

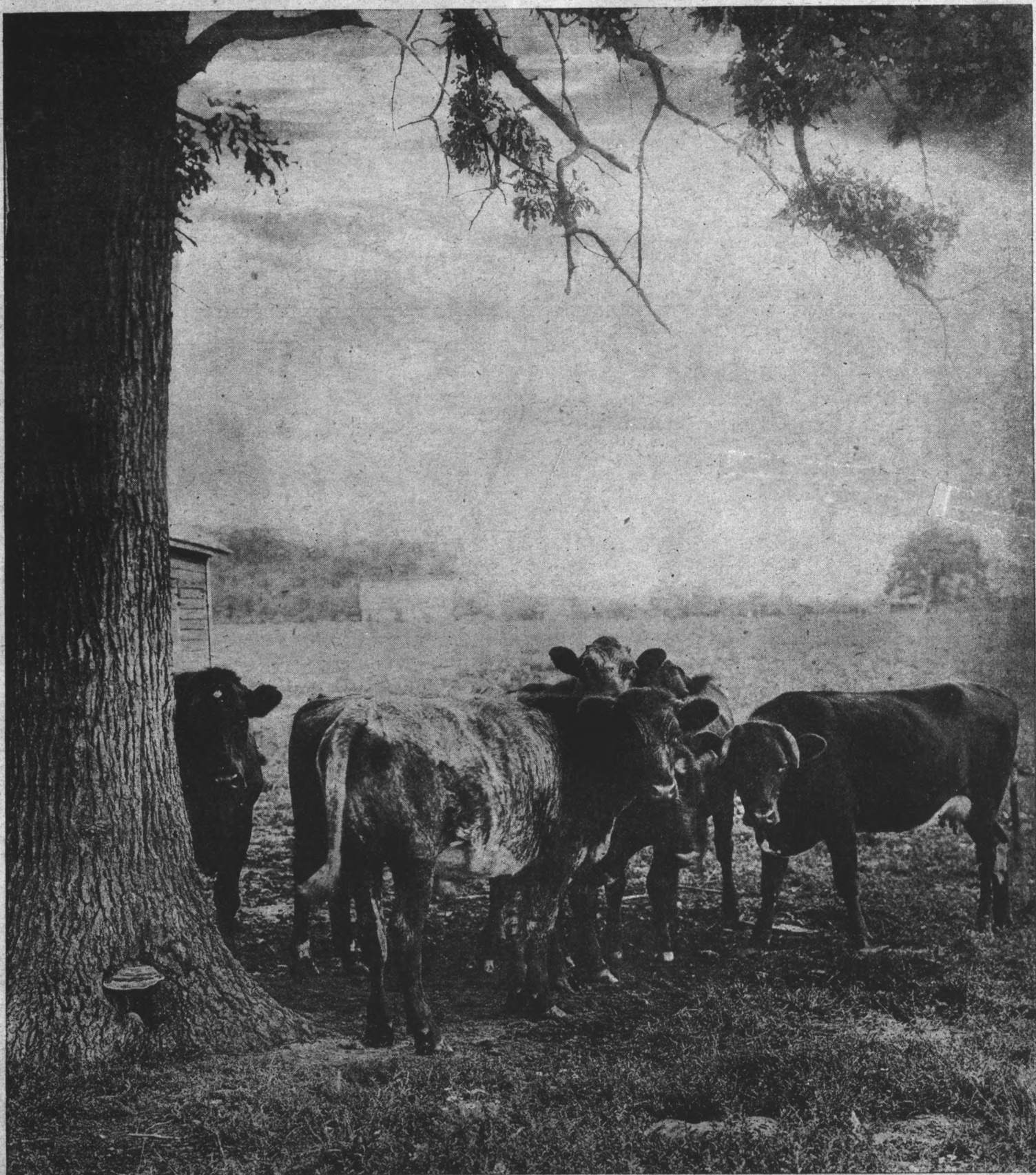
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VOLUME CLVIII : NUMBER ONE

DETROIT, JANUARY 7, 1921

CURRENT COMMENT

THE MICHIGAN FARMER SAYS:

It pays to tickle the cow's palate.

More farmers fail as executives than as soil tillers.

Beans and sheep make a happy combination on the general farm.

The test of good farming is in the available plant food remaining in the soil.

Live stock is as important to a balanced agriculture as protein is to an efficient ration for the dairy cow.

The permanent neighborhood interests of the farming community are a bulwark against national disintegration.

Obviously the farmer who produces staple crops at the lowest cost is the one who realizes the greatest financial returns.

Bankers and Farmers

IN our efforts to promote the operation of the War Finance Corporation plan of advancing money for agricultural purposes in this state we have learned considerable about the attitude of different classes of bankers, which we believe to be of vital interest to Michigan farmers and to hold a valuable business lesson for them. It is difficult to analyze this situation without doing an injustice to a large element of perfectly honest and patriotic bankers who firmly believe the present is a time for conservative reduction rather than expansion of credit all along the line. Bankers as a class are always conservative in their attitude in every business emergency. Experience has taught them this as a primary lesson in their line of business. And as the safety and soundness of our financial and business structure depends upon their conservatism as a class, we cannot justly criticize this general attitude. It is inconvenient to most of us at times, but it is a factor of safety in the matter of general business stability which should not be underestimated. So if it may seem to us that this general conservatism of bankers is overdone at times we must remember that the banker sees the problem from a different angle and must give first consideration to the general business problem and need, rather than to the individual problems and needs of his individual patrons.

But even with the full admission of this principle it is difficult to understand why the rank and file of bankers in this state seem to be firmly opposed to the use of the War Finance Corporation plan in extending further needed agricultural credit in their communities, which seems with few exceptions to be the case. In our investigation of the matter we have found them to be in a general way divided into three classes as to their views on this proposition. First there is the city banker who acts as correspondent for country banks, advancing them money on collateral loans and rediscounting their paper in the Federal Reserve Bank. These men are in close touch with the business emergencies of their industrial patrons, which in many cases are very great, and as a matter of course view the agricultural emergency as a whole and at a distance which minimizes this emergency as compared with the industrial emergency with which they are in daily and detailed touch. They have firmly in mind the general principle that the process of readjustment demands a restriction, rather than an expansion of credit and are bending their energies to that end, with scant regard for individual cases outside of their immediate clientele. This class of bankers believe that the War Finance Corporation plan should function principally in providing for the extension of existing agricultural loans until they can be repaid rather than in the making of new emergency loans, and that the funds so obtained should be used in the payment of loans to city correspondent banks by the banks now holding this agricultural paper. This attitude does not hold out much encouragement to the farmer in need of an emergency loan, other than that it is the shortest road to a decrease in interest rates, which will not ensue until the banks have more money than they can loan at present rates.

Another class of bankers who are not favoring the functioning of this plan is the constructive bankers of the smaller towns who have made every effort to satisfy the legitimate needs of their farmer as well as their business patrons in the matter of short-time loans, and with a gratifying degree of success. It is claimed by this class of bankers that such banks which are members of the Federal Reserve System are already in a position to take care of all desirable loans, but that non-member banks would probably find it an advantage to make applications for loans under the War Finance Corporation plan. This class of bankers, who have honestly made every effort to serve the emergency needs of their communities, seem to generally take the view that there is too much red tape connected with this plan to make it desirable from the banker's standpoint, and that owing to the publicity which has been given to this plan, if such banks were to make application under it they would probably be deluged with applications for loans from people whose credit standing would not warrant the amount of credit asked for, if any credit at all, which must be considered by the loaning bank having to guarantee the paper under the plan. We believe this phase of the matter is over-emphasized, but the banker who has met the needs of his community in other ways should not be too severely criticized on this account.

But there is another class of bankers whom we believe merit the most severe criticism. This is the class of bankers that rob their victims with as little compunction as the hold-up bandit. This class of bankers, of which there are altogether too many in this state, do not hesitate to take advantage of the emergency situations in which their patrons find themselves to collect usurious interest through the

subterfuge of bonus or discount from perfectly sound patrons and in cases where there is neither business nor moral hazard connected with the transaction. The presence of this class of bankers in numbers in our midst is a menace to the prosperity of the communities which they leech in the most consciousnessless manner. This is a situation which demands a remedy, prescriptions for which will be discussed in the next issue.

Experience as a Teacher

There is no teacher like experience. In every experience there is a valuable lesson which will be helpful to us if we but recognize and apply it. This is particularly true of business experiences, and applies to farmers individually and collectively just as truly as to men engaged in any line of business. In fact, our present business practices are the result of evolution and improvement resulting from past experiences. Just as truly the future improvement of our business practices and status will depend upon our recognition and application of the lessons which present themselves to us in our present experiences.

Michigan's Agricultural Rank

A CAREFUL examination of all the census figures now available, reveals to us some interesting information regarding the business of farming here in Michigan. Among other compilations by the census bureau is a list of the twenty leading crops of the country. Twelve crops in this list are grown in the latitude of Michigan. The other eight are cotton, tobacco, sweet potatoes, oranges, kaffirs, sugar cane and peanuts. In the production of the twelve crops indigenous to this climate, Michigan ranks among all the forty-eight states in the Union as follows:

Hay and forage, ninth.
Corn, sixteenth.
Rye, second.
Wheat, twentieth.
Oats, twelfth.
Potatoes, fourth.
Barley, seventh.
Apples, seventh.
Grapes, third.
Peaches, twelfth.
Sugar beets, second.
Beans, second.

Census figures on the acreage and production of forty other farm products are also available and we have tabulated these to find how Michigan stands in the production of each. While we cannot give the list here it is interesting to note that in not a single instance in the consideration of the whole fifty-two products or classes of products, does the state of Michigan fall to the half-way position. In other words, she exceeds a majority of the states of the Union in the production of over fifty important agricultural products.

Investing Our Talents

A MICHIGAN farmer not yet out of his thirties has decided to sell his farm, to retire from active work, and to live on his income. Through a fortunate real estate deal and good farming methods he has laid by a sufficient competence which if properly invested will under normal conditions provide an adequate income to shelter, clothe and feed him during the remainder of his days.

This is an extreme case. But is it not a fact that a majority of us begin to side-track our talents soon after we enter the years of responsibility? The little incentive we once had for investigation, the hope we entertained in our school days for becoming a reasonably good public speaker, the ability to impart our knowledge to others, our

youthful ambition to become an organizer of men or things in order to do more than the ordinary routine work of life, these and a hundred other things many of us have thoughtlessly dropped off on the side-tracks of life and forgotten them. Without doubt there is a general tendency on the part of the majority of us to slip into some narrow groove of life's activities and stick there to the end.

But the great aim of life is not merely to reach out and lay hold of enough capital to keep ourselves and those immediately dependent upon us from starving and discomforts. We have by no means played our part in the great drama when we have attained that desirable income. Our lives had rather be dedicated to a service that extends beyond the satisfaction of our physical necessities. Happy and useful is the man who maps out a constructive and worth-while program which will demand the full and constant use of every talent he possesses. Only such a man can know the supreme joy of living. In our thirties we are only approaching the years when our ability to serve is at its greatest.

Reflecshuns

MIRRORS sure is great, 'cause they let a fellow stand in front of hisself and take a look at hisself. They's nothin' that'll let you say "how-de-do" to yourself like that.

I think it was the thirteenth wise man what said it was a wise father what knew his own child. I'll go him one better, seeing it's me, and say it's a wise man what knows hisself, to say nothin' of the rest of the family.

Even if a fellow shaves hisself once a week whether he needs it or not, he has no time during the process to observe his manly brow, soulful eyes and the rest of his map, as he is too busy clearin' the landscape of second growth. Virgin timber on the south part of a man's face is now-a-days about as scarce as in the prairies of Iowa.

Now, when a fellow proceeds to get acquainted with hisself he wants to be sure that he gets a true reflecshun. Which makes me recollect that last summer Sophie and I went into one of these places of amusement what costs you nothin' to get in and all you got to get out. They had mirrors there, some what made me look like Apollo, the perfect man; others like the Man with the Hoe, and still others like the undertaker's best friend. Such flatterin' reflecshuns ain't no good for gettin' a true perspective of yourself.

Now when you can get a good duplicate to look at just say to yourself, "How'd you like to be friends with a fellow like that?" Then, quiet-like, so the reflecshun can't hear, give your full and unreserved opinion.

And maybe afterward you will want to change the topography of your likeness. I've been tryin' to do this, so here's the benefit of my experience: You can't get results from these facial manipulators but I find nice thoughts is the greatest beautifiers out. Look at my likeness and be convinced.

It bein' inventory time in institutions of commercial importance I find it in keepin' with the custom to take stock of my reflecshun to learn the qualities what is on the wrong side of the ledger and is producin' losses.

I find there ain't no greater asset in the Business of Life than Happiness. This we can get by developin' our good qualities and eliminatin' the poor ones. And I hope, bein' as 1921 has taught us some needed lessons, nobody will find their Happiness in bankrupt condition.

HY SYCKLE.

What Ails the Clover Crop?

By Prof. J. F. Cox

MICHIGAN farmers have long recognized the value of the clover crop, not only as a source of a cheap supply of excellent high protein hay and unexcelled pasture, but as the most important crop grown in the ordinary rotation in maintaining the content of organic matter and nitrogen. Big crops of clover are followed by big crops of corn, beans, sugar beets, potatoes and small grains. The great decrease in the clover acreage during the past decade is a matter of serious import, not only from the standpoint of present production but in considering the production of Michigan farms ten or twenty years from now.

According to the census the production of clover grown alone in Michigan has decreased over 39.4 per cent—a decrease from 216,862 tons in 1909 to 131,517 tons in 1919, or a decrease in acreage of 28.5 per cent—from 168,180 acres in 1909 to 120,299 acres in 1919. In 1909, 9.02 per cent of the farms of Michigan grew clover alone. In 1919 only 6.5 per cent reported growing clover alone. The production of clover has fallen off one-third in a ten-year period.

The census figures are directly in accord with the experience of farmers of long observation in practically all sections of lower Michigan who point out the increasing difficulty of securing stands of red clover as compared with earlier times.

In the legume campaign which has been under way for the past two months the writer has been struck with the fact that on the majority of farms in central and lower Michigan clover has become a precarious crop. For instance, in Allegan county, where a ten-day milk and alfalfa campaign was held, on nine of the first ten dairy farms where meetings were held, timothy hay was being fed to dairy cattle. This condition prevails in many other localities. Professor Reed, of the dairy department is emphatic in stating that it is impossible to feed dairy cattle economically in Michigan without a cheap supply of clover or alfalfa hay. There is a marked correlation between prosperous farms and sleek, well-fed dairy herds and success with alfalfa or clover. Where a farmer is known to be successful with either of

these crops it may be taken as a foregone conclusion that he is above the average in the production of other crops and as a successful dairyman or cattle feeder.

A further study of the census report brings out the fact that alfalfa has gained, in the ten years covered, from 6,553 to 74,059 acres. At present 6.1

sixty-acre farm, but alfalfa cannot take the place of red clover in seeding with small grains in the usual Michigan short rotation of corn, oats, wheat and clover or beans or beets, followed by oats or barley seeded to clover.

Many reasons have been given for the increasing difficulty of getting stands of clover, such as soil acidity,

that clover seedlings do not catch and hold as well as they did on virgin land or land high in organic matter.

Most of the above factors can be controlled by farmers, as is proven by the fact that there are still many farmers who have little difficulty in growing good clover, while others in their neighborhood are meeting with failure.

Lime Often Needed.

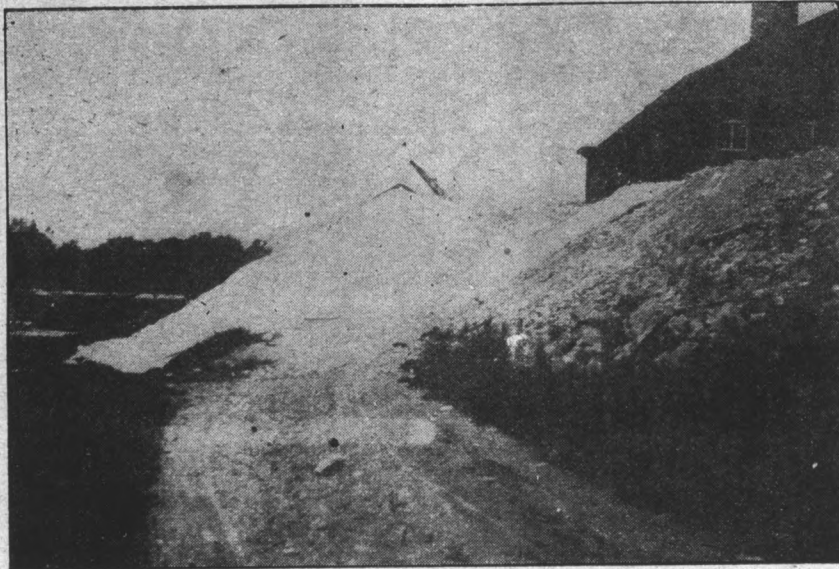
The great majority of Michigan soils need lime. This is particularly true where they have been farmed for several generations. Where clovers fail or when alsike, only, comes in when a mixed seeding of red and alsike clover is made, or where sorrel shows in large amounts, the conclusion may be safely reached that an application of two tons of finely ground limestone or several cubic yards of marl or beet sugar factory lime cake will bring red clover back again.

In general, finely ground limestone is one of the cheapest and most convenient forms to use, though the number of farmers who are taking advantage of the great stores of marl which nature has provided in many regions throughout Michigan, are finding this a very effective and quick-acting agent in correcting soil acidity and in putting the land in condition to grow clover and alfalfa.

