this year and yet if we had a dry spell the corn would not contain as much moisture and when there is any doubt about this a little moisture should be added at time of filling the silo.

An animal should have about two ounces of salt per day per thousand pounds of live weight. If you have large animals they require more salt per day than those weighing one thousand pounds.

C. C. L.

SOILING VS. SILAGE.

Kindly tell me how to feed cowpeas and oats to my cows in the late summer. Would you advise putting it in the silo or cutting it as needed? This latter way would take much of my time, which is valuable at that season.

Montcalm Co. L. C. W.

I think you have solved the problem yourself. Soiling of cattle is all very nice, only it takes time every day and interferes with other work. Besides there is only just a few days when a soiling crop is at its best. It soon gets too matured and you must commence feeding it before it gets matured enough, then continue to feed after it matures too much. But if you will cut the crop and put it in the silo just when it is in the best condition, you have saved it all at the least expense and preserved it at the time when it is in the best condition to feed. In my judgment a summer silo beats soiling in many ways.

C. C. L.

It should be managed to build the flock up a little every year. This can be done by saving out the choicest lambs, by buying now and then a good head for the flock, and by the very best feeding and care possible.



This fine JERSEY, at 9 yrs. 8 mos., gave 16,238 lbs. milk in one year. Records like that are worth trying for.



There's more to milk-production than just good feeding

MILK-PRODUCTION records do not happen by chance. Neither are they the result of good feeding alone. Fact is, the very process of "forcing" a cow to maximum milk-giving is full of grave dangers to her health unless the milk-making organs are assisted in the rebuilding process.

The recognition of this fact by scientific dairymen is in large measure the reason for the extensive use of Kow-Kare. While primarily a medicine for treating sick cows, the recognized tonic and strengthening effect of Kow-Kare on the organs of production have caused it to be widely used as a preventive of disorders such as are common to cows. Every cent thus spent in assisting Nature will return dollars in increased milk yield alone—to say

nothing of avoiding expensive losses through sickness.

When disorders do arise—such as Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite, Bunches, you'll find Kow-Kare a reliable, prompt remedy. Its action on the digestive and genital organs is restorative and strengthening. Such diseases disappear when these organs are strong.

Whether you have sick cows or not you can increase your milk income by the proper use of Kow-Kare—if only as a preventive of trouble.

The expense is slight. Kow-Kare is sold by feed dealers, general stores and druggists; 70c and \$1.40 packages.

Write us for our valuable free book, "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY, Lyndonville, Vt

NOTE: The trademark 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.



HOLSTEIN GATTLE

Messrs. Robinson & Schultz, Independence, Kansas, write:

"Three years ago in September we bought a Holstein cow for \$240. This cow has produced \$2,520 worth of milk in three years, and it cost us \$800 to feed her. Her four heifers are worth \$2,200. This cow has brought a net profit into our herd of \$3,400."

Send for Free Booklets

The Holstein-Friesian Association of America 164 American Bldg., Brattleboro, Vermont

Young Bull X.I. Paul DeKel Maple Crest 326 lbs. good individual 15 months old \$945. breeding both sides also bull calves 2 and 3 months old. Priced for quick sale. RIVERVIEW FARM, R-2, Vassar, Mich.

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Two Registered Holstein Bulls 2 and 4 mos. old. Nice straight individuals, from good dams \$100 each. J. M. EAGER, Howell, 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 herd is rich in the blood of Colantha 4th Johanna, the only cow that ever held all world's records in every division from one day to one year at the same time. She produced 651.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7 1/2 lbs. in 7 days.

His dam's records are: Milk 1 Day 100.1 lbs. Milk 7 Days 659.3 lbs. Butter 7 Days 26.31 lbs.

His name is KING VALE CORNUCOPIA WAYNE, No. 312599

Born February 6, 1920

His dam and sire's two nearest dams average

Butter 7 Days 33.02 lbs.

Milk 7 Days 607.3 lbs.

Handsomely marked about one third white.

\$250.00 f. o. b. Howell.

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All herds under U. S. Supervision.

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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 Duteland 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 25431 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.

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Allen Bros. Paw Paw, Mich.
Address Until June 1st. 1921.

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Hereford Bull 15 months old, choice breeding, a good one. First check for \$100 takes him. Registered, crated, f. o. b. this station. E. J. TAYLOR, Fremont, Mich.

Stop! Listen! Think! Act! Mr. Dairy Farmer

Are you keeping cows for money or for fun? To make you money or just get rid of your feed? To make money of course. To get the largest profit for feed consumed. The Jersey will do this. She has proven it in public tests and in private herds. She should; she has been bred for over two hundred years for economical production. This characteristic is fixed. The Jersey bull transmits it to his daughters. Grade up your dairy herd by using a pure bred Jersey sire. It will pay. Ask the man who has tried it. He knows. Remember—Economic Production is what we must have to succeed, and success is what we want.

JERSEYS
The Profit Breed

"The Key to Dairy Profits" and "Jersey Facts"—two important books, telling how farmers are making real profit today with Jerseys—how anyone can do it anywhere. Whether you are interested in one cow or a hundred, these books will show you how to make money.

Free—Write today
American Jersey Cattle Club, 324 N. W. 23 St. New York

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

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

Lillie Farmstead Jerseys Bull calves from COLON C. LILLIE, Coopersville, Mich.

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

Jersey bulls for sale: From Marguerite's Premier grandson of Pogue's 99th and R. of M. dams, SMITH & PARKER, R. 4, Howell, Mich.

Meridale Interested Owl No. 11311 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

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

BIDWELL SHORTHORNS BUY A BULL

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

BIDWELL STOCK FARM, Box D, Tecumseh, Michigan

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

The Maple's Shorthorns
Kirklevington Lad, by Imp. Hartford Welfare. In service, bulls for sale. J. V. WISE, Gobleville, Mich.

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 Polled Shorthorn Cattle
Young Bulls For Sale
Several well bred herd bull prospects. GEO. E. BURDICK, Mgr., Coldwater, Mich.

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

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

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

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

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

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

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

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

Shorthorn SHOW AND SALE

Michigan Shorthorn Breeders' Association

AT EAST LANSING, MICHIGAN
Friday, February 25th,
SHOW 10 A. M. SALE 1 P. M.

37 FEMALES 46 HEAD 9 BULLS
About one-half Scotch About one-half Scotch Topped

Many of the Best Families Represented
Every Animal Guaranteed, Tested and Sold Subject to 60 Days Retest

IF YOU WANT
Shorthorns of Real Merit Come to Sale

PERCHERON and BELGIAN HORSE SALE

25 MARES 3 STALLIONS

Same Place, February 24th

Write for Catalogues

Auctioneers W. E. J. EDWARDS, Manager
ADAMS & HUTTON East Lansing, Mich.

Big Type Poland Chinas

Will sell

Thursday, February 24, 1921
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(Under cover)

40 HEAD BRED GILTS, TRIED SOWS
5 HERD BOAR PROSPECTS
5 TOP FALL GILTS

All Double Immune Some Great Attractions
Trains will be met at Sturgis on N. Y. C. and Nottawa on G. R. & I., A. M. of sale.
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E. J. MATHEWSON,
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IRA COTTINGHAM, W. M. KELLY,
Auctioneer For the Michigan Farmer

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.

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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 JERSEYS

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

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

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

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

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



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

Brookwater Duroc Jerseys
BOARS—Ready for Service
Bred Sows and Gilts

Write us for Prices and Pedigrees
Mail orders a Specialty. Satisfaction guaranteed.
BROOKWATER FARM, Ann Arbor, Mich.
H. W. Mumford, Owner J. B. Andrews, Mgr.

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

DUROC JERSEYS

Carey U. Edmonds, Hastings, Mich.

40 Head. Duroc Jersey Bred Sow Sale, March 5th. Auto's in waiting at Park Hotel, Monroe, also at National Hotel, Dundee, be our guest sale day. F. J. Drott, Monroe, Mich.

DUROC JERSEYS Boars and gilts by Mich. Pathfinder. E. D. HEYDENBERG, Wayland, Mich.

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

O. I. C.'s choice spring pigs either sex. Booking orders for fall plus. We register free and ship C. O. D.
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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, mile west of Depot, Ott's. Phone 124. Otto B. Schuize, Nashville, 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.
GLOVER LEAF STOCK FARM, Monroe, Mich

O. I. C. Gilts bred for April and May farrow. Shipped C. O. D.
H. W. MANN, Dansville, Mich.

We Are Offering at special low prices O. I. C. fall pigs sired by State Fair winners.
WEBER BROS., Phone 408, Royal Oak, Mich.

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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

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.

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.

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

O. I. C.'s. Big Type Gilts, bred for Mar. and April farrow. Boars all ages. Write me for prices.
G. F. ANDREWS, Mason, Mich.

L. S. P. C. a few choice boars at farmers prices, gilts bred to Black Giant one of the best pigs out of Ill. this fall. Also a grandson of The Clan-man and Harrison Big Bob. H. O. SWARTZ, Schoolcraft, Mich

Big Bob Mastodon Spring gilts bred for March and April and some sows bred to Big Bob his sire was champion of the world, his dam's sire was Grand Champion of Iowa State Fair.
C. E. GARNANT, Eaton Rapids, Mich.

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70 head of Poland Chinas at private sale. Am offering spring boars from \$40 to \$50 and gilts the same price. Summer and fall pigs \$25 each. The first check will bring you the first choice. HART FULCHER & CLINE, Address F. T. Hart, St. Louis, Mich.

Francisco Farm Poland Chinas

Offering a dozen choice gilts and a few tried sows bred to such boars as Michigan Mastodon and Michigan Clansman.
F. P. POPE, Mt. Pleasant, Mich.

BIG TYPE POLANDS

Bred gilts for sale. Also a few choice fall pigs by The Clansman and his son The Clansboy. They are great. Immune and registered. Come or write.
WESLEY HILL, R. 5, Ionia, Mich.

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The Standard Remedy

Human and Veterinary

As a veterinary remedy its curative qualities have been acknowledged for many years in cases of Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Spavin, Ringbone and other bony tumors.

A Perfect Antiseptic

Soothing and Healing

For treatment of Rheumatism, Sprains, Neuralgia, Lumbago, Sore Throat, Stiff Joints, Cuts and Bruises it is invaluable. \$1.75 per bottle at druggists, or sent by parcel post on receipt of price.

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5450 PUTS THIS NEW MILL ON YOUR OLD TOWER

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Albion Mills are quiet and powerful. Fit any 4-post steel tower. We furnish new cast-iron and guides without extra charge. One-third the working parts of any other mill. Only main Pulman bearing subject to wear. This is silent. Requires no attention. Will last for years. Is then replaceable in 20 minutes. Covered by dependable weight without springs. You need a good Mill now to shorten your chores and ease the backache. This is your chance—get Albion direct from the manufacturer, fully guaranteed. We also make high grade steel mills. Write today for catalog.

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Because it has been on the market TEN YEARS, without a SINGLE FAILURE.


Made of famous Brazil Vitified Fire Clay—ONE ton costs as much as FIVE tons of shale.

THE "B-V-T" WILL LAST FOREVER

Will not freeze or crack. Keeps airtight in perfect condition. You never have to rebuild a "B-V-T"

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Brazil Hollow Brick and Tile Company
BRAZIL INDIANA



Dickey Glazed Tile Silos

Best of materials, six different diameters, overlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field

Send for catalog No. 9

W. S. Dickey Clay Mfg. Co.
Macon, Ill.
Kansas City, Mo. Chattanooga, Tenn.

CATTLE

Scotch-Topped Shorthorns Two cows, 2 year old heifer, yearling heifer, and bull calf. Write for pedigrees and price. SHOESMITH & BRICKER, East Lansing, Mich.

HOGS

LARGE Type Poland Chinas. A few choice fall boars for sale. Write or come and see them. A. A. FELDKAMP, R. 2, Manchester, Mich.

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

Big Type Poland Chinas bargain \$75 buys a bred gilt and a 250 lb. spring boar also choice gilts bred for \$40. Guarantee Satisfaction. DORUS HOVER, Akron, Mich.

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

P. C. Bred sows; Fall pigs singly or in pairs. Also S. C. Minorca cockerels all big Type of the best of breeding. Satisfaction guar. R. W. Mills, Saline, Mich.

L. T. P. C. If you are looking for something good, in bred gilts at a right price. Write W. J. HAGELSHAW, Augusta, Mich.

POLAND China Bred Sows and Gilts at bargain prices, also spring boars and fall pigs, either sex. CLYDE FISHER, R. 3, St. Louis, Michigan

Leonar's Big Type P. C. Sows bred to Orange Clansman, Fall boar pigs weigh 175 lbs. Real herd boar prospects. Call or cite. E. R. Leonard, R. 3, St. Louis, Mich.

Registered Hampshire gilts now ready to ship. Spring boars and fall pigs at a bargain. JOHN W. SNYDER, R. 4, St. Johns, Mich.

HORSES

Belgian Stallion for sale good breeder and well broken for farm work. W. B. STICKLE, Three Oaks, Mich.

FARM BUREAU MEETING.

(Continued from page 207).
members are all farm bureau members.

5. Districting of the state for commercial purposes with supervisors in charge responsible to the commercial departments of the Michigan State Farm Bureau should be given earnest consideration during the coming year.

6. The farm is the smallest business unit in the organization. Man and wife should be considered as a business firm and entitled to one vote for one membership.

7. The matter of adequate office facilities and warehousing accommodations should be given immediate attention by the executive committee. It will only be a comparatively short time before our present quarters are outgrown.

8. Early completion of the membership campaign in the seven counties of the state which have not been canvassed yet should occur.

9. Finance is one of the biggest problems today confronting the farmers of the state and nation. A study and analysis of the present banking system and their relation to our cooperative marketing association should be begun. Longer term credits for these associations and for individual farmers are absolutely essential, if the farmers and their organizations are to go far in doing their own marketing. This is a matter which has been talked of for years. Nothing definite has been done along this line. Action, not talk, has been the slogan of the State Farm Bureau. It should be put to work here.

The delegates voted to leave the matter of policy in the hands of the executive committee.

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.

Indigestion.—Four months ago I purchased a bull calf that was five months old; since then he has not thrived as well as I wished. How old should a bull be for service? A. P., Crystal Falls, Mich.—You fail to mention any symptoms of sickness or injury, therefore the writer is inclined to believe he has not been fed enough nutritious food to cause him to grow; you have seemingly allowed him to become stunted. Mix equal parts of ginger, gentian, cinchona, bicarbonate of soda and salt together and give him a tablespoonful in ground feed three times a day. Keep him warm, feed him some clover, alfalfa and roots. A well-kept bull calf should be ready to do some service at twelve months.