The refuse lime of sugar beet factories is an overlooked source of excellent lime. Professor A. J. Patten, experiment station chemist, states that the average sample of sugar beet factory refuse lime contains from fifty to eighty per cent of calcium and magnesium carbonate in accordance with the content of moisture present. This lime is largely carbonate if it has been exposed for a considerable time but when stacked in large heaps the material beneath the surface often contains a high per cent of calcium hydrate.

In Europe, where the sugar beet industry is on a well established footing, sugar beet growers are allowed refuse lime in proportion to the tons of beets delivered. It is seldom that growers fail to avail themselves of this privilege. In fact, it is a matter of much concern to them if they fail to get their share. In Michigan very little of the beet sugar lime cake is hauled

(Continued on page 8).



Beet Factory Lime-cake—a Source of Excellent Lime.

This pile of sugar beet lime-cake as dumped at the factory, is in excellent condition for hauling and distributing. Reports show that there are 235,000 tons of this material available practically free of charge. It has been comparatively little used, even by those adjacent to the sugar factories. The fact that refuse lime is free should not lead to the idea that it is of little value. From three to six large loads per acre will greatly aid in giving good stands of clover and alfalfa and pave the way for bigger crops of corn, sugar beets, beans and grain.

per cent of the farmers in Michigan are growing alfalfa. This remarkable gain almost but not quite offsets the loss in the clover acreage, but does not clear up the situation since clover is the best adapted of all our crops to our short rotation of three or four years.

Without doubt there is room for alfalfa in Michigan in nearly all general and live stock farms of lower Michigan for instance ten acres of alfalfa on an eighty-acre farm, or fifteen or twenty acres on a one-hundred and

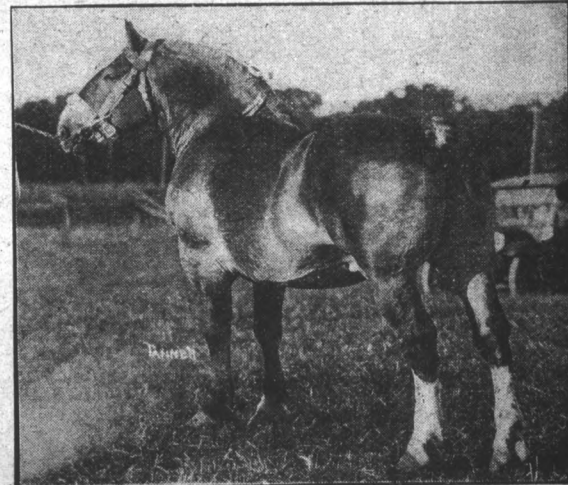
lack of organic matter in the soil, increase in insect pests and diseases, and the planting of imported seed produced in mild climates.

Some farmers have stated that in their opinion our climate is changing, that we have more frequent summer droughts and early spring droughts which injure the clover crop. It is my opinion, however, that it is not the climate which has become more droughty, but rather that soils have lost their organic matter where handled for a number of years to the point

More Michigan International Prize Winners



The Picture at the Left Shows Deesse, the One Above from Left to Right Illustrates Rubens, Sans Peur and Percence, while at the Right is Soleil Lavant.



PRAIRIE FARMS at Alicia, Michigan, owned by the Owosso Sugar Company, exhibited eleven horses at the recent International Live Stock Exposition at Chicago and brought home ten winnings. This is a most remarkable showing considering that the cream of the Belgian horses of the country were shown on this occasion.

Jacob DeGeus, the well-known manager of Prairie Farms has forwarded to us illustrations of winning animals

which we are pleased to publish here.

The group of three colts in the center are as follows: From left to right: First, Rubens, No. 12623. He won second prize in stallion foal class at International and also won first prize and reserve junior champion stallion at the Michigan State Fair in 1921. Second, Sans Peur, No. 12615, who won third prize in stallion foal class at International. Third, Percence, No. 9030, who won third prize in filly foal class.

The illustration of the single colt is Deesse No. 9029, who won first prize in the filly foal class at the International and was reserve junior champion mare at the Michigan State Fair of 1921.

The stallion at the right is of Soleil Lavant No. 9340. He was awarded second prize in the five-year-old stallion class at the International and was reserve grand champion stallion at the Michigan State Fair of 1921. He also won first prize in the four-year-old

class at the International Belgian Horse Show at Waterloo, Iowa, in 1919, and first prize in four-year-old class at the International Exposition at Chicago, 1919, and in each case winning over a son of the famous Farceur, who was sold in Iowa for \$47,500.

Besides the above winnings Prairie Farms took one fourth prize, one fifth prize, two sixth prizes and one seventh prize, making the total winnings ten in all.

LATE AGRICULTURAL NEWS

PRAIRIE CHICKENS NEED PROTECTION.

PRAIRIE chickens have for some years been domiciled in the upper peninsula, and The St. Ignace Enterprise thinks that some of them have been killed by hunters who have mistaken them for partridge or spruce hen. It is suggested that constant hunting in the west has driven the prairie chicken to the sheltered regions near the upper lakes. It is suggested that the law protecting prairie chickens in Michigan until 1925 ought to be given a greater extension of time to afford the birds a chance to get thoroughly established here. There are also reports that the Chinese ring-necked pheasant is getting a start here. This bird is being propagated at State Game Farm near Mason.—C.

CHOLERA OUTBREAKS.

SEVERAL outbreaks of hog cholera have been reported in central Michigan with heavy casualties in every herd where the epidemic is found. The losses were heavy in the herd at the Ionia State Reformatory and outbreaks have been reported since on two other farms north of the prison. State veterinarians are trying to check the spread of the disease.—R.

ROAD WORK FOR 1922.

MR. H. I. DAVIES, district highway engineer for the upper peninsula, has laid his plans for the 1922 road work in his territory. According to the Morning Press of Escanaba, where Mr. Davies has his office, the total mileage of new construction in the upper peninsula is to be 225, of which thirty-six miles are to be located in Mackinac county—said to be the largest amount in any county of the state. Mackinac county, lying as it does at the entrance to the peninsula adjacent to the Straits of Mackinac, is in a key position as regards highway travel.—C.

LIVE STOCK ACTIVITIES IN IONIA COUNTY.

JOHN M. PETERSON, secretary and manager of the Ionia County Farm Bureau, has been saving the farmers in his districts thousands of dollars in live stock commissions this winter. Since the first of September he has brought into Ionia county three hundred head of cattle and more than four hundred sheep for feeding and has shipped out thirty-one carloads of cattle, sheep and hogs.—R.

DENT CORN SHOWS FINE.

SPLENDID samples of Dent corn grown in Cheboygan county, are being exhibited in Saginaw Valley cities. This corn, which bears the name of Golden Glow, is acclimated to northern Michigan, having ripened in the Huron shore county over a period of several years. It is only a few years since it was believed Dent corn could not be grown successfully north of Arenac county. Now, thanks to efforts of progressive farmers and seed growers, corn is fast becoming a staple crop in every county of the Huron shore.—M.

USING MICHIGAN-GROWN ALFALFA SEED.

FOR many years Michigan alfalfa growers have been buying seed grown in other states, in order to secure strains which would stand the climate of northern Michigan. That

this soon will be unnecessary is indicated by the fact that Olaf Nelson, of Cheboygan county, working in cooperation with the plant specialists of the Michigan Agricultural College, has developed a strain of alfalfa that not only withstands the long northern winters, but is also a wonderfully productive plant, producing a crop of hay and also a crop of seed the season it is planted. This year, from a six-acre tract sowed last spring, Mr. Nelson secured nine hundred pounds of seed. As this seed is being sold at \$10 per pound on account of its quality, it means the fat income return of \$9,000 from that six acres.—M.

LATE NEWS FROM THE HURON SHORE.

FROM the up-shore country comes the news that an Ogemaw county farmer harvested 2,000 bushels of potatoes from a six-acre tract this fall, a yield which gave him a snug profit.

At the International Potato Show held in Duluth in October, a display of Petoskey Rural Russets, made by the Wolverine Cooperative Marketing Association, of Wolverine, Cheboygan county, took first prize in the International championship contest, winning the long end of a \$250 purse and the association loving cup. Northeastern

Michigan potatoes also won nine of the ten prizes in the class of one-peck displays of Rural Russets. In this contest the seventh prize went to a New York exhibitor.—M.

WANTS DUTY-FREE SACKING.

INASMUCH as the cost of burlap bags is largely paid by farmer users of fertilizers, feeds and grains, and the burlap industry in this country is insignificant compared with this interest of agriculture, Dr. Atkeson, of the National Grange, opposed the Fordney schedule of one cent a pound on imported burlap, and one cent a pound plus thirteen per cent ad valorem on the same burlap if printed or stenciled, saying that it should come in duty-free; otherwise the farmer consumer will be forced to pay a duty in excess of a million dollars to protect an industry of very small proportions.

FARMERS HOLDING POTATOES.

HOLDINGS of potatoes in the Grand Traverse region are exceptionally heavy this year. The growers believe the market will display higher tendencies in the spring. It is estimated that approximately eighty per cent of this year's crop still is in the hands of the growers.



Wednesday, December 28.

FOUR Chicago banks merge to avert crisis due to the condition of the Fort Dearborn National and Savings banks.—Premier Briand, of France, urges a France-British pact to assure France's safety.—The American Legion in Detroit urges an ouster law for immigrants who fail to seek citizenship.—The French stand regarding the submarine question is a big obstacle in the way of an early agreement at the Peace Conference.

Thursday, December 29.

MR. L. O. HOWARD, chief United States entomologist, says insects are humanity's greatest foes. He urges that strenuous efforts be made to subdue them.—Packing plant strikers stone cars and buildings in Oklahoma City.—Changes in soviet governmental policies may bring the resumption in trade between Russia and the United States.—United States census shows that death by cancer is on the increase. The northern states show a higher mortality than the southern states.

Friday, December 30.

EUGENE DEBS, the socialist leader, who spent three years in prison, is given a big ovation upon his return to his home town, Terra Haute, Indiana.—The census bureau announces that the death rate from tuberculosis is decreasing in this country.—The government reduces its tax claim of \$4,000,000 against the Lincoln Motor Company.—Several of the companies manufacturing medium and high-priced automobiles announced price reductions effective the first of the year.

Saturday, December 31.

THE New York prohibition officer has uncovered a highly organized boot-legging conspiracy that has withdrawn from bond \$30,000,000 worth of liquor on forged permits.—Edward Stimson breaks the airplane record by staying in the air twenty-six hours.—

Thirty-four United States firms have contracted to get seventy-five per cent of their potash from the German Potash Syndicate.

Sunday, January 1.

OVER seven thousand ex-soldiers afflicted with tuberculosis are in the hospital at Denver, Colorado.—The Detroit police department reports that one hundred were murdered in that city during 1921.—Due to a disagreement among the trustees and because of financial difficulties, the Christian Scientist Publishing Company may be put into the hands of the receiver.—The new mayor of Youngstown, Ohio, will appoint a police breath inspector and said that scents of clove, wintergreen and peppermint would put a black mark on the record of the offending officer.

Monday, January 2.

THOUSANDS along the Yellow River, China, are dying as the result of flood and famine.—President Harding has requested Secretary of Agriculture Wallace to call a national agricultural conference at Washington.—One of the 166 turtles set free by a Wisconsin professor breaks the world's speed record by traveling a mile in three years, eleven months and nineteen days.

Tuesday, January 3.

MANY steel mills in the Pittsburgh district which have been idle for a long time will resume operations immediately after the first of the year.—Diplomatic relations with Germany were officially resumed when Carl Lang presented his credentials to Secretary Hughes.—A Detroitier who has just returned from Europe, says Belgium is recovering from the war faster than any other country.—It has taken Frances M. Riley sixty-five years to get up courage to take his first matrimonial plunge.—His bride is fifty-four years old.

The Railroad Situation

Statement of W. H. Stackhouse, member of the Farm Implement Manufacturers Committee made at recent conference of this committee with Agricultural Publishers.

PRIOR to the Adamson Act becoming effective in 1916, the total railway wage bill amounted to \$1,468,576,394. This amount, due to the subsequent effect of the Adamson Act, which established an eight-hour basic day and provided for overtime, in addition to the pernicious national agreements executed by the director general of railroads during government operation, with the railroad brotherhoods, which prescribed certain inequitable rules, whereby four or five men were employed to perform the work of one, the railroad bill in 1920 increased to \$3,698,000,000, constituting an increase of 151 per cent plus. In view of this abnormal increase in wages, it should be borne in mind that railroad freight rates, during the same period, were increased but 101 per cent which, from a relative standpoint, was exceedingly conservative.

This conclusion is further emphasized by the following facts:

First.—During the period in question the railroads' average receipts per ton mile increased only forty-six per cent.

Second.—According to figures recently published by the Railroad Labor Board, other principal expenditures of the railroads, during the seven-year period, 1914 to 1920 inclusive, increased in the following percentages: Fuel, locomotive costs, 190 per cent; depreciation and repairs, 59 per cent; supplies and miscellaneous items, 132 per cent; while taxes increased nearly 150 per cent.

And investment returns to the stockholders, shrunk to less than \$62,000,000 for 1920, or less than ten per cent of what they were during 1914.

It might be interesting to note from the statistics of the Interstate Commerce Commission, that based on the total valuation of the railroad properties, of \$19,000,000,000, railroad net earnings for the past five years, which were attained greatly by disregard of maintenance, were as follows: 1916, 5.90 per cent; 1917, 5.25 per cent; 1918, 3.51 per cent; 1919, 2.46 per cent; 1920, .31 per cent.

The foregoing steady decline in returns to stockholders, down to almost nothing on the average, in addition to the fact that many of the railroads operated at a loss, is obviously due to the fact that no coordination exists between the Interstate Commerce Commission, which fixes railroad freight rates, and the Railroad Labor Board, which possesses supervisory jurisdiction over railway wages.

Additional self-evident reasons as to the necessity and justice of materially reducing railway wages, are readily apparent when one takes into consideration the fact that during the present year, all other industries have reduced wages on an average of about twenty-five per cent, whereas railway wages have been reduced but twelve per cent. Moreover, while railway wages increased 151 per cent during the period first above mentioned, the average cost of living, as ascertained by the National Industrial Conference Board of New York, increased but 104.5 per cent, the high peak having been reached during August, 1920, while at the present time, the average cost of living, according to the same authority just quoted, is sixty-four per cent in excess of 1913, although railway wages are still considerably over 100 per cent higher than during that year.

Meeting the Actual Market Demands

The Relation of Grading Standards to Consumer Requirements

By Edward Hutchins

THe best laid plans of mice and men often prove disappointing. Such is the philosophy of the Scottish bard, and such is a common experience of mankind. Experiences frequently do not meet our fondest anticipations, and it may not be considered extraordinary if need of improvement should be found in the new and multiplying forms of farmer organizations. It may be in order, then, to call attention to ways of improvement in cooperative fruit marketing.

We have been 'numerously assured that the way to make the most money out of fruit is to put it up in a reliable and dependable way, and it would always sell at top prices. But as a matter of fact, many in the last two years have actually realized more from their fruit by selling independently than those who have patronized the exchanges. I have talked with a number of experienced fruit farmers regarding this matter, and they all agree with me that prices obtained by the exchanges for fruit graded according to the rules established by the state and national grading laws have not been equal to those received by growers for the ordinary farmers' pack. Buyers seem willing to pay independent growers as much or more for fruit packed in a single grade, or a flat price for the two grades packed separately, than the packing houses realize for the grades as they sell them. The best grade does not sell for enough more than the farmers receive to compensate for the lower prices of the lower grade. As an instance of this, a common price for Bartlett pears the past season was \$3 per bushel, for the fruit put up in a single grade by the farmers, and some received more. About the best prices realized by any of the exchanges was \$3.35 per bushel for the best grades and a dollar less for the lower grade, but less than half went into the better sorts and the gross receipts were less than the money received by the farmers. One exchange sold the better grades for \$8.50 per barrel—less than \$3 per bushel—and \$1.65 for the lower grade, so that the gross was much below the farmer prices, and the marketing expense of the exchange still further reduced the amount.

Now, this statement should by no means go without qualification. Due credit should be given the exchanges for what they have done. As an instance, during the year 1920, when there was a large crop of all kinds of fruit, perhaps seventy-five per cent of it was marketed through the exchanges and was distributed over large districts in all directions, while if marketing had been limited to near-by markets and the few local buyers present marketing costs would not have been realized in general, and the loudest clamor for marketing organizations yet heard would have been raised. As it was, the independent growers were the gainers from the organizations as well as those forming and patronizing those institutions, although they didn't seem to realize it.

This must not be construed as in any sense a criticism of the present grading rules. Standardization is necessary, and when a prospective buyer is given quotations it is necessary that he should know what he is buying, and that he should not be subject to any disappointment in his purchase. This is only possible through established grading. But if buyers insist on strictly fancy grades they must be induced to pay a little more money for quality—or appearance—or else they should be led to see the reasonableness of buying on a basis similar to that of those who buy of the farmers direct. Grading

rules are somewhat elastic and it is possible to put up an "orchard run" grade, the same as the farmers do. Such a grade is, of course, rather variable and indefinite, but if buyers are not disposed to pay a price that will make the extra grading profitable, why make it for them?

In fact, the matter is open to ques-

tion if there is not more sentiment than practical sense in the distinction between the first and second grades as established by law. The marks permissible in the second grades that disqualify the fruit from the first are so very slight as to be negligible, anyway, none of them may go skin deep or distort the fruit or injure its keeping



The Little School

By David Clay

IN a recent issue of the Michigan Farmer a correspondent skillfully sets forth the desolation of the fatal rural school. "The rural schoolhouse gets cleaned once a year whether it needs it or not." "The dust of ages settles on everything, that is, the dust which does not find its way into the pupils' lungs." Many pupils die from tuberculosis.

If a good family should chance to secure the schoolhouse as a dwelling, the whole family would fall to and clean the house. It could be done and would be done. Removing filth is not a dainty task; but living in filth is intolerable, not to be thought of. The family would be better for its victory; its quality would be more secure. The neighbors would know; they always know. The good work would cheer and encourage them.

The new occupants would then inevitably give their dwelling something of their own charm. One's house always tells the truth. Shrubs, vines and young trees need not cost money; they grow in Michigan woods in rich variety of beauty. The wild kinds suit our climate and our landscape. The faults of builders and former occupants, proclaimed in the unsightliness of the premises, can be covered up by the perfect work of nature. It would be hard to find in Michigan any schoolhouse or school grounds that could not be made beautiful without expenditure of money. The rural schools that get their pictures taken as horrible warnings are not worse structurally than some cottages that get their pictures taken as beautiful.

If the teacher and pupils keep themselves and their surroundings neat and cheering, there may not be time for all of the standardized twenty-five or thirty recitations every day. Somebody may not pass an examination; the teacher may lose her job. Examinations yield credits, credits yield a diploma, and a diploma is the goal. The best Danish schools have gained by abolishing all examinations, credits and diplomas. With us, diplomas matter far more than education; and certainly the teacher may need her job. At worst, if all is lost, in despair the teacher and her pupils may throw away some more of those multitudinous recitations and go some fine spring day to see how the trees come

out in flower and leaf. That would not be down in the program, it would not be studying books; but there would be no tuberculosis in it, and it would be remembered when a day with the books had been forgotten.

A little house may be clean, wholesome and beautiful. Some good men and women live in little houses; some who do not, grew up in them. A big house may be unsanitary, may and often does shelter weakness and vice. Probably most of us hope to have bigger homes and bigger schoolhouses; but that hope is no reason why we may not now keep clean and plant trees. If a little schoolhouse is the only schoolhouse we now have, we can make it wholly unserviceable as a warning. Dirt is not irremovable; it is not a part of the divine order, inescapable. A little schoolhouse may be clean.

We live in the country. We can not have everything the city has, we can not bring the city to us. When we think it all over, possibly we should not be so content if we could. Like big cities, big schools are still this side of paradise; they have their problems. While we wait and work for the big houses, there is no harm in doing all we can for and in our little homes.

City papers now advertise little schools; the smaller they are, the higher the tuition. If at the moment we positively can not have the big school that we want, we may at least do our very best to help our little school to be as good as a little school can be. We might find that we like it, that it may be another advantage of that hard country life that makes us grumble but cling. Our little school is near the woods and fields, near the work and life of farms and farm homes. The environment might be worse. Vanity of vanities, the neighbors themselves might be worse; some of us will help the teacher and the pupils to clean the schoolhouse if she is willing that they should lose any part of that high education. The schoolhouse is not the best that we can imagine; but, like the farm, it is the best we have. If inevitably the biggest school were the best school, the country would be in hopeless plight; but what counts is not size but quality. A little school may be in the race; a big school may be out of it.



qualities. The fact that it is in a second grade seems to have a more depressing effect on the price than its quality would seem to justify. The writer has found in his experience that an orchard run with ciders out of apples made a very satisfactory and acceptable grade among a very good class of private customers.

It seems about time that a protest is put in against a certain kind of advertising Michigan fruit has been getting. A high officer in one of the newer marketing associations is reported as saying recently, "so much fruit in the past has been allowed to go to market of an inferior grade as to break down the good reputation which it otherwise might have established had the same marketing principles been used as those so rigidly enforced in western states." Haven't we had about enough such advertising from such a source? Just how much Michigan fruit is now put upon the market in a commercial way of this "inferior grade" and how much of it should be excluded in order to establish its reputation? And haven't our grading laws and system of rigid inspection now been in force long enough to begin to be effective?

On the contrary, it is quite time for our marketing officials to begin to advertise the fact that practically no fruit of an unmerchantable grade is now placed upon the market in a commercial way. Every fruit grower of consequence in the commercial fruit growing districts has a good power spray rig and fully understands the spraying schedules and formulas, and spraying in these districts is universal and fairly thorough. Practically no unsprayed fruit is grown in these sections. And if anyone is suspected of putting stuff on the market that is unreliable as to grading the inspector is soon apprised of the fact and is looking after it. All the fruit below marketable grades is used by canning factories and cider mills, and this constitutes a better quality than will be found in the grocery stores and, indeed, upon the tables of the restaurants and hotels of Michigan.

Never in all my experience have I grown finer fruit than in the year 1920. I take this year because of the exceptional quality of the fruit. Not three per cent was affected with either worms or fungus, or anything that can be controlled by spraying or known cultural methods. Yet not half of it went into the first grades and from six to ten per cent went into the discard for canners and ciders. There were limb chafes and weather injuries and insect punctures hardly skin deep and some marks that nobody seems to know the cause, none of which we know how to control and none of which reduce the keeping qualities and scarcely affected the appearance, yet all of which ruled it out of the first grade by the established grading regulations. How much of this would these critics have withheld from the markets, and what would they do with it? If, like western growers, our markets were distant and rates for transportation prohibitive it might be in order to talk of junking it, but with immense markets all about us in every direction it is both foolish and futile to talk of discarding it or withholding it from the market. Foolish because it is a good and merchantable quality of fruit that is in demand and in very limited supply if everybody who wants it might be reached, and futile because growers are going to continue putting it up. Isn't it better to advertise what fine quality we have instead of knocking our fruit?

OUR SERVICE DEPARTMENT

INTEREST RATES.

Kindly advise me whether any banking institution has a legal right to charge twelve per cent interest on notes, or mortgages. If so, why does the state of Michigan have a legal interest of seven per cent?—G. T.

The limit of interest rates that can be charged in Michigan, except by pawnbrokers, is seven per cent. But there is nothing to prevent any person owning a note from selling it for less than its face.—J. R. R.

ACCESS TO HIGHWAY.

A year ago there was a dredge cut dug in front of my farm which is a damage to me, for I cannot drain into it. This ditch deprives me of getting into my field, as they tore up my bridge and never replaced it. This cut comes in front and there is a creek too wide to ford in high water and adjoining farms on the other two sides. I wrote two letters to the county drain commissioner, but never received an answer. What can I do about this?—J. E. H.

It is the duty of the highway commissioner to furnish access to the highway where drains are placed alongside of the road, but if this is not done on demand, the complainant had better employ an attorney.—J. R. R.

ESTATE BY ENTIRETY.

If A's sister dies leaving a husband, does a joint deed hold where there is personal property mentioned in it? An agreement was made by her to sell before she died. Does the mortgage hold for her heirs?—W. S.

Land conveyed to husband and wife creates an estate by entirety unless different intention is expressed. Personal property can not be held by entirety. A transfer of personal property in the same words by the same instrument creates tenants in common as to the personal property. Land bound by mortgage remains subject to it in the hands of any person taking it until it is discharged.—J. R. R.

APPLYING FERTILIZER AFTER SOWING WHEAT.

I sowed a piece of wheat this fall without fertilizer, being unable to get it at the time. Would it be profitable for me to sow a good grade of fertilizer broadcast on this field now? The soil is of a sandy nature and is in need of it.—A. G.

Of course, it would have been better to apply the fertilizer when you sow the wheat but it can be applied afterwards. However, I would wait until spring to do this. If you sow it on top of the ground now much of it is liable to wash away with heavy rains and snows before it becomes mixed with the soil. The ground is apt to be saturated with water so that when a rain came after sowing much of the water would run off instead of soaking into the ground. Just as early in the spring as you can get on this land I would sow the fertilizer broadcast and give the field a slight harrowing with a slant-tooth harrow. Sown in the spring this way I would recommend that a fertilizer be used containing some nitrogen of a regular soluble nature.

BEAN MEAL FOR COWS.

Can you inform me how much protein there is in navy bean meal, and how much to feed to a dairy cow?—C. G. R.

Navy beans have much the same analysis as field peas, which contain sixteen per cent of digestible protein, 51.8 per cent carbohydrates and seven-tenths of one per cent of either ex-

tract or fat. You ask how much of this should be fed to a cow. Of course, very much depends upon the nature of the other foods in the ration. If you were feeding wheat bran or linseed meal, you would not need nearly as much bean meal as you would if you were feeding corn meal or corn and oat chop because the latter is not nearly as rich in protein as the former and so I could not tell you how much to feed unless I knew what other foods you intended feeding with it. In a general way, however, it is not wise to feed a very heavy ration of bean meal because it gives you a very hard fat. Butter made from cows heavily fed on bean meal is hard and crumbly and does not contain a good body. Two or three pounds of bean meal, however, can be fed to a dairy cow without perceptibly injuring the body of butter.

RAM INSTALLATION.

I would like some information about a ram. I have a spring about half a mile from the house, that flows, I would say, a three or four-inch stream. Can I ram it to the house? I think there would be a fifty-foot raise in half a mile.—C. W. B.

You do not give data enough to make it possible to state definitely whether or not the hydraulic ram will

and installation, \$100; one-half mile of one-inch pipe at ten cents per foot, \$264; digging one-half mile of three and one-half foot trench and laying the pipe at \$1.50 a rod, \$240, making a total of \$604.

If after measurements are carefully made, it seems possible and advisable to install a ram, the specifications should be given to some reliable manufacturer of rams and their recommendations taken as to the size of the ram and method of installation.—F. F.

WIDOW'S RIGHTS.

Suppose a man and woman marries, raises a family and accumulates property. What share can the woman hold in case of the man's death? If there is no will, can she will her share away? Can she do with her share as she pleases? Can the children throw her out of her share?—Subscriber.

If a man die leaving a widow and children and no will, she takes one-third of the real and personal property and the children two-thirds; but if he leaves only one child the widow takes half of the personality. If he leaves a will, the widow has the right to elect to take under it or to take the personal property she would have taken if he left no will up to \$5,000 and half of the rest of the personality she

tion is bound to restrain it at his peril. But proof of the knowledge of the vicious disposition is necessary to charge the owner in damages.—J. R. R.

COTTONSEED MEAL FOR STEERS.

We have twenty steers of good quality Shorthorns and Herefords. We began feeding them on November 1 at which date they averaged 867 pounds. We would like to know how near to a balanced ration we are feeding them. We are feeding 200 pounds of corn silage at a feed twice a day, morning and evening; after the silage we feed them all the shock corn that they will clean up twice a day, and at noon all the mixed hay they will eat. We are figuring on feeding them until about the first of February. Would you advise feeding them cottonseed, and for how long?—U. G. B.

My opinion would be that you ought to add cottonseed meal at once as your ration is too deficient in protein to get good results. For steers that you are going to dispose of in February you need not hesitate to feed them all of the oil meal that they will eat up clean. I would begin at once feeding about one pound a day and gradually increase until you get them eating four or five pounds of cottonseed meal per steer a day. You will have to be governed somewhat by the way they eat this ration. Of course, never overfeed. If you find they cannot take care of it all, you will have to act accordingly but I think you will find that they will eat as high as five pounds of cottonseed meal per day and this will be none too much to get you the best results in weight and the most economical ration to get it. I would recommend that you scatter this cottonseed meal on the corn silage, feeding it twice a day.

SWEET CLOVER AND TIMOTHY.

I have sixteen acres in rye, which I intend to sow to sweet clover this spring, about four quarts of clover and three quarts of timothy to the acre. I think I will try sweet clover, the white blossom variety. My land is a sandy loam, some is level and the rest is quite hilly and in fairly good condition, I think, as I have had clover growing there before, although I have lost the last two stands of cloverseed through winter-killing and dry weather. The seed I am going to get is to be double scarified. Now, would I have to inoculate this seed or would it be all right to sow it that way? If I would have to inoculate, which would be better and cheaper, buy the inoculating bacteria in the liquid form or use ground from a small sweet clover field which I have, where it grows quite rank? How would you spread the ground and how much to the acre? I intend to sow the clover seed on top of the ground and drag it in with a weeder.—T. S.

I do not believe you will be satisfied with your combination of sweet clover and timothy. The sweet clover will be ready to cut for hay before the timothy is ready, and as the second growth of the clover is usually left for seed, you will get no benefit from the timothy at all. Of course, the timothy will increase the amount of sod to plow under, and, in case the sweet clover fails to make a stand, the timothy might come in and give you some hay. The sweet cloverseed ought to be inoculated. It is much easier to treat the seed with pure culture of bacteria than to scatter several hundred pounds per acre of inoculated soil over a large field. Pure cultures of sweet clover bacteria can be purchased from the Agricultural College at East Lansing, at twenty-five cents per bottle, enough for one bushel of seed. Consult with your county agent about the plan you propose and the details of inoculation.—H. L. B.

Dean Russell to Speak in Michigan

THE first of a series of messages to be delivered to the people of the state by leaders in rural affairs has been announced by H. H. Halladay, Commissioner, Department of Agriculture.

The first series of meetings will be held during the week beginning January 23.

Dean H. L. Russell, of the Wisconsin Agricultural College, will give his address in each of the following cities: Flint, January 23; Bay City, January 24; Battle Creek, January 25; Kalamazoo, January 26; Grand Rapids, January 27, and Lansing, January 28.

Mrs. Dora Stockman, member of the State Board of Agriculture, and Michigan leader in rural affairs, will also address these meetings during the week.

Mr. J. A. Doelle, Director of the Bureau of Agricultural Development, under whose direction these meetings are being arranged, believes that the contact of the farmers and city folk with great agricultural leaders will aid in a mutual understanding of the serious agricultural problems of the day. Especial attention will be given to the understanding of our economic problems.

All the agricultural interests of the state, and the various civic bodies will be asked to cooperate in making these meetings a big success.

The Department of Agriculture wishes these meetings to be construed as sectional meetings in which all the farmers of the communities in the vicinity of these cities will attend.

Dean Russell has announced his address as "Come, Let us Counsel Together." Anyone who is at all familiar with the development of the agriculture of Wisconsin and the healthy attitude of the urban population to their country neighbors, knows that Dean Russell has been responsible to a large degree for this fortunate condition.

The title of Mrs. Stockman's address is "Home-grown Prosperity."

operate. The possibilities of an installation will depend upon the number of gallons of water per minute which the spring will supply and the fall in feet which it is possible to obtain from the supply to the ram. The size of ram necessary in this case I have estimated as a No. 5, which requires from six to twelve gallons of water per minute to operate, and a drive pipe fifty feet in length with a fall of seven feet from the supply to the ram. This ram should deliver from thirty to sixty gallons of water per hour. The cost of the installation will be comparatively high and unless it is difficult to get a satisfactory well the installation of a ram would seem to be inadvisable.

The estimated cost for the installation is:

The ram, drive pipe, pit for the ram,

would have taken had he left no will; and also she will take against the will a life estate in one-third of the real estate. If the widow makes no election within a year after the probate of the will she is presumed to take under the will. What she takes in either case she may do with as she pleases, and the children have no control over it.—J. R. R.

DANGEROUS ANIMALS.

Would you please give me the state law on bulls pasturing in fields along public highways where children have to go to school? Said bull is three years old.—W. S.

We know of no statute on the question. Of course, the owner of any animal known to be of a vicious disposi-

Winter Work for Farmers

By L. A. Chase

RECENTLY, in these columns, I adverted to a proposition of Prof. C. O. Sauer, of the University of Michigan's Department of Geography, relating to winter-time work for farmers, particularly in the northern section of the state. The idea is, that some of these farmers might be able and glad to produce home-made articles that would be marketable and would help the family income at a time when farm work is not very pressing and revenue from it is quite lacking.

Mr. L. M. Geismar, agricultural agent of Houghton county, does not take kindly to the suggestion. He has not found that such home-made articles as have been produced by the Finnish farmers of Houghton county have been marketable, in the main, and he thinks that it is more worth while to help the farmers to get a good living

boyhood in Finland, says Mr. Jasberg, the farmer needed only to buy iron, salt, dyes, matches, nails, buttons, medicines, and some coffee and sugar. Even tobacco was a home product, and, for that matter, I have seen it growing in the upper peninsula.

Home industry is still common in Finland, home-needs, especially for woodenware and furniture, in some communities still being largely supplied at home. Parts of clothing are still home-made. He says it is not unusual to find that one of the men of a family prepares the footwear for the entire family, even the community, from home-tanned leather. Mr. Jasberg also finds that home-made goods have a market in old Finland, particularly such things as the wagon, the rug, and the knife. Among such industries for women, he mentions spinning (the oldest and most extensive);



off the land itself. He takes dairying as an illustration of what the north country can effect.

On the basis of the recent census returns, Mr. Geismar computes that there are 184,130 farmers in the lower peninsula, and their cleared land amounts to 12,460,075 acres, or an average of 67.67 acres per farm. In the upper peninsula he finds there are 12,317 farmers, and their cleared land amounts to 465,446 acres, or an average of 37.78 acres per farm. The lower peninsula farmer has about eighty per cent more cleared land than the upper peninsula farmer, and showed he is able to carry on dairying on an eighty per cent larger scale. Then, turning to the number of cows used in dairying, he finds that there are 750,987 head in the lower peninsula; and in the upper peninsula, there are 51,108 dairy cows. He computes that the number of dairy cows per farm on which live stock is kept is 4.29 head in the lower peninsula, and in the upper peninsula the average number of head is 4.51. So he figures that with eighty per cent less cleared land the upper peninsula farmer keeps five per cent more dairy cows. Dairying, then, and not household industries, presents the greatest opportunities for northern farmers, he concludes.