Feline Distemper.—Can you tell me what is the trouble with my cats? I lost all of them last winter. They cough, sneeze and seemingly choke. Some of them are only sick a week or ten days then die. Others linger longer, but die. S. F. N., Woodland, Mich.—Distemper is a contagious and infective disease of cats, and I regret to say, no remedy has as yet been discovered for it. It is possible that they suffer from feline diphtheria, the most fatal of all cat diseases. However, this disease usually runs its course in twenty-four hours or less. The best advice I can give you is to take good care of your cats, clean and disinfect their kennel, feed them plenty of raw meat. Wash out mouth and throat with one part chinosol and one thousand parts water and give each cat two or three tablespoonfuls once or twice daily.

Mammitis—Mastitis—Garget.—We have a herd of thirty cows and for some time past have had more or less trouble with them giving thick garget milk from one or more quarters of their udder. Whatever the ailment is, it seems to last from two to five weeks. The cows are fed twenty-five pounds of corn ensilage per cow daily, eight quarts of chopped feed per cow daily, alfalfa hay twice a day, all they care to eat, besides plenty of shredded cornstalks once a day. J. N., Flat Rock, Mich.—Doubtless you have had your herd tuberculin tested; if not, do so at once. Clean and disinfect stable and see that plenty of fresh air is admitted, also ventilate your barn. You cannot be too painstaking regarding the cleaning and airing of the milking utensils, besides the hands of milker should be very clean. Perhaps the least expensive and most satisfactory course to pursue is to employ a competent veterinarian, who should examine each cow.



Cut the Costs—Swell the Profits

The stock-grower who keeps his cost of production low enough is safe on any market. Selling on a high market he gets big profits—on a low market he gets some profits instead of facing a loss.

And whether you produce dairy products, beef, pork, mutton or wool you can surely reduce costs by regularly adding to the ration the tested, dependable stock tonic—

Pratts Animal Regulator

It helps build and preserve stock health—that means work animals in the harness every day, steady milk production from every cow, rapid growth of young stock. It aids digestion—that means a saving of food, all used, none wasted. It strengthens and tones up the whole system—that means strength, vigor and vitality without which any animal is of little value.

Cut costs, too, by checking contagious diseases which may kill some of your stock and seriously injure the rest. Use, regularly and freely,

Pratts Dip and Disinfectant

to kill disease germs and parasites. As a dip to exterminate lice and ticks and overcome skin troubles. As a disinfectant to maintain stables and pens in sanitary condition. Low in cost—safe—powerful—efficient.

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AUCTION

Thurs., February 24, 1921

At 1:00 P. M.

Stock Judging Pavilion, Michigan Agricultural College

27 Registered Percheron and Belgian MARES 27
3 STALLIONS 3

A Few Good Grade Work Horses

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

TREAT YOUR OWN HERD FOR ABORTION STOP LOSING CALVES

Dr. DAVID ROBERTS' ANTI-ABORTION TREATMENT has been successfully used for nearly thirty years—it is past the experimental stage. Its effectiveness in preventing and overcoming Abortion in Cows is being satisfactorily demonstrated in hundreds of herds every year. Whether you own five head or five hundred, you can



Stamp Abortion Out and Keep It Out

Ask for the "CATTLE SPECIALIST" sent free on request. Answers every question pertaining to ABORTION IN COWS. Tells how to treat your own herd at small expense. Write Dr. DAVID ROBERTS VETERINARY CO., Inc. 640 Grand Ave., Waukesha, Wis.

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

Shropshires Choice ewes, all ages, bred to imported ram. Also a few rams W. B. McQUILLAN, R. 7, Howell, Mich.

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

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

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"The Key to Dairy Profits" and "Jersey Facts"—two important books, telling how farmers are making real profit today with Jerseys—how anyone can do it anywhere. Whether you are interested in one cow or a hundred, these books will show you how to make money.

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

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

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

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

Jersey bulls for sale: From Marguerite's Premier a grandson of Pogis 99th and R. of M. dams.
SMITH & PARKER, R. 4, Howell, Mich.

Meridale Interested Owl No. 111811 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

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

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BUY A BULL

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

BIDWELL STOCK FARM,
Box D; Tecumseh, Michigan

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

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

J. V. WISE, Gobleville, Mich.

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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

Polled Shorthorn Cattle

Young Bulls For Sale

Several well bred herd bull prospects.
GEO. E. BURDICK, Mgr., Coldwater, Mich.

VALLEY VIEW FARMS

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

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

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

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

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

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

HOGS

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

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

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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.

Shorthorn SHOW AND SALE

Michigan Shorthorn Breeders' Association

AT

EAST LANSING, MICHIGAN

Friday, February 25th,
SHOW 10 A. M. SALE 1 P. M.

37 FEMALES 46 HEAD 9 BULLS
About one-half Scotch About one-half Scotch Topped

Many of the Best Families Represented
Every Animal Guaranteed, Tested and Sold Subject to 60 Days Retest

IF YOU WANT

Shorthorns of Real Merit Come to Sale

PERCHERON and BELGIAN HORSE SALE

25 MARES 3 STALLIONS

Same Place, February 24th

Write for Catalogues

Auctioneers W. E. J. EDWARDS, Manager
ADAMS & HUTTON East Lansing, Mich.

Big Type Poland Chinas

Will sell

Thursday, February 24, 1921
at Farm

(Under cover)

40 HEAD BRED GILTS, TRIED SOWS
5 HERD BOAR PROSPECTS
5 TOP FALL GILTS

All Double Immune Some Great Attractions

Trains will be met at Sturgis on N. Y. C. and Nottawa on G. R. & I., A. M. of sale.

WRITE FOR CATALOG

E. J. MATHEWSON,
Burr Oak, Mich.

IRA COTTINGHAM,
Auctioneer

W. M. KELLY,
For the Michigan Farmer

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 JERSEYS

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

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

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

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

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

DUROCS WITH QUALITY

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

Brookwater Duroc Jerseys
BOARS—Ready for Service
Bred Sows and Gilts

Write us for Prices and Pedigrees
Mail orders a Specialty. Satisfaction guaranteed.
BROOKWATER FARM, Ann Arbor, Mich.
H. W. Mumford, Owner J. B. Andrews, Mgr.

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

DUROC JERSEYS

Carey U. Edmonds, Hastings, Mich.

40 Head. Duroc Jersey Bred Sow Sale, March 5th. Auto's in waiting at Park Hotel, Monroe, also at National Hotel, Dundee, be our guest sale day. F. J. Drodt, Monroe, Mich.

DUROC JERSEYS Boars and gilts by Mich. Pathfinder.
E. D. HEYDENBERG, Wayland, Mich.

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

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 growth stock 1/2 mile west of Depot. City's Phone 124. Otto B. Schulze, Nashville, Mich.


O. I. C.'s Fall pigs by C. O. Big Callaway have size and quality and are priced right.
C. J. THOMPSON, Rockford, Mich.

O. I. C. Bred Gilts for Mar. and Apr farrow also a few choice service boars.
CLOVER LEAF STOCK FARM, Monroe, Mich

O. I. C. Gilts bred for April and May farrow. Shipped C. O. D.
H. W. MANN, Dansville, Mich.

We Are Offering at special low prices some of our choice O. I. C. fall pigs sired by State Fair winners.
WEBER BROS., Phone 408, Royal Oak, 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 4 months old. Write for my plan—More Money from Hogs.
G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

For Sale O. I. C. Swine, Strictly Big Type with good quality 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.

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.