On the other hand, Mr. J. H. Jasberg, of Hancock, a prominent Finnish resident of the copper country, a man who I know to be sane and solid in his thinking, after considering the subject with some care, believes that there is something in the home industry proposition. He points out that for years northern Michigan farmers have practiced home industries to some extent without outside encouragement or direction. He notes that there are many families in the upper peninsula, consisting of from four to nine children where the mother makes all the stockings and mittens from home-grown wool, while many other pieces of clothing were formerly made at home. The men, he says, have been accustomed to make many small tools at home, the work being done in the early morning and evening when it is too dark to work out of doors.

In this the Finnish farmer is following a custom common in the old country, as Mr. Jasberg remembers it from forty years ago when he lived in Finland. In old Finland, he says, the farmer made all his clothing, work tools, furniture, and nearly all the earthenware of the house. During his

the knitting of stockings still general in western Finland; weaving, important at certain places in the country; lace-making along the coast at Orimattila, and cloth buttons.

Work done by men include the manufacture of spoons and ladles made from wood in northern Finland; wooden dishes in northern Finland; baskets, made throughout the country; articles made from birchbark, (slippers and shoes, baskets and knapsacks); baskets made of tree-roots in central and central northern Finland; willow baskets and furniture made by the blind throughout Finland; brushes, essential furniture, row-boats and sail-boats (differing in models in various parts of the country). The skill industry is described as extensive and profitable. Collar-trees, or bows as part of harness are similarly produced, as also hames. Other home industries include the manufacture of vehicles, farm implements, knives, castings, tin-smithing, leather-goods, felt slippers and shoes, cornigerous articles, toys, earthenware, and stone articles.

These home industries are now organized in Finland, and are assisted by schools which give instruction in them. There is governmental inspection for these schools. Home-made goods are sold in the open market and by individual producers. Home industry associations maintain their own stores in the cities for the disposal of these goods.

While Mr. Jasberg does not regard the American Finn as advanced in home industries as his congeners in old Finland, he can learn. Mr. Jasberg finds that the northern Finnish farmer does not waste much time in winter, except in the long evenings, when he could very well devote himself to some profitable line of home manufacture. Both men and women are capable but their efforts have been undirected and unsystematized, he says.

There are many Finnish farmers in northern Michigan and they are tenacious of old world customs. They have, as Mr. Jasberg points out, a natural aptitude for home manufactures derived from their life in old Finland. He thinks that this aptitude, if not cultivated, will be lost in a very few generations, and he warmly espouses the effort that the Upper Peninsula Development Bureau is making to improve the condition of northern farmers in this direction.



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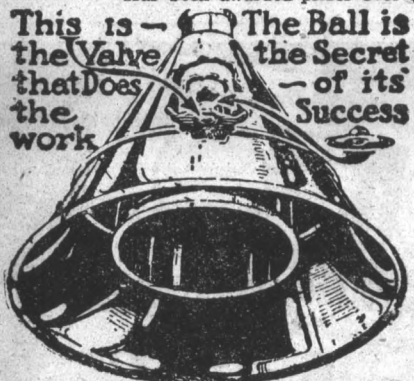
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HAYES FRUIT-FOG Sprayers

FOR SALE: 8 ft. Cedar Grape Posts, 15c. Picked up at our yard. **Barnes Wire Fence Company, Detroit, Michigan**

What Ails the Clover Crop?

(Continued from page 3).

away, though it is offered free of charge to farmers in the neighborhood for the hauling, or is loaded for shipment at but a small charge, which consists of the cost of loading on cars only. There is an immense reserve of this material in Michigan.

The Continental Sugar Company of Blissfield, Michigan, states that there are approximately seven thousand tons of refuse lime at Blissfield, which could be handled, but that practically none has been distributed though no charge is made for it.

The Holland-St. Louis Sugar Company of Holland, Michigan, states that they have an accumulation on hand as a result of twenty years operation, but that more or less of it is being hauled away by farmers and gardeners to be used as fertilizer. It is free to anyone who wishes to come and get it.

The Michigan Sugar Company of Bay City, estimates that they have from ten to fifteen thousand tons of refuse lime on hand and that they would be pleased to have the farmers take all they want without charge.

The Owosso Sugar Companies of Owosso and Lansing report that the supply of lime-cake in their settling basins amounts to sixty thousand tons. A large quantity of it is in condition similar to earth, with about fifty per cent of water. They will donate to farmers calling for same with team.

The Independent Sugar Company of Marine City, state that they have fifty thousand tons on hand, at present wet, due to operation, but dry during summer. They have always distributed lime free to farmers.

The Columbia Sugar Company of Mt. Pleasant, Michigan, have fifty tons of refuse lime available, dumped on side of settling basin. The present condition of the lime is good. It is supplied free where piled.

The Menominee River Sugar Company of Menominee, Michigan, have something like ten thousand tons of lime piled about their plant and most of it is in a fine powdered form, carrying a moisture content of twenty-five to forty per cent. This is supplied free to farmers who haul it away or for shipment. It is loaded with locomotive crane equipment, the loading charge being not more than \$10 per car, a car carrying twenty-five to thirty tons. Mr. G. W. McCormick recommends that this lime be put in stock piles by farmers at their homes so that it may be had for use at such time as it is convenient to haul.

Just because it is free for the hauling must not lead to the idea that beet factory lime is not of value—for it is an excellent form of lime to use when in condition to haul and apply. From three to five large loads is the usual application per acre.

The Alma plant of the Michigan Sugar Company reports seventy-five thousand tons of lime on hand, which at the present time is free to anyone who comes to get it.

The Holland-St. Louis Sugar Company of St. Louis reports having from fifteen to twenty thousand tons of lime, which is now in the consistency of moist earth. It is distributed free.

It would seem that many farmers, particularly those hauling beets to the factory, would find it good business to haul away this excellent lime.

Michigan-grown Seed.

The matter of choice of seed is also largely in the hands of the individual. Michigan-grown seed or seed produced in other northern states is best for Michigan. It is granted that clover seed from northern Europe will do well in Michigan, but on the other hand, large quantities of Italian seeds are also shipped from Europe. Ex-

periments at the Michigan Agricultural College have shown that the Italian seed produces plants which do not withstand Michigan climate nearly as well as Michigan-grown seed or seed from northern Europe. Special effort should be made to secure will-cleaned Michigan-grown seed from reliable sources. It is estimated that only about two-thirds the usual supply of Michigan-grown seed is available this year.

Top-dressing fields with manure, even though the dressing is very light, will greatly help the clover stand. It is also a matter of note that where small grains are treated with acid phosphate or complete commercial fertilizer the clover seeding is substantially benefited. Early seedings on firm seed beds give best results.

Under the present conditions it is mighty good business to increase the acreage of clover, alfalfa and other legumes. Clover and alfalfa hay are bringing relatively much more money than general crops, but it is not for sale primarily that the crops should be increased, but in order to provide an ample supply of cheap protein hay for the feeding on the farm of dairy cows and live stock so that the cost of production of milk and meat can be lessened in order to meet present prices and leave a greater margin of profit.

From the standpoint of future crop and live stock production, more clover, more alfalfa and legumes in general will lay a foundation for dependable farming. The prosperity of Michigan farms in the immediate future depends very largely on the success met with in establishing good stands of these crops.

Big clover crops means bigger crops at less cost, of corn, sugar beets, beans, potatoes and grain. "Succeed with clover or alfalfa and you will succeed with all."

1921 WOOL NEARLY ALL SOLD.

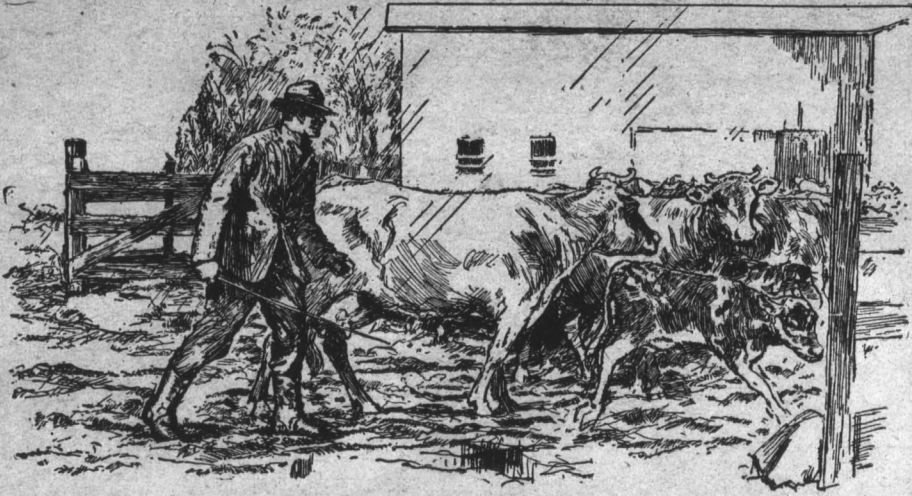
SALE of 483,000 pounds of wool from the State Farm Bureau's 1921 pool recently has brought the farm bureau pool to the point where the end is in sight. Since September 1, the farm bureau wool department has sold about 2,200,000 pounds of wool out of a total of 2,785,000 pooled when the grading campaign ended.

Coincident with the announcement of the big sale of wool came another announcement that every check has been mailed in final settlement of the 1920 pool.

The contrast between the 1920 and 1921 pools is marked. With the 1920 pool the farm bureau had to contend with a market that was dead for about seven months. Then between February 15 and September 1 of this year the wool department moved most of the 3,500,000 pounds of the 1920 wool pooled.

This year sales were under way before the grading campaign had ceased and a constantly improving market has enabled the wool pool to market the greater portion of the pool in a little less than four months. Wool has been placed upon the market from time to time as prices warranted it, but the movement has averaged a car a day when spread over the four months' period.

Michigan farmers have gained recognition in the cooperative wool marketing field, and besides they are getting credit for every pound of wool that is worthy of a grade. Today Michigan farm bureau graded wool stands high with the mills, and the cooperative wool business of Michigan seems to be assured of a profitable place in the markets of today and the future.



Muck and mire that stick like glue

*—that's what the
stockman is up against*

THAT'S why we invented the U. S. Walrus—an *all-rubber* overshoe that washes clean like a boot. It made its first big hit with the stockmen of Iowa—but today it's making friends with farmers everywhere.

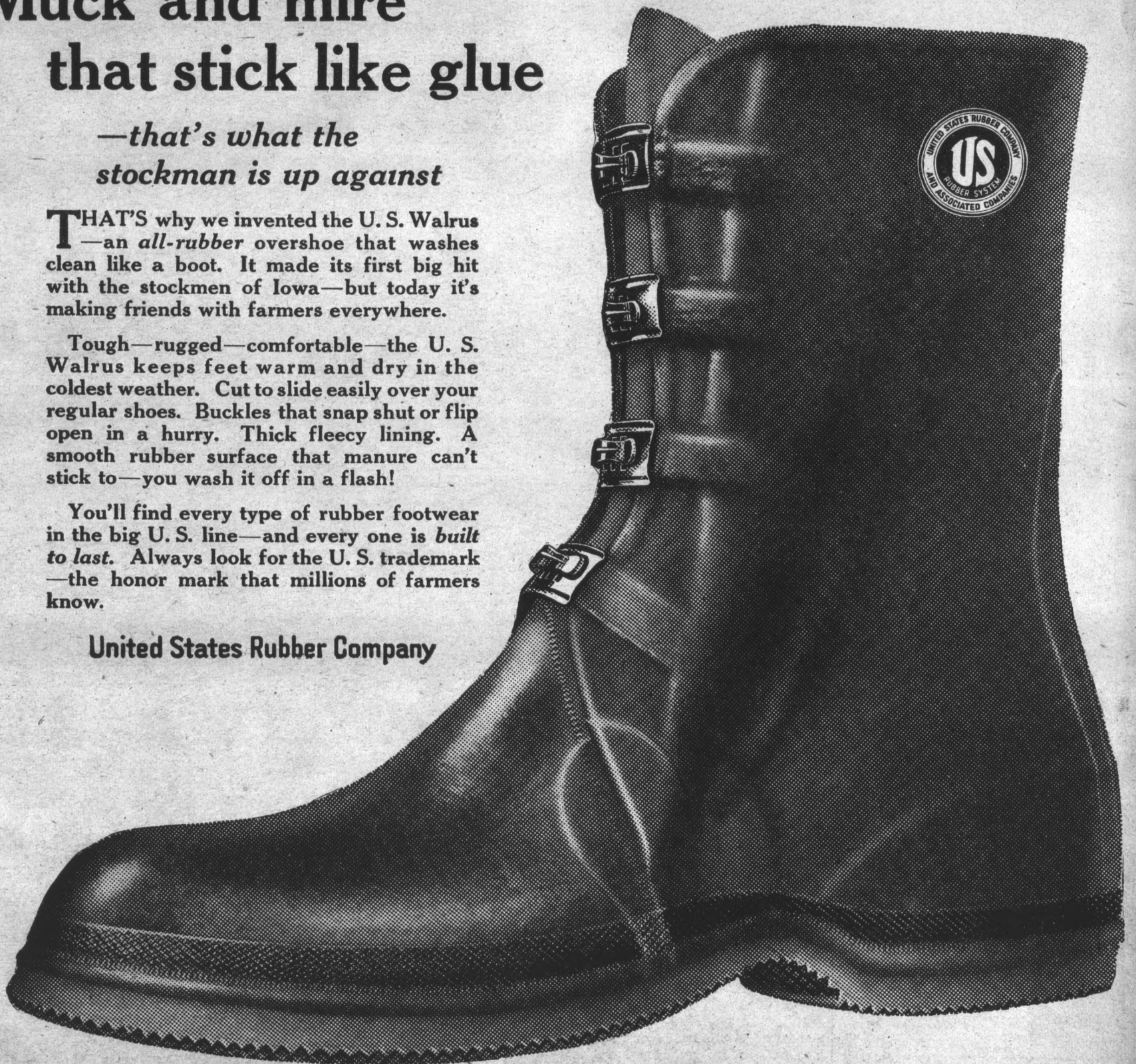
Tough—rugged—comfortable—the U. S. Walrus keeps feet warm and dry in the coldest weather. Cut to slide easily over your regular shoes. Buckles that snap shut or flip open in a hurry. Thick fleecy lining. A smooth rubber surface that manure can't stick to—you wash it off in a flash!

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 Rochester, N. Y. The Flower City

Farm Organization News

DAIRYMEN TO MEET.

SAGINAW will be the dairy center of Michigan on February 14-17, when the Michigan Allied Dairy Association holds its third annual convention and dairy show there, says H. D. Wendt, general secretary of the association, in announcing that plans are rapidly rounding into shape for the coming convention. Mr. Wendt says that the marked drop in practically all farm products except those from the dairy has resulted in a noticeable stimulus for the dairy industry in Michigan.

The dairy association is trying to get such noted speakers as Secretary Hoover, of the department of commerce; J. R. Howard, president of the American Farm Bureau Federation, and Professor David Friday, president-elect of the Michigan Agricultural College for its convention program. An extensive exhibit of all types of dairy equipment is assured. Educational exhibits by the state and the United States Departments of Agriculture will feature the importance of greater economy in production and a higher and more uniform quality of dairy products.

CLOVERSEED IS SCARCE.

ACCORDING to the Bureau of Markets the United States has a visible supply of about 62,000,000 pounds of cloverseed this year in the face of an annual consumption of some 120,000,000 pounds. Good adapted seed is the one assurance that a farmer has. Good seed of known origin and adaptation is the starting point for a successful year.

Comparing the financial fortunes of the foresighted farmer who is able to make seed purchases now at a time when he can choose what he wants, and the man who waits, the farm bureau says:

To the farmers who buy their seed now and assure themselves of the best—seed that is adapted, weed-free and will grow, price is the small consideration. If a man buys clover seed now, planning to seed ten pounds to the acre and the price of seed goes up \$3 a bushel, he gains fifty cents an acre; if it drops \$3 he loses fifty cents an acre—a small sum; but he has real seed in his granary. That is the important item.

If a man waits and gets the tail-end seed offerings, often imported or southern-grown seed, weed-infested and unadapted, he is in for trouble. If he pays \$10 to \$15 a bushel for such stuff and sows it ten pounds to the acre, he lets himself in for a possible loss of \$2.50 per acre on seed, not to mention the loss of the expected crop and his time and labor.

STATE GRANGE NOTES.

THE State Grange passed a resolution unanimously endorsing the Michigan Farmers' Automobile Tours, which were originated and conducted by Brother J. H. Brown, of Battle Creek. The plan of touring and camping as a sort of traveling Chataqua was sponsored by the Michigan Farmer the first year Mr. Brown tried out his plan with a tour up the east and west pikes of the state to Mackinac and the Soo. The State Grange voted to invite the tour manager to conduct future tours "Under the Auspices of Michigan State Grange." Mr. Brown was pleased with such a fine endorsement and both the 1922 tours to Niagara Falls and up the west pike to

Mackinac next August will be Grange tours, the same as last year.

The resolution asking abolishment of the state constabulary was defeated. The county commission form of government was not favored. A state trade commission similar to the national trade commission was favored. Profiteering should be made a penal offense. Ways and means of furthering cooperative buying and collective bargaining was favored in a resolution. A commodity law was asked which will enforce the truthful labeling of all articles of food, clothing and similar every-day needs.

Considerable time one afternoon was devoted to the proposal that the national government furnish some system of storage for food products raised by the farmer, and that food be held there for orderly marketing, thus bringing relief from food gamblers and speculators. The securities of the farmers who had food in storage would be used to borrow on. It was claimed this would furnish a better system of crop handling, would relieve the farmer of his crop and make more farm owners. A resolution to amend the constitution of the United States prohibiting tax-exempt securities was passed. The Lakes to the St. Lawrence waterway plan was endorsed.

The sentiment during the convention was that the Grange in Michigan today was stronger than ever before in its history. A big campaign will be made next summer somewhat along the regional plan of last summer.

The enemies of the income tax, if defeated at the polls next fall, will try to nullify the law by returning to the vicinities in which the tax originates a major part of the income for local purposes. That would mean that ninety per cent of the tax would go to the city of Detroit. In Wisconsin the major part of the income tax collected is returned to the city of Milwaukee, and the state derives but little benefit from the law. In New York state one-half the tax collected goes to the state.

Mr. Bramble charged that the reserve board favored some interests, and that one bank in Chicago had loaned to speculators at four and one-half per cent interest, while charging agriculture seven per cent. The only remedy that he could propose was that the farm organizations of the country demand that at least three representatives from their ranks be chosen to sit on the board, and then if they were unable to prevent alleged discrimination, to take their complaint to the people.

HAS SUCCESSFUL YEAR.

SO successful was its first year's business, the Grand Traverse Packing Company, of Traverse City, is contemplating enlarging its warehouse and increasing its operations next season. The stockholders at the recent annual meeting voted to increase its capital stock from \$100,000 to \$200,000. The directors believed the prospective business warranted the increased capital.

The company, organized by fruit growers about a year ago, paid the farmers ten cents a pound for their cherries this year. Nine cents a pound was paid at the time of delivery and the extra cent a pound was declared at the close of the season.

The company experimented with frozen fruits and has found them very successful. A barrel of the frozen fruit was shipped to Chicago and reports returned indicated it arrived there in excellent condition, the fruit still being frozen.—R.

say

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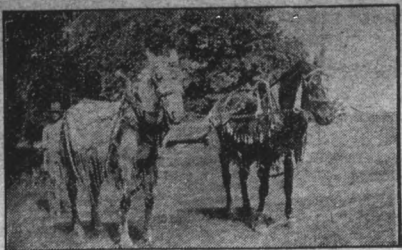
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 We pay more for raw furs than you can get from dealers. Why? Because we are manufacturers—not dealers. We buy furs to make them up into fur garments, so we can give you the extra profit that the dealer usually gets when he sells your skins to the manufacturer.
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 Special Introductory Offer to get new customers. If you would rather have a new overcoat instead of all cash for your skins, we will send you for \$35 worth of skins an \$85 Ulster with full-skin, unplucked Otter collar. Latest style with belt. Heavy dark brown, all-wool mixture. Free circular with picture of ulster and complete details. Send for it today.
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 Made of real, live rubber by U. S. Rubber Co., Goodyear Rubber Co., and other manufacturers for U. S. Army use. Our enormous stock enables us to sell them at the low price of \$3.75 per pair. Each pair FULLY GUARANTEED by us as to wear, quality, etc. Sizes 6 to 12.
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WE TAN YOUR HIDE and make you the best FUR COAT or ROBE for \$15.00. Also tan hides for harness and sole leather, deer skins for buckskin.
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GROWS HIS OWN ALFALFA SEED.

OVER in St. Clair county near Capac lives Mr. A. Petz. He has been growing alfalfa for a decade or more, and during the past three years he has been harvesting seed from his alfalfa fields. This year his crop amounted to fifty-five bushels. This we believe to be the largest supply of this seed grown by any farmer in Michigan this year.

One of the fine things about this home-grown seed is that it will all be used in the vicinity where grown. The farmer neighbors are anxiously seeking to secure a supply sufficient for their needs. The yield will be ample to sow over three hundred acres. We shall be pleased to hear from others who have had recent experiences with the production of this seed on Michigan land.

LEARNS A LESSON.

I AM just writing to tell Michigan Farmer readers of an observation on hay production. Ten farmers in this county kept books on their 1921 hay crop. The average cost per ton was \$10.68 and the average yield was one and seven-tenths tons per acre. The hay was sold for from \$12 to \$16 per ton. The men who grew a ton and a half or more per acre made a little money, but those who grew less than this amount did not realize profit from their venture. I must follow the men who grew good crops. This means better farming. I can see plainly that through increased fertility the cost of production is lowered as has been clearly shown to me by the returns from these ten farms.—O. U.

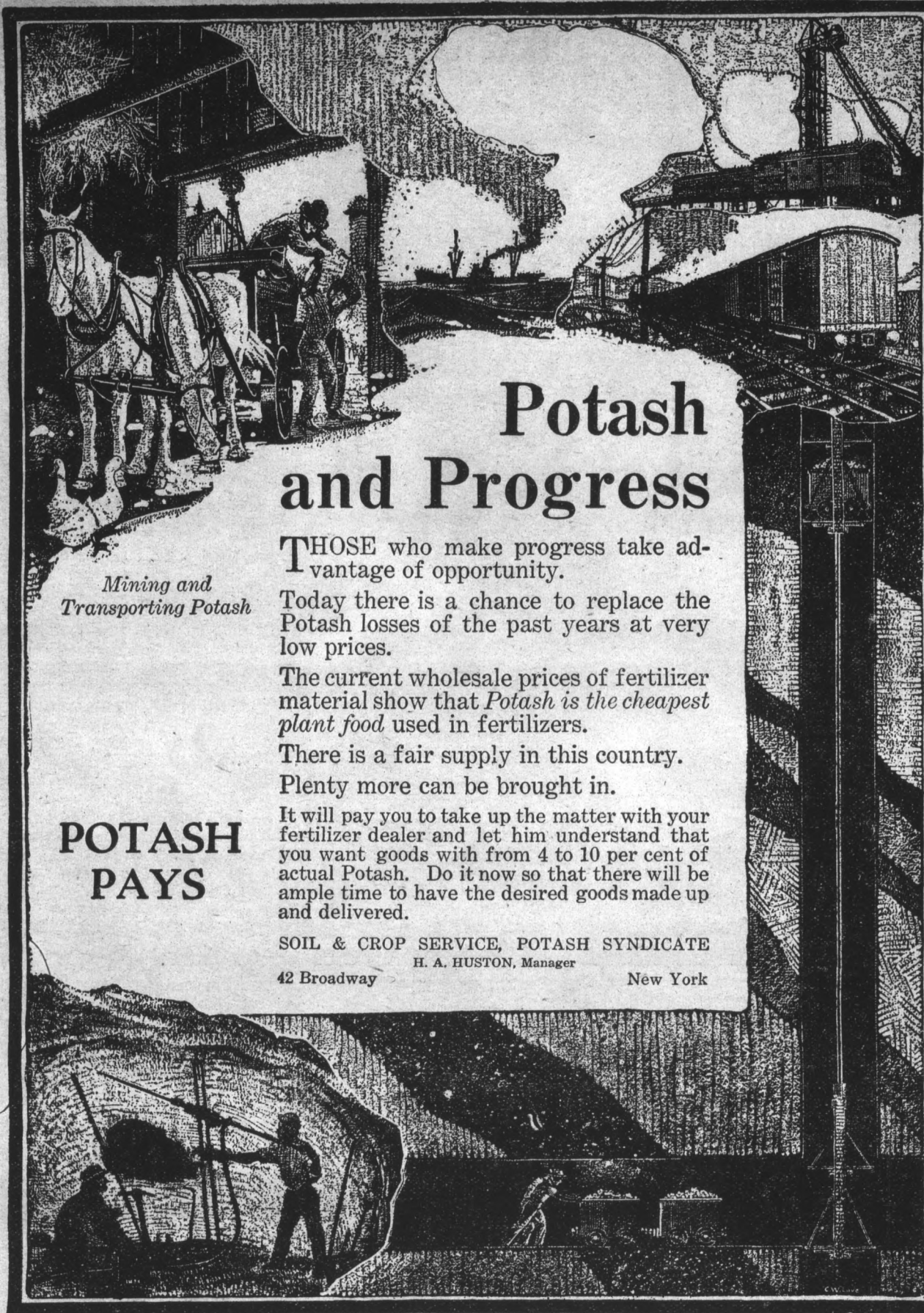
FARMING PEAT SOILS.

A WAY from large cities the management of peat soils is somewhat difficult. The question of transportation and labor makes it necessary to eliminate the heavy truck crops. Recourse must be made to other rotations. One that is commonly used by successful men is to sow the peat ground to some small grain the first year, this to be followed by a crop of hay, and then by a crop of corn.

One is more certain to secure a catch of clover by using a nurse crop. Small grains have served best in this capacity. Rye is now being held as one of the best of these nurse crops for peat land. It ripens early and is less apt to lodge. Oats and barley are good, but the straw of these crops when grown on low, wet soil is weak and easily breaks down. The usual mixture of seeds to follow the small grain is a combination of red-top, timothy and alsike clover. In handling these soils it is, of course, important to look after the tile drainage.

CHANGE IN COUNTY AGENT IN CHARLEVOIX COUNTY.

CLIFFORD W. WING, agricultural agent in Charlevoix county, has resigned and will leave the work as soon as his successor is named. He has made a fine record in the northern county, raising Charlevoix to fourth place among the counties in the production of certified seed potatoes in the United States. C. A. Cheney, manager of a large fruit farm at Empire, is favorably mentioned as Wing's successor.



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Popular 7-Room Home



7-Room Semi-Bungalow.



Low-Priced Bungalow.

Francisco Farm Notes

By P. P. Pope

AS stated at the close of our last week's letter, we will here attempt to tell of our system of bookless book-keeping. It is not exactly bookless either, for it requires a check book. We have had occasion to investigate and try out numerous cut-and-dried farm accounting systems, with varying degrees of satisfaction or disgust. Keeping farm accounts is one of the things in which theory and practice often fail to coordinate. Many students of accounting have worked out various forms of farm account



books, simple and complicated, good and good for nothing, free and otherwise. I presume there are few farms that are not in possession of one or more of these ready to wear affairs, and I would venture the assertion that seventy-five per cent of them are out of commission. This is not entirely the fault of the books, but the very nature of the farmer's work—and I am speaking of the farmer who works with his hands—makes it very difficult for him to long continue the practice that these books require.

We have tried making an immediate record of all transactions on one of these neat little books. The result was, it caused lots of running, the use of many and various writing implements, and a well-thumbed page. The only way we could keep that book neat was to not put anything in it until a more convenient season. So we tried that and forgot more or less of it. We tried a cheap pencil day-book for making a temporary memorandum of all transactions. This worked better and we kept it up for several years, transferring the items to the permanent account at our convenience.

In the meantime, we were doing more and more of our buying by check, and handling less cash. It gradually dawned upon us that if we would do all our buying that way, and would write on the check stub what the money was spent for, we could do away with the day-book except for the receipts. Of course, we could not make our expenditures by check without also depositing the receipts. We tried to show our banker how he could save us some book-keeping by issuing a pass-book with more space for writing in the source of the deposit. But the pass-book was usually at home in another pocket. Several years ago we read an article in the Ohio Farmer by H. P. Miller, and immediately adopted his plan of recording receipts, and it works to perfection. It is simply this. Deposit all moneys received and take a duplicate deposit slip. Do not present pass-book when making deposits. Before leaving the bank write down on the duplicate slip what the funds were received for. Then don't lose the slip. I reserve a certain section of my pocketbook for these slips and when it gets too full, slip them together with paper clips and file them with stub books and vouchers, each year's supply being filed together. We use a check book that folds and has a stub as large as the check blank, giving ample room for recording the transaction. Thus you see that we have a correct record of all cash transactions without any special effort or any special equipment, and with these records the summing up can be done at any desired time. We usually find little occasion for it until the end of the year when we

spend the better part of three or four days on the year's records. So far we have gone into detail to a considerable extent in order to show that our system is founded upon convenience and is a gradual outgrowth of experience. It is not perfect, of course, but for the busy farmer it is practical and it works. We might add that our business is practically all done on the basis of cash or its equivalent. Any credit business we may have, either going or coming, is, in so far as possible, handled through the bank.

The first step in the annual summary of affairs is the taking of the annual inventory, described in last week's letter. This tells whether the year has a gain or a loss to show and how much. Next we want to know the gross receipts and expenditures. We get the gross receipts easily from the deposit slips, plus or minus any gain or loss in the inventory compared with the previous year. Each month our bank returns a balance sheet with the cashed checks or vouchers. These we go over and check off both on the check stub and on the balance sheet, to see that no errors have been made or checks raised or forged. Expenditures may then be accurately determined from either stubs or balance sheet. Now the question comes up, where did the money come from and where did it go to? So we proceed to find out. We take a sheet of ordinary letter head and rule it vertically, making six or seven columns. Then we read our deposit slips, beginning at the first or the year. The first says, "loan from bank," (good way to start the new year), so we write "loans" at the top of the first column and the amount underneath, subsequently all receipts from loans are written in this column. The next indicates that the receipt was for hogs sold, so we write the amount down in the second column and head the column "hogs" or "live stock." The next says "beans" so the third column is headed "produce." There may be several receipts from minor sources so we have a "miscellaneous" column to take care of these. Another headed "personal" takes in receipts independent of the farm. This may be continued until we secure whatever information is desired in regard to the source of income. Another sheet is ruled in the same manner and with all check stubs for the year in hand is made to answer our queries in regard to the expenditures.

From here on there are numerous questions that come up for solution. They may vary greatly on different farms, but given the above information, a little mathematics will usually reveal the unknown quantity. I hear the objection raised, that depositing and checking every item of receipts and expenditures would be very troublesome and it surely would be. We all like to feel some good coin of the realm in our jeans, so instead of writing a check every time we want a new necktie or a little gas for "lizzie," we keep the pocket replenished by writing checks to "cash," and charging them in the summary to the personal account. Of course, we buy little things for the business at times and pay cash out of this money that will be charged to personal account. But we also receive funds in small amounts from time to time that we do not deposit. Past records have taught us that, taking one year with another, these items will approximately balance each other. We do not claim everything for this system, nor absolute accuracy in all things, but it is practical and workable until the end of the year when we

RHODES DOUBLE CUT PRUNING SHEAR Cuts from both sides of limb and does not bruise the bark. Made in all STYLES & SIZES. All shears delivered free to your door. Send for circular and prices.

RHODES MANUFACTURING CO.
305 Division Ave. GRAND RAPIDS, MICH.

BOOK ON DOG DISEASES And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

America's Pioneer Dog Medicines

We Pay \$7 a Day
taking orders for Inside Tyres—inner armor for automobiles. Positively prevent puncture and blow-outs. Guaranteed to give double tire mileage. Use over and over again. Old worn-out casings will give three to five thousand more miles service. Enormous demand. Every auto owner a prospect. Write quick for agency.

AMERICAN ACCESSORIES CO. B-1759 CINCINNATI, OHIO

COAL "Blue Ribbon Lump" Highest grade. Direct from the mine. Get our prices, circular and agency proposition and make money.

THEO. BURT & SONS, Melrose, Ohio.

Never-Klog Saw Dust Blower Guaranteed five years. Cash or easy terms. Write for circular. **HILL-CURTIS CO.,** 1506 No. Pitcher St., Kalamazoo, Mich.

Tobacco MONEY BACK IF NOT DELIGHTED. Choice aged mellow Kentucky natural leaf. Chew, smoke. Direct from reliable producers at big saving. Trial lb. each, 3 kinds: mild white Barley, best yellow Pryor and second grade, only \$1 prepaid. Chambers Tobacco Growers', Warehouse O, Chamber, N.Y.

Tobacco Natural Leaf. Sweet, mellow hand-picked. Chew 1/2 lb. \$1.50; 10 lbs. \$2.50. Smoking, 20 lbs. \$4.00. Furnish free receipt for preparing. Quality, delivery guaranteed. **Farmers' Tobacco Exchange,** Sedalia, Ky.

Homespun Tobacco collect on delivery, 10 lb. \$2.50; 20 lb., \$4. Free receipt for preparing. **Ford Tobacco Co.,** Mayfield, Ky.

DOGS

COLLIE PUPPIES

Write Dr. W. Austin Ewart, Mt. Clemens, Michigan for thoroughbred Pedigreed Collie Puppies, bred from farm trained stock that are natural heelers with plenty of grit. Puppies guaranteed.

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

Alert and ready for Work Again

WE sign a Guarantee Contract to cure. Use it once and you will always depend upon **SAVE-THE-HORSE.** We take all the risk to make your horses sound.

SAVE-THE-HORSE
Is sold under signed MONEY-BACK Guarantee to absolutely cure Ringbone, Thoropin, SPAVIN of Shoulder, Knee, Ankle, Hoof or Tendon Disease. Over 28 years' success with stubborn cases where everything else failed has proven the value of **SAVE-THE-HORSE** to more than 325,000 satisfied users.

BOOK FREE
Write today for FREE **Save-the-Horse BOOK** of 96 pages, illustrated, telling how to locate, understand and treat any lameness; copies of Guarantee and expert veterinary advice, all FREE.

TROY CHEMICAL CO.
320 State Street Binghamton, N. Y.
At Drugists and Dealers with Signed Contract or sent prepaid

MEN WANTED

Sweeney
The Wilson-Dallas School of Auto-TRACTOR-FLYING
—to send for my big illustrated 72-PAGE **Free!** BOOK—
It tells how in a few weeks you can earn from \$150 to \$400 a month in the Auto and Tractor business.

IPAY Will rebate railroad fare from any point in the United States to Kansas City.

JOBS OPEN. Sweeney trained men in demand. See list of jobs. **LEARN IN EIGHT WEEKS.** No previous experience necessary. Use tools not books. Simply send name and address today, a post card will do, for Free book and 27 photographic reproductions of machine shop work, etc. in world's largest and finest trade school. **Let's Go—Write Now!**

LEARN A TRADE
Sweeney
SCHOOL OF AUTO-TRACTOR-FLYING
67 SWEENEY BLDG. KANSAS CITY, MO.