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

O. I. C.'s Big Type Gilts, bred for Mar. and April farrow. Boars all ages. Write me for prices.
G. P. ANDREWS, Mason, Mich.

L. S. P. C. a few choice boars at farmers' prices, gilts bred to Black Giant one of the best pigs out of all this fall. Also a grandson of The Oman and Harrison Big Bob. H. O. SWARTZ, Schoolcraft, Mich.

Big Bob Mastodon Spring gilts bred for March and April and some sows bred to Big Bob his sire was champion of Iowa State Fair.
C. E. GARNANT, Eaton Rapids, 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, FULGHER & CLINE, Address F. T. Hart, St. Louis, Mich.

Francisco Farm Poland Chinas

Offering a dozen choice gilts and a few tried sows bred to such boars as Michigan Mastodon and Michigan Clansman.
F. P. POPE, Mt. Pleasant, Mich.

BIG TYPE POLANDS

Bred gilts for sale. Also a few choice fall pigs by The Clansman and his son The Clansboy. They are great. Immune and registered. Come or write.
WESLEY HILE, R. 6, Ionia, Mich.

FARM BUREAU MEETING.

(Continued from page 207).
 members are all farm bureau members.
 5. Districting of the state for commercial purposes with supervisors in charge responsible to the commercial departments of the Michigan State Farm Bureau should be given earnest consideration during the coming year.
 6. The farm is the smallest business unit in the organization. Man and wife should be considered as a business firm and entitled to one vote for one membership.
 7. The matter of adequate office facilities and warehousing accommodations should be given immediate attention by the executive committee. It will only be a comparatively short time before our present quarters are outgrown.
 8. Early completion of the membership campaign in the seven counties of the state which have not been canvassed yet should occur.
 9. Finance is one of the biggest problems today confronting the farmers of the state and nation. A study and analysis of the present banking system and their relation to our cooperative marketing association should be begun. Longer term credits for these associations and for individual farmers are absolutely essential, if the farmers and their organizations are to go far in doing their own marketing. This is a matter which has been talked of for years. Nothing definite has been done along this line. Action, not talk, has been the slogan of the State Farm Bureau. It should be put to work here.
 The delegates voted to leave the matter of policy in the hands of the executive committee.

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.

Indigestion.—Four months ago I purchased a bull calf that was five months old; since then he has not thrived as well as I wished. How old should a bull be for service? A. P., Crystal Falls, Mich.—You fail to mention any symptoms of sickness or injury, therefore the writer is inclined to believe he has not been fed enough nutritious food to cause him to grow; you have seemingly allowed him to become stunted. Mix equal parts of ginger, gentian, cinchona, bicarbonate of soda and salt together and give him a tablespoonful in ground feed three times a day. Keep him warm, feed him some clover, alfalfa and roots. A well-kept bull calf should be ready to do some service at twelve months.

Feline Distemper.—Can you tell me what is the trouble with my cats? I lost all of them last winter. They cough, sneeze and seemingly choke. Some of them are only sick a week or ten days then die. Others linger longer, but die. S. F. N., Woodland, Mich.—Distemper is a contagious and infective disease of cats, and I regret to say, no remedy has as yet been discovered for it. It is possible that they suffer from feline diphtheria, the most fatal of all cat diseases. However, this disease usually runs its course in twenty-four hours or less. The best advice I can give you is to take good care of your cats, clean and disinfect their kennel, feed them plenty of raw meat. Wash out mouth and throat with one part chinolol and one thousand parts water and give each cat two or three tablespoonfuls once or twice daily.

Mammitis—Mastitis—Garget.—We have a herd of thirty cows and for some time past have had more or less trouble with them giving thick garget milk from one or more quarters of their udder. Whatever the ailment is, it seems to last from two to five weeks. The cows are fed twenty-five pounds of corn ensilage per cow daily, eight quarts of chopped feed per cow daily, alfalfa hay twice a day, all they care to eat, besides plenty of shredded cornstalks once a day. J. N., Flat Rock, Mich.—Doubtless you have had your herd tuberculin tested; if not, do so at once. Clean and disinfect stable and see that plenty of fresh air is admitted, also ventilate your barn. You cannot be too painstaking regarding the cleaning and airing of the milking utensils, besides the hands of milker should be very clean. Perhaps the least expensive and most satisfactory course to pursue is to employ a competent veterinarian, who should examine each cow.

Gombault's Caustic Balsam

The Standard Remedy
 Human and Veterinary
 As a veterinary remedy its curative qualities have been acknowledged for many years in cases of Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Spavin, Ringbone and other bony tumors.

A Perfect Antiseptic
 Soothing and Healing
 For treatment of Rheumatism, Sprains, Neuralgia, Lumbago, Sore Throat, Stiff Joints, Cuts and Bruises it is invaluable. \$1.75 per bottle at druggists, or sent by parcel post on receipt of price.

The Lawrence-Williams Co., Cleveland, O.

5450 PUTS THIS NEW MILL ON YOUR OLD TOWER
 ALBION
 Albion Mills are quiet and powerful. Fit any 4-post steel tower. We furnish new cast-iron and guide without extra charge. One-third the working parts of any other mill. Only main Pinna bearing subject to wear. This is silica. Requires no attention. Will last for years. Is then replaceable in 20 minutes. Governed by dependable weight without springs. You need a good mill now to shorten your chores and ease the backache. This is your chance—get Albion direct from the manufacturer, fully guaranteed. We also make high grade steel mills. Write today for catalog.
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Because it has been on the market TEN YEARS, without a SINGLE FAILURE.

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Brazil Hollow Brick and Tile Company
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Dickey Glazed Tile Silos
 Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.
 The Fruit Jar of the Field
 Send for catalog No. 9
 W. S. Dickey Clay Mfg. Co.
 Macomb, Ill.
 Kansas City, Mo., Chattanooga, Tenn.

CATTLE

Scotch-Topped Shorthorns Two cows, 2 year old and bull calf. Write for pedigrees and price. SHOESMITH & BRICKER, East Lansing, Mich.

HOGS

LARGE Type Poland Chinas. A few choice fall boars for sale. Write or come and see them. A. A. FELDKAMP, R. 2, Manchester, Mich.

Big Type P. C. some very choice boars double Im-mune, out 100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Big Type Poland Chinas bargain \$75 buys a bred gilt and a 250 lb. spring boar also choice gilts bred for \$40. Guarantee Satisfaction. DORUS HOVER, Akron, Mich.

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

P. C. Bred sows. Fall pigs singly or in pairs. Also S. C. Minorca cockerels all big type of the best of breeding. Satisfaction guar. R. W. Mills, Saline, Mich.

L. T. P. C. If you are looking for something good, in bred gilts at a right price. Write W. J. HAGESHAW, Augusta, Mich.

POLAND China Bred Sows and Gilts at bargain prices, also spring boars and fall pigs, either sex. CLYDE FISHER, R. 3, St. Louis, Michigan

Leonard's Big Type P. C. Sows bred to weigh 175 lbs. Real herd boar prospects. Call or cite. E. R. Leonard, R. 3, St. Louis, Mich.

Registered Hampshire gilts now ready to ship. Spring boars and fall pigs at a bargain. JOHN W. SNYDER, R. 4, St. Johns, Mich.

HORSES

Belgian Stallion for sale good breeder and well broken for farm work. W. B. STICKLE, Three Oaks, Mich.



Cut the Costs—Swell the Profits

The stock-grower who keeps his cost of production low enough is safe on any market. Selling on a high market he gets big profits—on a low market he gets some profits instead of facing a loss.

And whether you produce dairy products, beef, pork, mutton or wool you can surely reduce costs by regularly adding to the ration the tested, dependable stock tonic—

Pratts Animal Regulator

It helps build and preserve stock health—that means work animals in the harness every day, steady milk production from every cow, rapid growth of young stock. It aids digestion—that means a saving of food, all used, none wasted. It strengthens and tones up the whole system—that means strength, vigor and vitality without which any animal is of little value.

Cut costs, too, by checking contagious diseases which may kill some of your stock and seriously injure the rest. Use, regularly and freely,

Pratts Dip and Disinfectant

to kill disease germs and parasites. As a dip to exterminate lice and ticks and overcome skin troubles. As a disinfectant to maintain stables and pens in sanitary condition. Low in cost—safe—powerful—efficient.

Make this your motto—"Every animal on the job every day." Then make good by using Pratts Stock Preparations. You must be pleased—

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Get the Genuine Pratts Preparations
There's a Pratt Dealer near you.

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Makers of Pratts Poultry Regulator, Butter-milk Baby Chick Food, Cow Tonic, Hog Tonic, Stock and Poultry Remedies.

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AUCTION

Thurs., February 24, 1921

At 1:00 P. M.

Stock Judging Pavilion, Michigan Agricultural College

27 Registered Percheron
and Belgian MARES 27

3 STALLIONS 3

A Few Good Grade Work Horses

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

TREAT YOUR OWN HERD FOR ABORTION STOP LOSING CALVES

Dr. DAVID ROBERTS' ANTI-ABORTION TREATMENT has been successfully used for nearly thirty years—it is past the experimental stage. Its effectiveness in preventing and overcoming Abortion in Cows is being satisfactorily demonstrated in hundreds of herds every year. Whether you own five head or five hundred, you can



Stamp Abortion Out and Keep It Out

Ask for the "CATTLE SPECIALIST," sent free on request. Answers every question pertaining to ABORTION IN COWS. Tells how to treat your own herd at small expense. Write
Dr. DAVID ROBERTS VETERINARY CO., Inc. 640 Grand Ave., Waukesha, Wis.

SHEEP.

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

Shropshires Choice ewes, all ages, bred to imported ram. Also a few rams. W. B. McQUILLAN, R. 7, Howell, Mich.

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

HORSES

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

LATEST MARKET REPORTS

GRAIN QUOTATIONS

February 8, 1921.

Wheat.

Detroit.—Cash No. 2 red \$1.82; May \$1.75; No. 2 white and No. 2 mixed \$1.80.

Chicago.—No. 3 hard \$1.64; No. 1 northern \$1.67½@1.70; March \$1.61¼.

Corn.

Detroit.—Cash No. 3 yellow 64c; No. 4 yellow 61c.

Chicago.—No. 2 mixed 62@63c; No. 2 yellow 64c.

Oats.

Detroit.—Cash No. 2 white 45c; No. 3 white 43½c; No. 4 white 40½c.

Chicago.—No. 2 white 41½@42½c; No. 3 white 39¾@40¼c.

Beans.

Detroit.—Immediate and prompt are steady at \$4 per cwt.

Chicago.—White beans steady. Hand-picked beans choice to fancy \$4.25@4.50; red kidney beans \$8.75@9 per cwt.

New York.—Market is dull. Choice pea, new \$4.50@4.75; do medium at \$5.50; red kidney \$9.25@9.50 per cwt.

Rye.

Detroit.—Cash No. 2 rye \$1.54.

Seeds.

Detroit.—Prime red clover \$11.75; alsike \$16; timothy \$3.10 per bushel.

Toledo.—Prime red clover, cash and February \$11.20; alsike \$15.50; timothy \$3 per bushel.

Hay.

No. 1 timothy \$21@22; standard and light mixed \$20@21; No. 2 timothy \$19@20; No. 1 clover mixed and No. 1 clover \$19@20; rye straw \$12@13; wheat and oat straw \$11@12 per ton in carlots at Detroit.

WHEAT

Wheat prices declined during the past week to the lowest price on the crop. Export sales have been smaller than a few weeks ago and the news from foreign countries has not been assuring. British resale prices on imported wheat have been reduced twice during the week. On the other hand, reports that Italy, Holland and some other European countries would not make additional purchases for several weeks have been contradicted by actual purchases in this country made only a few days after the statements were issued. The milling demand seems to be gradually increasing and mills are reported to be outbidding exporters in the southwest. Flour demand has shown improvement in several sections of the country. Practically all of the statistical summaries upon the wheat situation in the United States now being issued by various members of the grain trade indicate that this country is on a domestic basis and not dependent upon foreign buyers for the disposition of the remainder of the crop. The government's report supports the belief that there will only be a small carryover. By the end of the present month the market should be on a stronger basis.

CORN

A week ago the visible supply of corn showed an increase of around 4,500,000 bushels or nearly 50 per cent as a result of the big run during the preceding week and prices declined to new low figures for the crop. A further increase is expected during the past week in spite of reduced sales by producers. The supply of corn is 3.4 per cent larger than in the 1912-1913 crop year which represented the previous record, while the number of hogs is 7.6 per cent larger than at that time, and the number of cattle other than milch cows is 14.3 per cent larger than on January 1, 1913. While crop reserves on March 1 are certain to be larger than usual and may establish a new record, the figures may not amount as high as trade interests expect because of the large farm consumption. Normally lowest prices on corn are established from December to February inclusive and since present prices to the farmer are less than the pre-war cost of production in many cases it is hard to see why this seasonal behavior will not run true to form this year.

OATS

Quotations continue downward. The visible supply stands at about 33,000,

000 bushels compared with an average of about 22,000,000 bushels for the past ten years.

SEEDS

Demand for clover and timothy seed remains comparatively light. Seedmen are not buying heavily for future needs and demand from farmers for spring seeding is not brisk. Growers are estimated to have over half of the red clover and alfalfa, over one-third of the alsike, and possibly two-thirds of the sweet clover seed crops in their hands. Supplies are liberal because of the larger crop and the liberal carry-over. Imports are much smaller than a year ago. The future of prices depends upon whether the expected large spring demand develops or not.

FEEDS

Wheat and corn by-product feeds declined again during the past week, influenced by fresh declines in corn and oats. Continued open weather is another bearish influence. Stocks in the northwest are above normal. Gluten feed declined about \$13 in two weeks. Oil meals show little change, although both linseed meal and cottonseed meal has shown weakness. Tankage is also lower.

BEANS

Michigan beans show no change in prices compared with a week ago. The choice hand-picked stock is quoted at \$4.20 f. o. b. Michigan points and \$3.50 is the prevailing price to growers for beans in the dirt. Chicago reports a feeling of greater firmness in the trade but some other points are decidedly nervous.

HAY

Hay markets remain dull, with a comparatively light movement in and out. Lower freight rates may come later on but they would probably be offset by the big holdings in growers' hands and the relative cheapness of grains and other feeds. Cincinnati is overburdened with poor quality timothy. Prices show few changes, mostly on the downward side.