PENNSYLVANIA BUYS MICHIGAN
SEED POTATOES.

A DEAL was recently completed in Emmet county for the purchase of 3,200 bushels of certified seed potatoes for distribution in Pennsylvania. This is only one of several big orders placed in northern Michigan this fall and winter for seed by the Pennsylvania farmers. P. E. Dougherty, of Williamsport, Pa., purchased the seed, which will be shipped to the United States Seed Company in the spring. The price paid was said to be approximately \$1.50 a bushel.

GOVERNMENT WHITEWASH.

HERE is the famous recipe for government whitewash. This whitewash is whiter than most such mixtures. It spreads so evenly that a pint covers nearly a square yard, and it lasts well when used on outside jobs.

This is the standard recipe: Slake one-half bushel of fresh lime with boiling water, covering the receptacle to keep in the steam. Strain the liquid through a fine sieve, and add seven pounds of fine salt, previously dissolved in warm water; three pounds of ground rice, boiled to a thin paste and stirred in; one pound of white glue, soaked first in cold water until swollen, then carefully melted over fire.

To this mixture add five gallons of hot water and let it stand covered for a few days before using.

FERTILIZER FOR MUCK.

I am a farmer on muck. I raised onions, celery and peppermint. How much potash would you advise to the acre of peppermint, and the other crops named? My land is in good shape, is kept with manure and commercial fertilizer, cheap grade mostly. What kind of spray would you advise me for blight on celery? Please let me know, as I want to spray my plants before transplanting.—J. V. V.

The question can not be adequately answered without knowing the treatment which the muck received last year. Recommendations would also be limited by the type of muck, depth, etc.

Assuming that the muck in question is of high quality, well decomposed, at least three feet deep, that it has been into meadow or pasture, or has grown a cultivated crop, and that fertilizer has been applied within four years.

For peppermint 150 pounds of muriate of potash and about 100 pounds of acid phosphate to the acre would be required for a good yield of oil. For onions apply 600 pounds of muriate of potash and 700 pounds of acid phosphate. For celery, planted with rows two and one-half feet apart, the same application should be made. If manure had been applied within the last two years, the application of potash can be cut to one-third of the amounts given for onions and celery. This fact has not been determined for mint. Observations and experimentation carried out by the soils department of M. A. C. on muck soils last year, indicate that applications of barnyard or stockyard manure have a residual effect not generally recognized, which makes it unnecessary to apply potash for celery within two years after an application of fifteen tons of manure to the acre.

In a cool spring I would not hesitate to supplement the potash and phosphoric acid with nitrogen. Nitrate of soda, applied between the rows for onions and celery already planted at the rate of 100 pounds to the acre, would pay.

Bordeaux mixture is used to control celery blight. Write to the Michigan Agricultural College, East Lansing, for a bulletin giving the details of spraying celery to control late blight.—E. L.

They can conquer who believe they can.—Virgil.

Lower Machine Prices

—a factor in a brighter outlook for 1922

MOST of the readers of this paper know that we have reduced our prices on farm machines for 1922. The lower figures apply on practically our entire line of grain, hay, and corn harvesting machines, plows, tillage implements, seeding machines, etc.

Reductions in prices of farm machines and other articles the farmer buys is one of the many indications pointing to continued improvement in the farmer's situation. The War Finance Corporation is steadily pouring aid from its billion dollar fund into agricultural communities to finance the farmer. Freight rate reductions on stock, grain, hay, etc., now going into effect, will save many millions for the farmers. Land values are now on a sound-

er basis. For 1922, better labor at lower cost will be available, better marketing conditions are being evolved, and recent tariff legislation also should tend to increase farm product prices.

All these factors indicate that more efficient production by modern methods and improved machines will mean greater profit for the new year. You cannot afford to postpone the purchase of needed machines. Where repairs have been made again and again, beyond the point of serviceability, waste and loss are pretty sure to follow. The present prices will enable you to replace the old with efficient modern machines so that best use may be made of the opportunities that are certain to come to the farming world.

The International Harvester Line of Farm Operating Equipment

Binders
Threshers
Harvester-Threshers
Headers
Push Binders
Mowers
Rakes
Teddies
Loaders
Side-Delivery Rakes
Sweep Rakes and Stackers
Combined Side Rake and Tedder
Baling Presses
Corn Planters
Listers
Corn Cultivators

Corn Binders
Corn Pickers
Corn Shellers
Ensilage Cutters
Huskers and Shredders
Huskers and Silo Fillers
Beet Seeders
Beet Cultivators
Beet Pullers
Cotton Planters
Grain Drills
Lime Sowers
Broadcast Seeders
Tractor Plows
Horse Plows
Disk Harrows

Spring-Tooth Harrows
Peg-Tooth Harrows
Tractor Harrows
One-Horse Cultivators
Culti-Packers
Kerosene Engines
Tractors
Motor Trucks
Cream Separators
Manure Spreaders
Stalk Cutters
Feed Grinders
Stone Burr Mills
Cane Mills
Potato Diggers
Wagons

If you are interested in learning some of the new prices or in looking over any individual machine, the International Dealer in your vicinity is at your service. Or you may address your inquiry direct to us.

INTERNATIONAL HARVESTER COMPANY

CHICAGO OF AMERICA USA
(INCORPORATED)
92 Branches and 15,000 Dealers in the United States

Western Canada Offers Health and Wealth



and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had on easy terms

Fertile Land at \$15 to \$30 an Acre

—land similar to that which through many years has yielded from 20 to 45 bushels of wheat to the acre—oats, barley and flax also in great abundance, while raising horses, cattle, sheep and hogs is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

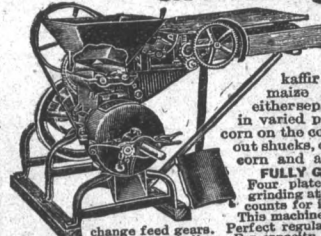
make a tremendous appeal to industrious settlers wishing to improve their circumstances. For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

J. M. MacLachlan,
10 Jefferson Ave. East,
Detroit, Mich.

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada

160 ACRE
FARMS IN
WESTERN
CANADA
FREE

KELLY-DUPLEX COMBINATION CUTTER and Grinding Mill



Grinds alfalfa, corn fodder, clover hay, pea vine hay, sheaf oats, kaffir corn and milo maize in the head, either separately or mixed in varied proportions with corn on the cob, with or without shucks, oats, rye, barley, corn and all other grains.

FULLY GUARANTEED Four plates—a double set, grinding at the same time accounts for its large capacity. This machine has three sets of change feed gears. Perfect regulation, fine, medium or coarse grinding. For capacity, easy running and uniform grinding, the Kelly-Duplex can't be beat. Especially adapted for Gasoline Engines. Write for free catalog. DUPLEX MILL & MFG. CO., Box 308, Springfield, Ohio

Big Profit In custom lumber sawing with a Howell

up-to-date Saw Mill. Keep your engine earning money all the year. Now is the time to saw your standing timber and turn it into money. Big demand for lumber, lath and shingles.

Write for Free Catalog B and Prices. R. R. HOWELL & Co., Mfgs., Minneapolis, Minn.

3 BIG BARGAINS

Wait! Before you buy an engine, separator, spreader or any other machine, get Galloway's new low price: save 14 to 25-300,000 pleased customers testify to facilities designs, best materials. Satisfaction guaranteed. Send for catalog. WM. GALLOWAY CO., Box 167, Waterloo, Iowa

Please Mention The Michigan Farmer When Writing to Advertisers

Cloverland News

By L. A. Chase

LESS SNOW IN U. P.

THE extraordinary fall of snow on the eighth and ninth of November was confined to the southern counties of the state it appears from the monthly bulletin on climate recently issued by the Lansing office of the United States Weather Bureau. On the whole the northern peninsula has had rather less than its due proportion of precipitation, and one hears that in some quarters logging operations have been hindered by the lack of snow.

POISONING PREDATORY ANIMALS.

THE Michigan Hunters' Monthly News Letter of the State Department of Conservation, states that government prepared strychnine is now being supplied warden hunters and deputy game wardens for use in poisoning wolves, coyotes, cats and foxes. It is stated that poisoning must be resorted to during the winter when traps cannot be used to best advantage. This poison is the property of the state and can be used by employees only in their official work. During October nineteen regular hunters worked a total of 557 days and there were gathered in one timber wolf, thirty-three coyotes, four bob-cats, four cross and forty-one red foxes—eighty-four predatory animals in all; while thirteen skunks, eight weasels, one hundred porcupines, one woodchuck, eleven hawks, eleven owls and two crows were also taken.

FOREST ACTIVITIES WILL BE CURTAILED.

UNLESS there is a material advance in the price of forest products," says the Iron Mountain Daily News, "not many of the smaller operators in this district will operate logging camps, this season." The big operators will continue to put in logs. Common labor will receive \$26 per month during the winter, it is said, while skilled men will receive from \$30 to \$35. Last year the scale was \$65 to \$80 per month. There are also cuts in the piece-work wages. Tie-makers are to be paid ten cents per tie, while pulp-wood cutters will get one and three-fourth cents per stick. Piece-workers are to be boarded by contractors at seventy-five cents per day, it is reported. Operations in the woods it is expected will be about fifty per cent of normal.

HOME CANNING OF MEATS DEMONSTRATED.

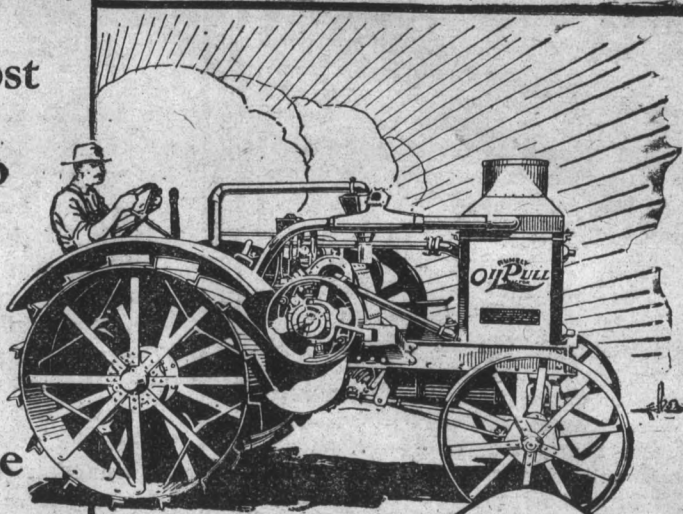
THE Ironwood Daily Globe, of December 1, reports that an expert from a Chicago firm is giving demonstrations in Gogebic county of the process of canning meats. The demonstrations are being given under the direction of the home demonstration agent and the county agricultural agent. It is expected that thousands of farmers and townspeople will can their low priced home-grown meats for preservation until next summer. It is desirable, it is pointed out, to substitute more fresh meat for the salt meats commonly consumed in country homes. It is hoped that the farmers' surplus meat can be thus disposed of advantageously.

Is the west coming east? Michigan seems to be forging ahead as a beef and dairy state. Down our way good cows are scarcer than supervisors without swelled heads.—L. B. R.

OILPULL TRACTOR

"The Cheapest Farm Power"

- ① Lowest Fuel Cost
- ② Lowest Upkeep Cost
- ③ Longest Life (10 years and more)
- ④ Reasonable Price



Why an OilPull Increases Farm Profits

Every farmer knows that there are just four factors he must have in the tractor he buys to get cheapest power. These are (1) Low Fuel Expense. (2) Low Repair Expense. (3) Long Life. (4) Reasonable Price.

In the Rumely OilPull Tractor these Four Factors have been combined for the first time. An OilPull, for example, has held (1) the World's Official Fuel Economy Records for 10 years past. (2) Government figures show a national average yearly upkeep cost of \$40. Among many OilPulls of all ages the average was found to be less than half the Government figures. (3) The average life of an OilPull is more than 10 years. The first OilPull, Old Number One, is still serviceable after 12 years. (4) Rumely prices are very reasonable. They are strictly in line with present economic conditions. Everything needed to make cheap power is here.

Triple Heat Control

OilPull records are due largely to TRIPLE HEAT CONTROL—a wonderful oil burning system which solves the problem of maintaining motor temperatures. Triple Heat Control absolutely gets the power out of cheap kerosene. It is the only system in which oil is used in the cooling system instead of water. No freezing. No overheating. Under light loads temperatures are correct for power and economy. As load increases the motor actually grows cooler. It is due to Triple Heat Control entirely that the OilPull is the only tractor sold

with a bona fide written guarantee to burn kerosene successfully at all loads and under all conditions up to its full rated brake horse power.

Write for Free Book

Among the four sizes is an OilPull that will make a profit for you. Go see the local Advance-Rumely dealer—he will demonstrate the tractors and point out the features.

In the meantime, write for complete information and a special book on Triple Heat Control.

Advance-Rumely Thresher Co., Inc.

Battle Creek, Mich.



The Advance-Rumely line includes kerosene tractors, steam engines, grain and rice threshers, alfalfa and clover hullers, and farm trucks

ADVANCE-RUMELY

Triple Heat Control



A gallon of cheap kerosene contains more actual power than a gallon of expensive gasoline. The problem is to get the hidden power out of cheap kerosene.

Triple Heat Control is a scientific system of oil burning that positively DOES get the power out.

FREE BOOKLET
Write for a copy today.



Advance-Rumely Thresher Company, Inc.
Mail to nearest Branch

Please send free copy of booklet advertised.

Name _____

Address _____ (H87)

FertilEarth

Agricultural Gypsum
(LAND PLASTER)

"Makes Crops Grow"

Helps Crops
Survive
Drought

IT is a scientific fact that soils treated with FertilEarth become so rich in plant food content (nitrates, sulphates, lime) that plants thrive for a much longer time on a given amount of water than they do on soil not treated with FertilEarth. FertilEarth increases all crops. It has actually increased alfalfa crops five hundred per cent in rare cases. But double and triple alfalfa crops are certainties. Try it yourself on a small plot.

Write for booklet. FertilEarth is sold everywhere.

GRAND RAPIDS PLASTER COMPANY

1203 G. R. Savings Bank Bldg., Grand Rapids, Mich.

Established in 1876 Manufacturers of

FertilEarth
Agricultural Gypsum
"Makes Crops Grow"

Climax Wood Mortar
"For Plastering
Fine Homes"

Hercules Wall Plaster
"For Plastering Larger
Buildings"

TANNERS

of CATTLE, HORSE, CALF, COON, FOX, SKUNK, MINK, MUSKRAT, WOODCHUCK, DOG, CAT and RABBIT SKINS.

What kind of skins have you? We make up and line Men's & Ladies' Fur Coats, Scarfs, Muffs, Capes, Collars, Robes and Mittens from raw skins. Circulars Free. Use plenty of salt on green hides.

W. W. Weaver, Reading, Mich.
Custom Tanner, 30 yrs. Experience

LAKELAND FUR EXCHANGE

Buyer wanted in every county to collect furs. Salary or commission. Specializing in shipments and local dealers' lots. Will call for lots of \$1000 or over. Write for list, (four grade list). Highest prices. Fair sort. OLIVER DIX, Salem, Mich.

FERRETS

500 Ferrets For Sale

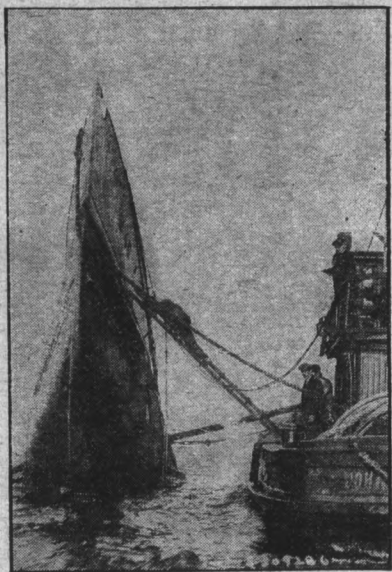
O. J. DIMICK, Rochester, Ohio

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

FERRETS for killing rats also hunting rabbits. Instruction book and price list free. LEVI FARNSWORTH, New London, Ohio

Please Mention The Michigan Farmer When Writing to Advertisers

WORLD EVENTS IN PICTURES



Submarine S-48 which sunk off Long Island Sound recently.



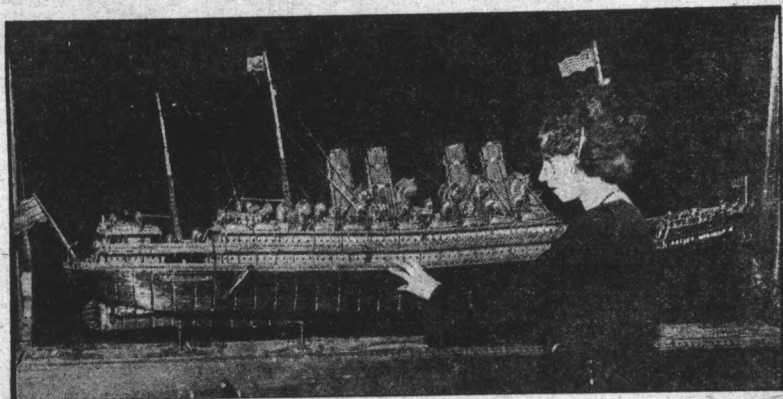
Stars in an all-Chinese moving picture company which was recently organized in Los Angeles.