BUTTER

The butter markets have been going from bad to worse during the past

week reaching the lowest point in a long while. The principal factor has been the weakness of the New York market due to heavy offerings of foreign butter. Chicago was short of fresh butter but continued weakness in the east carried it along. About 4,000 boxes of Argentine butter arrived at Boston and 6,000 boxes at New York City. Cargoes of Danish also arrived carrying 1,900 boxes and 5,300 casks. Another shipment of 22,000 cases was reported to have left Copenhagen on February 4. Additional shipments offered as low as 42c f. o. b. duty unpaid were also reported. Recent shipments have all been of high quality and the eastern trade came to prefer the Danish product so that domestic butter could only be moved by making price concessions. The market continued to slip until the Danish shippers refused to cut their prices further. Fresh butter is now so cheap that there is no demand for storage butter. There is little change in the domestic production and but little centralized of fine quality has been produced yet. Quotations on 92 score fresh butter as reported by the Bureau of Markets on February 5 were as follows: Chicago 45¼c; New York 46c; Philadelphia 46c; Boston 47c.

EGGS AND POULTRY

Weather is favorable for winter egg production and receipts are increasing while buyers are purchasing sparingly and waiting for lower prices. Drastic declines occurred during the week. The latest quotations are:

Chicago.—Eggs, fresh firsts 45c; ordinary firsts 42@43c. Poultry, spring chickens 29½c; hens, general run at 28c; roosters 21c; ducks 28@35c; geese 22c; turkeys 43c.

Detroit.—Eggs, fresh 51@52c. Live poultry, spring chickens 29@30c; leg-horns 21@25c; heavy hens 32@35c; light hens 30c; roosters 20c; geese 27@28c; ducks 38c; turkeys 40@42c.

CHEESE

Cheese distributing markets lost their firmness during the past week, due to offerings at lower prices on the country markets. The only exceptions were Daisies which are in strong demand. Young Americas were particu-

larly weak. Eastern markets, as well as western were on the easy side. The volume of trading is only moderate. Export demand is very quiet. The quality of offerings is average and shows the usual winter defects. Receipts at Chicago and New York made a bid increase over the preceding week and a 60 per cent increase over last year.

POTATOES

Open weather in producing sections has accelerated the movement of potatoes notwithstanding low prices. Even heavier shipments are expected next month. Prices declined about 10c per 100 pounds at northern shipping points to 75@90c per 100 pounds sacked. New York f. o. b. markets are quoted at \$1 @1.08. The Detroit market is lower at \$1.75@1.90 per 150-lb sack. The Chicago market for sacked stock ranges from \$1@1.25 with bulk stock bringing from \$1.10@1.25.

ONIONS

Yellow onions declined about 10 per cent per 100 pounds at f. o. b. markets closing at 75c. Eastern consuming markets reached 70c@1.25. Storage holdings in the consuming centers as well as in producing sections are reported to be comparatively heavy.

CABBAGE

The market recovered somewhat at the close but trading was very slow most of the week, Chicago breaking from \$15 per to \$11 per ton for Northern Danish stock, and closing around \$13. Heavy supplies of California and Florida stock and limited demand are assigned as reasons for decline. New York f. o. b. markets are slightly lower at \$9@10.

APPLES

The apple markets were steady during the past week with supplies moving more readily into the consumptive channels. Receipts of both barrelled and boxed stock are liberal. The British apple market is reported to be the lowest in a number of years due to heavy offerings and to general price declines on other commodities.

DETROIT CITY MARKET

Light supplies resulted in a slight improvement in values for a few lines on the city markets at the opening this week. Apple prices range from 60c@2.25 per bu; cabbage 65@90c; carrots 50@90c; onions 75@85c; parsnips 60@90c; potatoes 70@80c; turnips \$1@1.75; eggs 65@75c; poultry 30@38c; dressed hogs 13@15c; dressed veal 18@20c; loose hay \$18@26 per ton. These prices represent goods sold in wholesale lots.

STATE FARM BUREAU MARKET REPORT.

Grain opened strong at advance but later declined. Undertone of market was strong at opening but closed weak. Hay continued dull with demand light and terminal markets are again declining under heavy receipts of consignment which in most cases represented heavy losses to shippers. Seed market continues to weaken. Repeating last week's suggestion, growers should decide to get seed moving to warehouse of responsible terminals soon else hold for next year. This year's seed must be prepared for the market soon. If it is to be ready for spring demand some good stock of Michigan-grown soy beans, corn, seed oats and barley that should be ordered by Michigan farmers before it is absorbed outside the state.

COMING LIVE STOCK SALES.

Duroc Jersey Swine.—Tuesday, February 22, Chaslen Farms, Northville, Michigan.

Percherons.—February 24, The Horse Breeders' Association, M. A. C., East Lansing, Michigan.

Poland Chinas.—February 24, E. J. Matthewson, Burr Oak, Michigan.

Holsteins.—March 2, Michigan Holstein-Friesian Association, Perry, Michigan.

Sheep have many good points to recommend them as farm animals of profit. They are prolific, the manure is very rich and evenly distributed over the soil surface, and the wool and flesh will always command a good price in the market, not to mention other favorable qualities.

Live Stock Market Service

Markets for February 9, 1921.

DETROIT

Cattle.

Market is very dull.

Best heavy steers	7.00@8.00
Mixed steers and heifers	6.50@7.50
Best handy wt bu steers	6.00@7.00
Handy light butchers	5.00@6.00
Light butchers	4.50@5.50
Best cows	5.00@6.00
Butcher cows	4.00@4.50
Common cows	3.25@3.75
Canners	2.50@3.25
Choice bulls	5.50@6.00
Bologna bulls	5.00@5.50
Stock bulls	4.50@5.00
Feeders	6.00@7.00
Stockers	5.00@6.00
Milkers and springers	5.00@9.00

Veal Calves.

Market steady.

Best	\$15.00@15.50
Others	5.00@11.50

Hogs.

Market is 25c lower.

Mixed hogs	\$9.25@9.35
Pigs	10.00
Heavy	8.50

Sheep and Lambs.

Market dull.

Best lambs	\$8.50
Fair lambs	7.00@8.00
Light to common	4.00@6.50
Fair to good sheep	3.00@3.75
Culls and common	1.00@2.50

CHICAGO

Hogs.

Estimated receipts today are 23,000; holdover 11462. Market slow and 10@25c lower. Bulk of sales \$8.75@9.25; tops \$9.90; heavy 250 lbs up medium, good and choice \$8.70@9; medium 200 to 250 lbs medium, good and choice at \$8.90@9.35; light 150 to 200 lbs common, medium, good and choice at \$9.15@9.90; light lights 130 to 150 lbs common, medium, good and choice \$9.25@

9.85; heavy packing sows 250 lbs up smooth \$7.75@8.60; packing sows 200 lbs up rough \$7.50@7.75; pigs 130 lbs down medium, good and choice \$8.75@9.80.

Cattle.

Estimated receipts today are 7,000. Market slow but steady. Beef steers medium and heavy weights 1100 lbs up choice and prime \$9.25@10.40; do medium and good \$8@9.25; do common \$7.25@9; light weight 1100 lbs down, good and choice \$8.50@9.75; do common and medium \$6.75@8.50; butcher cattle heifers common, medium, good and choice \$5.25@8.50; cows common, medium, good and choice \$4.40@7.25; bulls bologna and beef at \$4.50@6.50; canners and cutters cows and heifers \$3@4.40; do canner steers \$3.50@5; veal calves light and handyweight medium, good and choice at \$9.50@12.25; feeder steers common, medium, good and choice \$6.25@8.50; stocker steers common, medium, good and choice at \$4.75@7.65; stocker cows and heifers common, medium, good and choice at \$3.75@5.75.

Sheep and Lambs.

Estimated receipts today are 12,000. Market 25c lower. Lambs 84 lbs down medium, good, choice and prime \$8.50@9.90; do 85 lbs up medium, good, choice and prime \$7@9.50; do culls and common \$6.25@7.50; spring lambs medium, good, choice and prime \$5.75@7.50; ewes medium, good and choice \$3.50@5; ewes cull and common \$2@3.25; yearling wethers medium, good and choice \$7@8.25.

BUFFALO

Pigs and yorkers are quoted at \$11, mixed hogs \$10@10.25, and medium and heavy at \$8.50@9.50. Lambs are steady at \$10.25; best calves are bringing \$16.

Insure Your Clover Seed Catch

Your clover seed catch can be insured by applying Four Leaf Phosphate to the soil. Where seeding down with oats, it is an ideal combination. Grain and clover both require phosphorus. With a moderate amount of humus in the soil, Four Leaf Phosphate gives a big increase in the grain yield, and makes the heavier straw needed to hold the heavier grain erect. It produces double the clover on the first cutting, and this increase will pay for the phosphate. The benefits of Four Leaf Phosphate continue for eight years, and the soil nitrogen is increased from the growing of clover and legumes.

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\$1.00

Write today! Send 10 cents to help pay postage and packing and receive the above "Famous Collection" and our New Instructive Garden Guide.

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Silver King Barley great yielder tall stiff straw large plump kernel price \$2.00 per bu. **White Bonanza** seed oats noted for heavy yield, very large kernel price \$1.00 per bu. Also **Pure Green Mountain Seed potatoes** \$1.00 per bu. For further particulars inquire of **GERRIT EISING, R. 2, McBain, Mich.**

Wanted to Buy **Retail Lumber Yard** in live Michigan town. Address Box D25, Michigan Farmer, Detroit, Mich.

Ky. Tobacco Fine long leaf: 1919 crop, 3 lb. sample \$1 postpaid. Write for prices. Hancock Leaf Tobacco Assn., Dept. X, Hawesville, Ky.

Farms and Farm Lands For Sale

McClure-Stevens Land Co.

We have for sale: 15,000 acres of fine unimproved lands, well located, joining well settled locality, on easy terms. A tract of 100 acres, 5 miles from Gladwin, on daily mail route, all fenced with woven wire, 20 acres under fine state of cultivation. 6 acres in fruit. A Sheep Ranch of 810 acres, all fenced, well grassed over, living water, 70 acres cleared, 30 acres under fine state of cultivation with fruit, good buildings, 250 head of sheep. 4 stock ranches well grassed, fenced and watered with living water.
McCLURE-STEVENS LAND CO. Gladwin, Mich.

High Class Dairy Farm For Rent

180 acres fertile land within one mile of town. Good buildings, barns to house, 100 head of stock and feed for same. Will rent on share for term of years to good dairyman or stock man who can finance one-half of herd, of 20 to 30 cows and furnish teams and tools. Address Box J15, care of Michigan Farmer, stating experience and financial ability in first letter.

\$800 Secures 75 Acres with

Cow, machinery, hay, etc.; near village; good tillage, wood, fruit, sugar maples; comfortable house, barn, etc.; \$1100 takes all. Details page 10 FREE Ills. Catalog 1200 Bargains. STROUT AGENCY, 814 BO Ford Bldg., Detroit, Mich.

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

VIRGINIA FARMS AND HOMES

FREE CATALOGUE OF SPLENDID BARGAINS. R. B. CHAFFIN & CO., Inc., Richmond, Va.

Farms and Homes in Delaware where the climate is pleasant, the lands productive and prices reasonable. For information write, State Board of Agriculture, Dover, Del.

For Sale 40 acres all under plow, 2 horses, 1 cow, 3 hogs, flock of chickens, all farm tools. Good buildings. Orchard. A bargain at \$2300. Easy terms. Write JOHN CONANT, Grand Haven, Michigan

For Sale A good 135 acre farm in Hillsdale Co. all or description. A. G. WELLS, Jonesville, Mich.

For Sale Small farm to retire on, bungalow, all kinds outbuildings, fruit, lake, fishing, 1 1/2 miles county seat. Winemiller, Coldwater, Mich.

10 Improved New York & Vermont farms, choice soil, no failures, good bldgs, \$40 A. with cattle, horses, machinery. SHAHAN, Port Henry, N. Y.

WANTED To hear from owner of farm or unimproved land for sale. O. K. HAWLEY, Baldwin, Wisconsin

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

WOOL

At the last London open wool auction prices advanced about seven and a half per cent over previous quotations with American buyers participating in the bidding. At the sale on February 1 at Sidney, Australia, an advance of ten per cent was made on medium fine grades of wool with the cross-breds neglected. Melbourne and Perth also show advances. Sales in this country are still of small volume but all holders of wool view the future with greater confidence.

The woolen goods trade has lost some of the bloom shown early in January. The bureau of commerce reported a higher percentage of idle looms and spindles on January 1 than on December 1 or November 1. Reports of increased mill operation during January show a different situation on this point at the present time.

The sale of government-owned wool scheduled for the week was cancelled by the secretary of war on twenty-four hours' notice on the score that the time was inopportune for selling.

The fate of the tariff bill still hangs in the balance, and the prospects of its passage are none too flattering. Imports during the last few months have not been at an extraordinary rate, but were the smallest since 1914. However, many of the purchases made by American buyers in Australia and New Zealand since markets were opened in those countries have not yet had time to reach the United States. Boston quotes prices unchanged from those of a week ago.

DECREASE IN NUMBER AND VALUE OF LIVE STOCK.

THE Department of Agriculture's estimate of the value of live stock shows a decrease in every class, the total amounting to 4.7 per cent, or 10,076,000 head compared with a year ago. Hogs decreased 7.1 per cent, sheep 4.3 per cent, milch cows 1.5 per cent, other cattle 4.2 per cent, horses 4.2 per cent, and mules 0.8 per cent.

The number of sheep is the smallest since 1900 and the number of hogs is smallest since 1915. The number of cattle, other than milch cows, is the smallest since 1917 but is about 7,000,000 head above the years just before the war. Both hogs and all cattle are considerably above the January 1, 1913, level when corn supplies were also unusually large. The price of horses is the lowest since 1906.

Number and value per head are as follows:

Cattle (Other than Milch Cows).

1921	42,870,000	\$ 31.41
1920	44,750,000	43.22
1919	45,085,000	44.22
1911-1915 average	37,178,000	26.41

Milch Cows.

1921	23,321,000	\$ 63.97
1920	23,679,000	85.11
1919	23,475,000	78.20
1911-1915 average	20,804,000	46.77

Swine.

1921	66,649,000	\$ 12.99
1920	71,787,000	19.01
1919	74,584,000	22.02
1911-1915 average	63,152,000	9.04

Sheep.

1921	45,067,000	\$ 6.41
1920	47,114,000	10.52
1919	48,866,000	11.63
1911-1915 average	51,430,000	3.96

Horses.

1921	20,183,000	\$ 82.45
1920	20,785,000	94.42
1919	21,482,000	98.45
1911-1915 average	20,702,000	108.13

Mules.

1921	4,999,000	\$115.72
1920	5,041,000	147.07
1919	4,954,000	135.83
1911-1915 average	4,400,000	121.34

The total value of all animals was \$6,235,569,000 as compared with \$8,507,145,000, a decrease of \$2,271,576,000, or 26.7 per cent.



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Experience is sometimes a costly teacher. That is why so many men who will not observe and learn from the mistakes and bitter experiences of others lose all they have toiled for. Often—in case of FIRE—their savings for years are wiped out in a few hours.