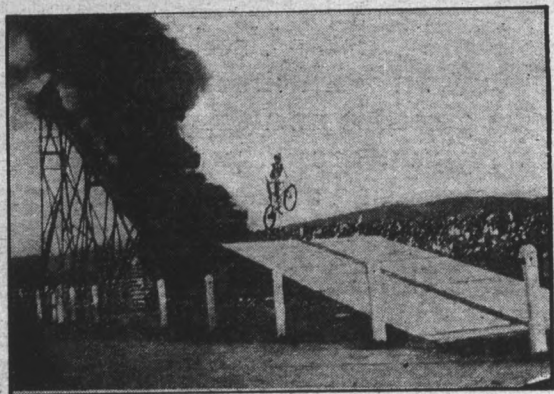
The Schamp sisters find turkey raising profitable.



Irish political prisoners are being let free since the recent peace plan has been under consideration.



The only straw ship model in existence. A Venetian artist took eleven months to complete it.



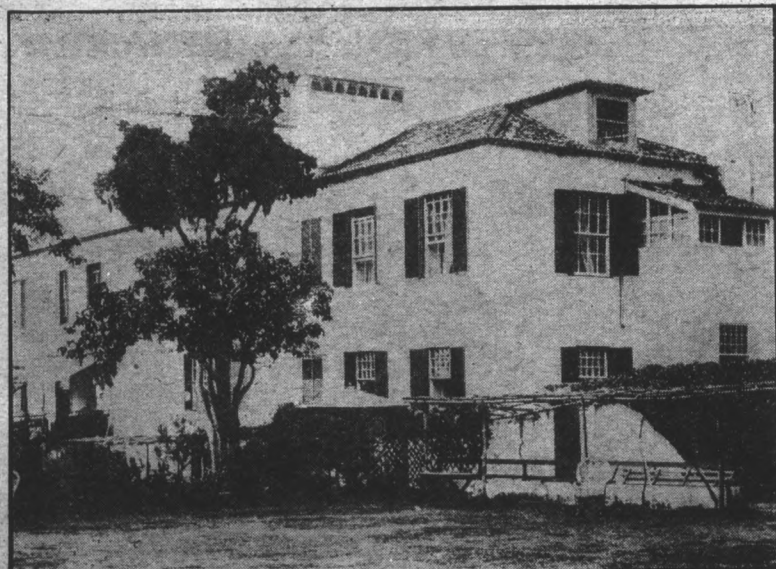
A Yankee bicyclist makes South Americans gasp with his death-defying stunts.



Christmas shopping early. Mary Pickford Fairbanks does her



Apparently Miss Freda Whittaker, of New York, is some skate artist.



Former Emperor Karl of Austria, is to spend the rest of his life in exile at this place on the Isle of Maderia.



The packing house strikers in Kansas City are being pleaded with to refrain from violence.

Announcing the Advent of the New Force in the Fight against Insect Pests and Fungus Diseases

This will announce the opening of the Dosch Chemical Company, with general office and plant at Louisville, Kentucky, an organization devoted to the preparation and distribution of fungicides and insecticides which the research of Experiment Stations and the field work of County Demonstration Agents have shown to be scientifically correct and commercially practicable.

With the firm conviction that the dusting method of insect and plant disease control offers the brightest hope of profit to the fruit and vegetable grower, the Dosch Chemical Company will concentrate upon the production of the finest dusts and the best dusting machines.

This belief represents the combined experience of the plant pathologists, entomologists, practical fruit men, and field workers whose names are listed in this announcement.

Nevertheless, it is not the intention of the Dosch Chemical Company to offer the dusting method of control as a cure-all or a miracle worker. This organization proposes to conduct its operations upon a plane that will win the approbation of scientific research workers in this field, and the priceless confidence of the grower.

There are some territories for which we would consider desirable representation. We would be glad to hear from dealers where we have not already made connection.

Listed below are the products upon which the manufacturing ability of the Dosch Chem-

ical Company will be centered in the endeavor to produce a better quality of dusting material and dusting machinery than have ever been made before.

PRODUCTS

Nicotine Contact Dust. Will control the various forms of aphids (plant lice), pear psylla, leaf hopper and apple red bug.

Nicotine Sulphate. Added to liquid sprays will control the pests which are controlled by nicotine contact dust.

Lead Arsenate. For all chewing insects. Mixed with dusting sulphur in the control of fungus diseases as well.

Calcium Arsenate. A powerful poison which is designed for the control of boll weevil in cotton, tobacco worm, alfalfa weevil, and potato beetle.

Dusting Sulphur. To prevent apple scab, brown rot of stone fruits, cherry leaf spot and other diseases.

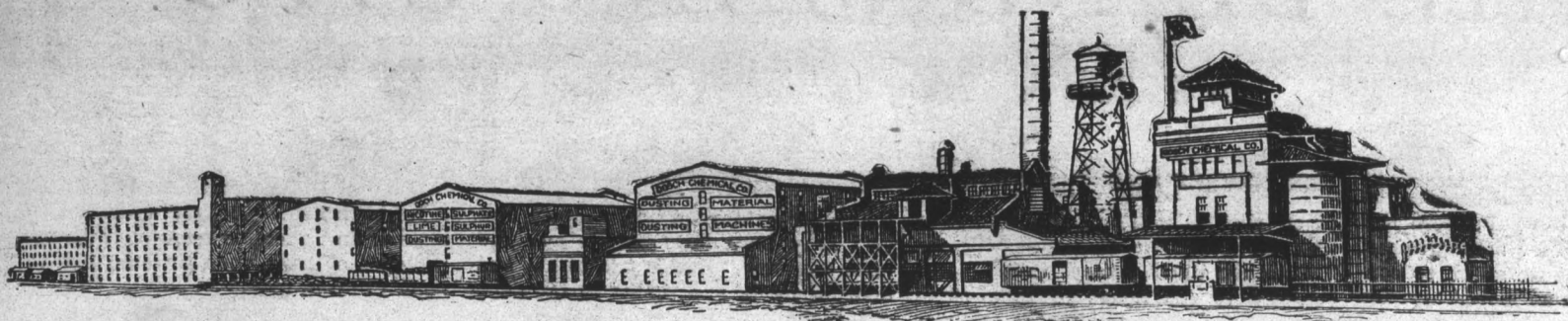
Copper Lime Dust. Used as a summer dust in combination with arsenate for the control of fungus diseases and chewing insects of apple, pear, plum, grape, potato and other vegetable crops. Used alone for celery and potato blights.

Dehydrated Copper Sulphate Dust. For combination with lime in copper lime dust.

Soluble Lime Sulphur Compound. Used in the control of San Jose and other scale insects and peach leaf curl.

Improved Dusting Machinery. Power, traction and hand dusters for fruit trees, vegetables, truck crops, cotton, tobacco, flowers and shrubs.

DOSCH



D. P. L. BURTON
STO. COLLECT.

The Dosch Chemical Company was organized by Theodore Dosch and is amply financed to conduct its research and experimental work, being capitalized at \$2,500,000. Mr. Dosch has previously organized and operated for thirteen years one of the largest companies in the United States, engaged in the manufacture of dust materials and dusting machinery.

OFFICERS

Theodore Dosch, president and general manager. Mr. Dosch has for thirteen years been a leader in the development of fungicides and insecticides and has conducted his work in every part of the United States and Canada.

Thomas T. Feeley, vice-president and treasurer. Mr. Feeley was formerly a publisher, and county clerk of Niagara County, New York, and now lives at Louisville, Kentucky.

Harold J. March, secretary. Formerly Mr. March was a member of the firm of A. Bennett & Company, commission merchants, New York City, and now resides at Louisville, Kentucky.

John J. Raskob, director, Wilmington, Delaware. Mr. Raskob is also vice-president of the General Motors Corporation, and vice-president of the E. I. duPont de Nemours Company.

Howard V. Pearsall, director, Williamson, New York. Mr. Pearsall is president of the State Bank, Williamson, New York. He is also president of the Williamson Cold Storage Company, and an extensive grower and dealer in fruits and vegetables.

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RESEARCH STAFF

Dr. H. W. Dye, Pathologist. For the past five years Dr. Dye has been associated with the Plant Disease Investigational Work at Cornell University and the New York State College of Agriculture, and is well known to the New York State Growers and elsewhere through his work there. He has been employed also by the Bureau of Plant Industry of the United States Department of Agriculture in Investigational Work. Dr. Dye resigned as Assistant Professor of Plant Pathology at Cornell University and the New York State College of Agriculture, to join the Research Department of the Dosch Chemical Company as Chief Pathologist.

Dr. G. E. Sanders, Entomologist. For several years Dr. Sanders has been associated with the Entomological work of the Canadian Department of Agriculture. He has been largely responsible for the general adoption of the dusting practice by Canadian growers and has developed the copper lime dust which is coming into general use. Dr. Sanders is the foremost investigator today in the development of insecticides. He is resigning his work in Canada as Chief of Insecticide Investigations to join the Dosch Chemical Co., Inc.

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DUSTS

THE BLIND MAN'S EYES

By William MacHarg and Edwin Balmer

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He had observed, during the day, that Avery or Harriet had been at work in that room—one of them or both—almost all day; and besides the girl he had met in the hall, there had been at least one other stenographer. Must work in the house go on so continuously that it was necessary for some one to work at night, even when Santoine lay ill and unable to make other than the briefest and most important dispositions? And who was working in that room now, Avery or Harriet? He let himself think, idly, about the girl—how strange her life had been—that part of it at least was spent, as he had gathered most of her waking hours of recent years had been spent, with her father. Strange, almost, as his own life! And what a wonderful girl it had made of her—clever, sweet, lovable, with more than a woman's ordinary capacity for devotion and self-sacrifice.

But, if she were the one working there, was she the sort of girl she had seemed to be? If her service to her father was not only on his personal side but if also she was intimate in his business affairs, must she not therefore have shared the cruel code which had terrorized Eaton for the last four years and kept him an exile in Asia and which, at any hour yet, threatened to take his life? A grim set came to Eaton's lips; his mind went again to his own affairs.

CHAPTER XIII.

The Man From the Train.

IN the supposition that he was to have less liberty, Eaton proved correct. Harriet Santoine, to whose impulse had been due his first privileges, showed toward him a more constrained attitude the following morning. She did not suggest hostility, as Avery constantly did; nor, indeed, was there any evidence of retrogression in her attitude toward him; she seemed merely to be maintaining the same position; and since this seemed difficult if they were often together, she avoided him. Eaton found his life in the house after that first day more strictly ordered into a routine which he was obliged to keep. He understood that Santoine, steadily improving but not yet able to leave his bed, had taken up his work again, propped up by pillows, one of the nurses had been dismissed; the other was only upon day duty. But Eaton did not see Santoine at all; and though he learned that Miss Davis or another stenographer, whose name was West, came daily to the house, he never was in a position again to encounter any outsider either coming or going. Besides the servants of the house, he met Blatchford, with whom Eaton usually breakfasted; he also lunched with Blatchford, and Harriet sometimes—sometimes with Avery; he

dined with Blatchford and Avery or with all three.

At other times, except that he was confined to the house or to a small space of the grounds about it and was kept under constant surveillance, he was left largely to his own devices; and these at least sufficed to let him examine morning and night, the vase in which he was to find the signal that was to be left for him; these permitted examination of window-locks in other rooms, if not in Santoine's study; these permitted the examination of many other items also and let him follow at least the outline of the method of Santoine's work.

There was no longer room for Eaton to doubt that Harriet had the confidence of her father to almost a com-

plete extent. Now that Santoine was ill, she worked with him daily for hours; and Eaton learned that she did the same when he was well. But Avery worked with the blind man too; he too was certainly in a confidential capacity. Was it not probable then that Avery, and not Harriet, was entrusted with the secrets of dangerous and ugly matters; or was it possible that this girl, worshiping her father as she did, could know and be sure that, because her father approved these matters, they were right?



A hundred times a day, as Eaton saw or spoke with the girl or thought of her presence near by, this obsessed him. A score of times during their casual talk upon meeting at meals or elsewhere, he found himself turned toward some question which would aid him in determining what must be the fact; but each time he checked himself, until one morning—it was the fifth after his arrival at Santoine's house—Harriet was taking him for his walk in the garden before the house.

It was a bright, sunshiny morning and warm—a true spring day. As they paced back and forth in the sunshine—she bare-haired and he holding his cap in his hand—he looked back at the room in the wing where Santoine still lay; then Eaton looked to the daughter, clear-eyed, clear-skinned, smiling and joyous with the day. She had just told him, at his inquiry, that her father was very much stronger that morning, and her manner more

for a few steps. "I like your saying what you did, Mr. Eaton."

"Why?"

"It implies your own creed would be against such a thing. But aren't we rather mixing things up? There is nothing to show yet that the attack on Father sprang out of business relations; and even if it did, it would have to be regarded as an—atrocities outside the rules of business, just as in war, atrocities occur which are outside the rules of war. Wait! I know what you are going to say; you are going to say the atrocities are a part of war even if they are outside its recognized rules."

"Yes; I was going to say that."

"And that atrocities due to business are a part of business, even if they are outside the rules."

"Yes; as business is at present conducted."

"But the rules are a part of the game, Mr. Eaton."

"Do you belong among the apologists for war, Miss Santoine?"

"I?"

"Yes; what you say is exactly what the apologists for war say, isn't it? They say that war, in spite of its open savagery and inevitable atrocities, is not a different sort of combat from the combat between men in time of peace. That is, the acts of war differ only in appearance or in degree from the acts of peace. Is that what you believe, Miss Santoine?"

"That men in times of peace per-

form acts upon each other which differ only in degree from the acts of war?"

"Yes."

"Do you believe that, Mr. Eaton?"

He hesitated. "Do you want me to answer that question from my own experience or from what I would like to believe life to be?"

"From your own experience, of course."

"Then I must answer that I believe the apologists to be right as to that fact."

He saw her clear eyes darken. "But you don't believe that argument itself, do you, Mr. Eaton?" she appealed. "It is only the old, old argument, 'Whatever is, is right.' You don't excuse those acts—those atrocities in time of peace? Or was I mistaken in thinking such things were against your creed? Life is part right, part wrong, isn't it?"

"I am not in a good position to judge, I'm afraid; for what I have seen of it has been all wrong—both business and life."

He had tried to speak lightly; but a sudden bitterness, a sharp hardness in his tone, seemed to assail her; it struck through her and brought her shoulders together in a shudder; but, instead of alienating her, she turned with a deeper impulse of feeling toward him.

"You—you do not want to tell more—to tell how it has been wrong; you don't want to tell that—" She hesitated, and then in an intimate way which surprised and frightened him, she added, "to me."

After she had said it, she herself was surprised, and frightened; she looked away from him with face flushed, and he did not dare answer, and she did not speak again.

They had come to the end of the garden where he was accustomed to turn and retract his steps toward the house; but now she went on, and he went on with her. They were upon the wide pike which ran northward, following, but back from, the shore of the lake. He saw that now, as a motor passed them on the road, she recalled that she was taking him past the previously appointed bounds! but in the intimacy of the moment, she could not bring herself to speak of that. It was Eaton who halted and asked, "Shall we go on?"

"Wouldn't you like to?"

They walked on slowly. "I wish you could tell me more about yourself, Mr. Eaton."

"I wish so too," he said.

"Then why can you not?" She turned to him frankly; he gazed at her a moment and then looked away and shook his head. How had she answered, in what she already had said, the question which lay below what he had asked her? In her defense of business,

AL ACRES—Jimmy Makes an Observation and Arrives at a Conclusion.

—By Frank R. Leet



did she know all the cruelties of business and defend the wrong she knew, together with the right, as inevitable? Or did she not know all of what was known even under her father's roof; and if she knew all, would she then loathe or defend it? Another motor sped near, halted and then speeded on again; Eaton, looking up, saw it was a runabout with Avery alone in it; evidently, seeing them in the road, Avery had halted to protest, then thought better of it and gone on. But other motors passed now with people who spoke to Harriet and who stopped to inquire for her father and wish him well.

"Your father does not seem to be one of the great men without honor in his own neighborhood, Eaton said to her after one of these had halted and gone on.

"Every one who knows Father likes and admires him!" she rejoiced.

"I don't mean exactly that," Eaton went on. "They must trust him too, in an extraordinary way. His associates must place most complete confidence in him when they leave to him the adjustment of matters such as I understand they do. There is no way, as I comprehend it, that any of the powerful men who ask his advice could hold him accountable if he were unfair to them; yet men of the most opposite types, the most inimical and hostile, place their affairs in his hands. He tells them what is just, and they abide by his decision."

Harriet shook her head. "No; it isn't quite that," she said.

"What, then?"

"You are correct in saying that men of the most opposite sorts—and most irreconcilable to each other—constantly place their fate in Father's hand; and when he tells them what they must do, they abide by his decision. But he doesn't decide for them what is just."

"I don't understand."

"Father cannot tell them which side is just because, if he did that, they wouldn't consider his decision; and they wouldn't ask him to make any more; he would lose all influence for better relations. So he doesn't tell them what is just."

"What does he tell them, then?"

"He tells them what would be the outcome if they fought, who would win and who would lose and by how much. And they believe him and abide by his decision without fighting; for he knows; and they know that he knows and is absolutely honest."

Eaton was silent for a moment as they walked along.

"How can he come to his decision?" he asked at last.

"How?"

"I mean, much of the material presented to him must be documentary."

"Much of it is."

"You will pardon me," Eaton prefaced, "but of course I am immensely interested. How are these written out for him—in Braille characters or other letters for the blind?"

"No; that would not be practicable for all documents, and so it is done with none of them."

"Then some one must read them to him."

"Of course."

Eaton started to speak—then refrained.

"What were you going to say?" she questioned.

"That the person—or persons—who reads the documents to him must occupy an extremely delicate position."