Just think of the men you know who through lack of insurance are no better off than they were when they started to work—years and years ago. All through tragic fires that were beyond their control.

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HAY Apples, Potatoes Wanted Highest prices paid. The E. L. RICHMOND CO., Detroit, Mich.

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Administrator's Sale

Will sell at public auction at the farm of the late A. L. Cridler, 1 1/2 miles west of Middleville, Barry Co., Mich. at 10 a. m. Tuesday, Feb. 15, 1921, 10 head of exceptionally good registered Percherons, 8 head of registered Holstein cows, a number of calves eligible to registry, and a splendid equipment of farm machinery and tools. A good chance to get extra fancy stock at forced sale.

THOMAS HEANY, Spl. Admr.
Middleville, Mich.



Chart of Recommendations for TRACTORS (Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyl Mobiloils for tractor engine lubrication are specified in the Chart below.

- A means Gargoyl Mobiloil "A"
- B means Gargoyl Mobiloil "B"
- BB means Gargoyl Mobiloil "BB"
- Arc means Gargoyl Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyl Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for all Tractors.

NAMES OF TRACTORS	1920		1919		1918		1917		1916	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Allis-Chalmers General Purpose	A	A	A	A	A	A	A	A	A	A
Allis-Chalmers All Other Models	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Appleton	B	B	B	B	B	B	B	B	B	B
Aulman-Taylor (18-36)	B	B	B	B	B	B	B	B	B	B
(12-45)	B	B	B	B	B	B	B	B	B	B
(15-30) Waukesha Eng.	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Avory (5-10)	B	B	B	B	B	B	B	B	B	B
Motor Cultivator & Planter	A	A	A	A	A	A	A	A	A	A
All Other Models	B	B	B	B	B	B	B	B	B	B
Bates Steel Mill	B	B	B	B	B	B	B	B	B	B
Bean-Track-Full	B	B	B	B	B	B	B	B	B	B
Big Bull	B	B	B	B	B	B	B	B	B	B
Buckeye (Findlay, Ohio)	B	B	B	B	B	B	B	B	B	B
Case (9-18)	B	B	B	B	B	B	B	B	B	B
(10-18)	B	B	B	B	B	B	B	B	B	B
(10-20)	B	B	B	B	B	B	B	B	B	B
(12-25 & 20-49)	B	B	B	B	B	B	B	B	B	B
(15-27)	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
All Other Models	B	B	B	B	B	B	B	B	B	B
Cletrac	B	B	B	B	B	B	B	B	B	B
Cleveland	B	B	B	B	B	B	B	B	B	B
Coleman	B	B	B	B	B	B	B	B	B	B
Common Sense	B	B	B	B	B	B	B	B	B	B
C. O. D.	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Craig	B	B	B	B	B	B	B	B	B	B
Cresting Grip	B	B	B	B	B	B	B	B	B	B
E. B. (19-26)	B	B	B	B	B	B	B	B	B	B
(Reverse)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Flour City (20-53)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Fordson	B	B	B	B	B	B	B	B	B	B
Gas Full	B	B	B	B	B	B	B	B	B	B
Gram-Bel	B	B	B	B	B	B	B	B	B	B
Happy Farmer	B	B	B	B	B	B	B	B	B	B
Hart Farm	B	B	B	B	B	B	B	B	B	B
Heider	B	B	B	B	B	B	B	B	B	B
Henson	B	B	B	B	B	B	B	B	B	B
Hollis	B	B	B	B	B	B	B	B	B	B
Holt Caterpillar (Model 18)	B	B	B	B	B	B	B	B	B	B
(Model 45)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Huber	B	B	B	B	B	B	B	B	B	B
Illinois	B	B	B	B	B	B	B	B	B	B
Indiana	B	B	B	B	B	B	B	B	B	B
K. C. Prairie Dog	B	B	B	B	B	B	B	B	B	B
La Crosse	B	B	B	B	B	B	B	B	B	B
L. Berry	B	B	B	B	B	B	B	B	B	B
Lightfoot	B	B	B	B	B	B	B	B	B	B
Minneapolis	B	B	B	B	B	B	B	B	B	B
Nipal (8-16)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Maline Universal	B	B	B	B	B	B	B	B	B	B
Monarch	B	B	B	B	B	B	B	B	B	B
National	B	B	B	B	B	B	B	B	B	B
Neverslip (20-12)	B	B	B	B	B	B	B	B	B	B
(10-18, 10-6)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
New Age	B	B	B	B	B	B	B	B	B	B
Nilson	B	B	B	B	B	B	B	B	B	B
Oil Full (14-28, 10-20)	B	B	B	B	B	B	B	B	B	B
(12-20, 10-30)	B	B	B	B	B	B	B	B	B	B
(20-40)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Parrett	B	B	B	B	B	B	B	B	B	B
Pioneer	B	B	B	B	B	B	B	B	B	B
Royer	B	B	B	B	B	B	B	B	B	B
Russell (8-16)	B	B	B	B	B	B	B	B	B	B
(12-24)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Russell (Giant)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Sandusky	B	B	B	B	B	B	B	B	B	B
Square Turn (15-30)	B	B	B	B	B	B	B	B	B	B
(18-35)	B	B	B	B	B	B	B	B	B	B
Titan	B	B	B	B	B	B	B	B	B	B
Toledo	B	B	B	B	B	B	B	B	B	B
Towson	B	B	B	B	B	B	B	B	B	B
Turnaday	B	B	B	B	B	B	B	B	B	B
Turner Simplicity	B	B	B	B	B	B	B	B	B	B
Twin City (Model 15)	B	B	B	B	B	B	B	B	B	B
(Model 16)	B	B	B	B	B	B	B	B	B	B
(Model 12-20)	B	B	B	B	B	B	B	B	B	B
(Model 20-35)	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Vallis	B	B	B	B	B	B	B	B	B	B
Cub	B	B	B	B	B	B	B	B	B	B
All Other Models	B	B	B	B	B	B	B	B	B	B
Watson Boy	B	B	B	B	B	B	B	B	B	B
West	B	B	B	B	B	B	B	B	B	B
Whitney	B	B	B	B	B	B	B	B	B	B
Wisconsin	B	B	B	B	B	B	B	B	B	B

Farming Costs and Farm Profits

Some enlightening figures on both subjects

RESULTS of an investigation made by the Department of Agriculture show that in the last seven years the average return on farm investment increased from 4% to 7%. The Department found, however, that in spite of the comparatively higher prices paid for farm products, few farmers made more than \$500 cash a year, over and above the things the farm furnished toward the family living.

These figures are eloquent.

The modern farmer who is fully alive to the possibilities of his investment will see a close connection between these figures and the reduction of operating expense. On farm machinery alone it is often possible to effect a saving of astonishing size in the course of a single year.

Prominent engineers state that over 50% of all engine repairs on auto-

mobiles, trucks and tractors are due to incorrect lubrication.

In hundreds of tests Gargoyl Mobiloils, when used as specified in our Chart of Recommendations, have shown savings in oil ranging from 50% to 70%, and fuel economies of 17% to 25%.

Lubrication, which seems a small item, is the most important factor in farm machinery operating costs—particularly tractors, trucks and automobiles. Scientific lubrication means longer life, fewer repairs, and slower depreciation.

The Vacuum Oil Company is known the world over as the leader in the science of lubrication. Gargoyl Mobiloils when used as specified in our Chart of Recommendations (shown in part on this page) enable you to get utmost efficiency from your tractor, truck and automobile.



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In buying Gargoyl Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyl on the container.

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