"He does. In fact, I think that position is Father's one nightmare."

"Nightmare?"

"The person he trusts must not only be absolutely discreet but absolutely honest."

(Continued next week.)

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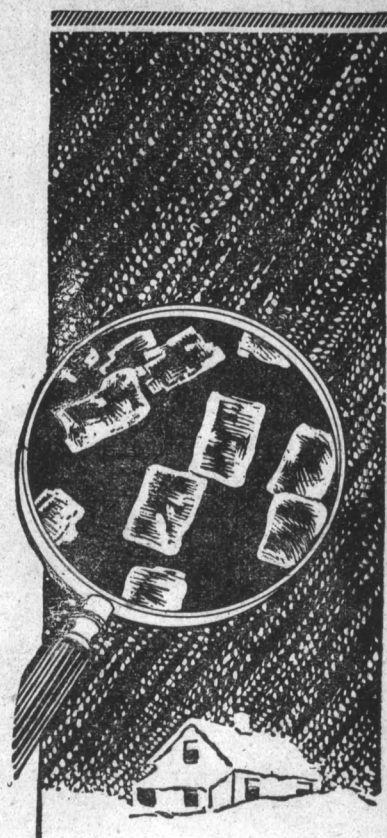


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Q He lives twice who can at once employ
The present well, and e'en the past enjoy.
—Pope.

Woman's Interests



The Noon Lunch at School

THERE are many mothers in the land who pack dainty and wholesome lunches for their children, but there are also many busy and work-harassed mothers, or perhaps a few careless mothers, who deem any lunch satisfactory if it satisfies the child's appetite, even though it is unwholesome and not at all well balanced.

Whichever may be the case, the child's dinner can not be complete without an appetizing hot dish or drink for lunch during the long winter day. Fortunate indeed, is the child who carries to school a Thermos bottle filled with hot milk or cocoa, but all can not afford even these little necessities.

Last year the teacher in our district school noticed that the children did not study well after the noon hour. A little keen observation showed her the reason. Their food was heavy and unbalanced, and at best was nothing but a cold lunch; of course, the result was a sluggish brain, as might be expected. So our teacher began to make plans. After she had them all completed, she laid them before the parents who heartily approved.

A little equipment consisting of the following, was donated or bought: A second-hand table, a second-hand cupboard, a two-burner kerosene stove, an eight-quart kettle, a tin dishpan, a quart cup, a soup ladle and enough soup bowls and teaspoons to go round. The dish towels were hand-hemmed by the sewing class, as were the hot-pan holders.

The next thing was to decide who was to do the cooking. It was a small school and had but few older pupils. The older boys were appointed to empty dish water, get in water and help serve. There were two eighth-grade girls and two seventh-grade girls. One girl from each grade was put on the same committee. Committee No. 1, under the strict supervision of the teacher, cooked for one week, and committee No. 2 did the dishwashing. The next week they changed about so that each committee had a chance to show its culinary skill. The teacher helped serve and taught the children how to do the cooking.

Close account was kept of everything, and at the end of the month a statement was sent to each parent. The total expense for each month was divided by the number of pupils; thus settling the expenditures to the satisfaction of everyone.

It was not long before the teacher began to notice a change for the better, by the added zest and aptitude of the children for their after-dinner studies.

The week's menu for twenty children was as follows:

Monday—Rice boiled in milk.
Tuesday—Bean soup.
Wednesday—Milk toast.
Thursday—Cocoa.
Friday—Potato soup.

The potatoes for potato soup were prepared the previous night or in the morning before school, and left in cold water. The recipes we used follow:

Rice Boiled in Milk.

Wash one quart of rice through several waters or until water is clear. At ten o'clock put it on to boil in four quarts of salted water. At 11:45 add a quart of whole sweet milk and one-half cup of fresh butter. This will need occasional stirring but is well worth the trouble involved.

Bean Soup.

Put one quart of navy beans, with one level teaspoon of soda, on to boil at 8:45 o'clock. When they start to boil, drain and add fresh water. Put on to cook again. If a soup bone is to be used, it should be put in at once and if not, two quarts of sweet milk and one-half cup of fresh butter should be added at 11:30. Salt to taste.

Milk Toast.

We found it handiest to let each pupil bring its "quota" of toast from home, ready made. Four quarts of whole milk should be put on to heat at 11:30 o'clock. When it boils, add salt to taste and pour over the toast. Leave closely covered until ready to serve. This proved a favorite dish.

Cocoa.

At 11:30 o'clock put on three quarts of whole milk and three quarts of water to heat. Mix one teacup of cocoa and one and one-half cups of sugar to a paste with water. Stir the paste in to the hot milk and water. Let come to a boil and stir well before serving.

Potato Soup.

At 11:00 o'clock put two quarts of peeled and diced potatoes on to cook

in four quarts of salted water. Let it boil until 11:30 o'clock. Then add two quarts of whole milk and one-half cup of fresh butter.

CARING FOR THE FAMILY MEAT SUPPLY.

A HIGHLY recommended method of pickling hams and shoulders preparatory to smoking includes the use of molasses. To four quarts of fine salt and two ounces of pulverized saltpetre, add sufficient molasses to make a pasty mixture. The hams and shoulders having been in a dry, cool place for three or four days after cutting up, are to be covered all over with the mixture, more thickly on the flesh side, and laid skin down for three or four days.

In the meantime make a pickle of the following proportions, the quantities here named being for one hundred pounds of meat: Coarse salt, seven pounds; saltpetre, two ounces; potash, half an ounce; soft water, four gallons. Heat gradually, and as the scum rises remove it. When scum ceases to rise, allow the pickle to cool. When the hams have remained the proper time in the pasty mixture, cover the bottom of a clean, sweet barrel with salt about half an inch deep, pack in the meat as closely as possible, cover it with the pickle, and place over it a follower with weight to keep the meat down.

Small hams and shoulders should re-

main in the pickle for five weeks, larger ones will require six or eight weeks, according to size. And they should be allowed to dry well before smoking.

The meat should be smoked in a small building suitable for the purpose. One which is as near air-tight as possible is the best, as no more smoke should be wasted than is necessary.

For smoking a small quantity of meat a large cask or barrel may be used. To make this effective a small pit should be dug, and a flat stone placed across it, upon which the edge of the cask will rest. Half the pit is beneath the barrel and half is outside. The head and bottom may be removed, or a hole can be cut in the bottom a little larger than the portion of the pit beneath the cask. The head or cover is removed while the hams are being hung upon the cross-sticks. The cross-sticks rest upon two cross-bars made to pass through holes bored in the sides of the cask. The head is then laid upon the cask and covered with moist sacks to confine the smoke. The fire is put into the pit outside the cask and may be regulated by a piece of tin which may be removed when more fuel is put on.

Pine and other strong woods should not be used as it will taste in the meat. Corncobs, hardwood chips or fine brush may be used with safety and they will make a good smudge.—W. E. D.

IF YOUR CHILD STAMMERS.

THAT stammering is a mental fault often caused by fear, imitation or improper speech training is the claim of Dr. Frederick Martin, director of the Speech Improvement Association. Much of it could be corrected in the public school, he claims.

"One great difficulty in meeting the requirements of this problem is the attitude of parents in waiting for the child to outgrow the defect. A child thus treated usually continues stammering for years, driving in deeper his false habits of speech, which would never exist were the cause known and the defect corrected when it first starts. The teacher can prove the greatest help by preventing the defect, or eliminating it in its first stages. When first noticing any stumbling, stuttering or hesitancy in recitations, one should gently check the child without attracting the attention of the rest of the class and help him into a more deliberate and better articulated mode of expression. A common mistake in attempting to cure stammering is to ask the stammerer to take a breath before speaking each word or words that bother him. When he is thus made to stop and unnaturally take a breath this recalls to his mind that he is unable to speak as the other children do. It is not more air in the lungs which stammerers need, but normal subconscious control. Stammerers can sing without difficulty, and singing requires greater lung power than speaking."



The Need of the Hour

TO those simple minded folk who always did believe that Christianity—please note, I do not say theology—was a sufficient guide not only for individual daily living but for matters of statesmanship, the sudden discovery by so many writers and speakers that Christ had the right of it is rather amusing.

Have you noticed how this past few months it has become quite the fashion to believe once more that God is really the ruler of the Universe, and that the only way for persons or nations to prosper for long is to work in harmony with his laws?

A lecture last week on "The Need of the Hour" brought out that the speaker thought the one vital need of the hour was to get back to the simple teachings of Christ! Can you imagine an audience before the war being interested in anything like that? Yet the roomful of women applauded as heartily as they used to when someone held forth on the teachings of Nietzsche.

Of course he was right. No judicial thinker, no matter what he believes about the mass of theology built up

by men about Jesus, the son of Mary, can deny that what he taught would remake the world, if folks would only practice it. The trouble is it calls for so much unselfishness that few people, even those who profess to do it, really live according to Christ's teachings. And for that reason Christianity has fallen into disfavor. Christianity has not failed, the folks who might interpret it have failed; its principles have been too high for a gold-loving generation.

When it came to a question of deciding between profits and principles, principles have gone by the board, and the accusation applies to the farmer who adds a spoiled egg to the eleven fresh ones and calls it a dozen, as much as to the capitalist who shuts down the mines to raise the price of coal. Neither act is square, the only difference is in the size of the offense.

Christianity can save the world when people really attempt to live it. It can do nothing so long as its adherents think it consists merely of quibbling about how long it took to make the earth, or who did the swallowing, Jonah or the whale.

Your Child's Reading

By Mary M. Allen

ONE of the biggest tasks imposed upon the schools is the development of a taste for good reading in the child. The study of the best in literature, including the Bible, is not only necessary to secure an education but it also develops a high moral sense. Whenever we study with a child a masterpiece in literature or a Bible story and arouse in him a desire to hear the same story re-read, we have stimulated in the child a desire for reading of the best kind.

President Elliot, of Harvard, once said: "That schooling which results in a taste for good reading, however unsystematic the schooling may have been, has achieved the main end of elementary education." Many people live entirely without reading and they are the most difficult of all classes to get a comprehensive view of the great problems with which the masses are confronted.

The desire for reading is most potent in the child between the age of seven and seventeen and it is then that the guidance received earlier in life shows results. It is a pitiful fact that we frequently find children in the grammar grades of our schools without the slightest knowledge of the sublime characters of the Bible, the world's greatest book.

The place of the movie in education and community life is well recognized, and schools and rural churches are using this in their work. If the child's reading has been well directed, he will be eager to see the masterpieces of literature on the screen.

Not all persons can acquire an education in the schools. We can point out many successful men and women who were a failure in mathematics or science or history; but because their reading was wisely directed at a critical time, they became masters in their line. If we can develop a taste for good literature and good reading to the exclusion of the trashy, we have accomplished something worth while. Educators are fully agreed that one's success in life is more largely determined by the taste they have acquired for good reading than by any other single factor. The mother who takes a short time each day to develop and direct this taste in her child will have the satisfaction of knowing that she started him out wisely and well.

The mother who would do something to aid in this task can get valuable help from the public library. If she lives in the country out of reach of a library, she may get the approved lists of books compiled by the state department of public instruction, from the rural teacher. This list also contains a list of desirable magazines for every age from the kindergarten to the high school. If expense is a question, as it often is, books may be obtained from the school library that would help, and Michigan sends out traveling libraries to district school boards, which may be retained in the district three months for only the cost of transportation. Your rural teacher can give you full information regarding this. Reading circles are being encouraged by the department of education for boys and girls in the grammar grades.

CITRON.

MANY people have an idea that the candied citron used in cakes, puddings, etc., is the same melon that grows in our gardens. This is not so. There are two different melons called "citron."

There are several varieties of the common citron melon grown in the United States. The flesh is not good

to eat raw but is used in making sweet pickles and very delicious preserves.

The candied citron or "citrus medicus" which we obtain at the grocery stores does not grow in this country. It is grown in the Mediterranean coast region and is exported from there.

In making preserves of the citron melon grown here the melon is sliced, cut in strips, diced and the seeds and rind removed. Three-fourths pound of sugar to each pound of fruit is added, also one lemon sliced, to each two pounds of fruit. The whole is allowed to stand in an open preserving kettle till the juice begins to form; then it is simmered slowly till the citron is tender, and put away in Mason jars. A desired quantity of crabapples, halved and cored, may be used in place of lemon in the preserves. The melon does not need to be ripe. The flesh is a very pale lemon color.—R. R. B.

SOME HOUSEHOLD SUGGESTIONS.

I have been getting help from the Woman's Department of the Michigan Farmer ever since the famous bread recipe was given nearly forty years ago, and as I was pasting the recipe of how to put a cake together, just now, I wondered how many of our readers knew that a very small piece of cold boiled potato is splendid to paste paper. I first saw a dressmaker use it for cutting a pattern (to piece out paper).

Add a tablespoonful of water and a pinch of salt to the white of an egg before you beat it for frosting. It only takes half the time to beat it and is very nice.

Buns.—One cup of dough taken from loaf before putting in pans. Set in a cool place until ready to use two or three days or longer, when ready to use add a piece of lard the size of an egg, to the dough, half cup of sugar, one cup of warm water, mix stiff, raise, then form into buns.—Reader.

NO MORE DOUBLE STANDARD.

THANKS to the activity of City Magistrate Jean Norris, the only woman on the bench in the city of New York, the matter of a double standard of morality is to be tried in the courts. A coal and oil operator, said to be worth \$16,000,000, is the man in the case. It is charged he was found in the company with two girls in the home of a woman some time last summer. The three women were arrested, and the older one sentenced to jail. The millionaire was called as a witness for the defense, but refused to testify on the grounds that it might degrade him. Counsel for the defense then demanded his arrest as a confederate, and the request was granted.

PORK SUPPLIES ENERGY.

"One pound of salt pork supplies as much energy as five and one-half quarts of milk or three and three-fourths dozens of eggs, and one pound of sausage as much energy as three quarts of milk or two dozen eggs."—Meat and Live Stock Digest.

It is said that a little salt added to an over-sweetened dish will neutralize the sugar, and that a little sugar added to a too-salt dish will have the same effect.

Orange Syllabub.—Whip one-half pint of cream and beat one egg white and fold into cream. Then add one cup of marshmallows cut in small pieces, one cup of broken walnut meats and pulp of two oranges. Sweeten to suit and serve in sherbet cups.



Sponge Cake Recipe

5 eggs. 1 cup sugar. 1 cup water. 1½ cups Lily White Flour. 1 heaping teaspoon baking powder sifted with flour five times. Flavor to taste. Cook sugar with water until it is a thick sirup. Let cool and pour over well beaten yolks of eggs. Fold in flour, then the beaten whites and flavor. Bake quickly in layers or in a sheet.

Lily White

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When flour is milled from the finest wheats grown in America, with such extraordinary care and sanitation that it possesses absolute uniform granulation, proper color, texture and nutritive value, the best baking results are not only possible, but assured. Your success with LILY WHITE will surprise and delight you. The next time you bake try it.

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New Winter Caught Pickerel Round 6c, Headless and dressed 8c, in boxes 125 lbs. net weight. Smaller quantities 1-4c lb. higher. 1-4c per pound discount on 500 lb. lots or over. Write for complete price list of all varieties. Imported and Domestic Frozen, Smoked, Salted, Spiced and Canned Lake and Ocean Fish.

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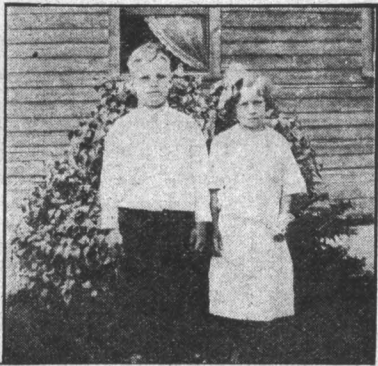
Our Boys' and Girls' Department

My Potato Club Experience

By Clyde Williams

I AM a boy twelve years old and I live on a farm in Monroe township. My father is a farmer. This year I took up club work and am greatly indebted to our county club leader, Miss Ann R. Banks, and also to our county agent, Mr. D. B. Jewell, for my success. I will tell you why.

Early in the spring our club leader and county agent visited our school and wanted to organize a potato club, and as my sister had been in a club and succeeded, I thought I might try, so I talked it over with my father. He said he would give me a piece of ground, so I enrolled as a member in the club, and I think it's fine for boys and girls to be able to do club work as



Clyde Williams and Sister.

its object is to make better and more profitable farmers.

I will tell how I prepared, planted and cared for my potatoes. First my father gave me a new piece of land a quarter of an acre in size. I helped him clear his plot in return for what he gave me after it was cleared. My father plowed and dragged it, then I planted it. My potatoes were late Petoskeys and bin-selected; I cut the seeds about three eyes to the cut; when my potatoes came up they looked good and the ground was new and had never been tilled, we did not cultivate it at first. I went through and pulled out the weeds, and later I got my father with a horse and cultivator and went through them once.

Soon after the potatoes came up the potato bugs came so I got a pound of Paris green and sprayed them three times with good success.

This fall in potato digging time, my father dug them and I helped him pick them up in return. My crop was good for the kind of a year that we had, my total yield being thirty-two bushels in all. I saved three bushels for next year's seed. I sold twenty-five bushels and had four bushels of culls, after marketing, I figured that I made a profit, not financially alone, but in experience also.

Our club exhibit was at the county fair held at Wolverine, each club member selecting fifteen potatoes. The uses for the potatoes are many and varied for palatable dishes, for feed, etc. Many very appetizing dishes are made of potatoes, but as I am not a girl, neither am I a cook, I have not tried these out.

Our club held its meetings every Monday and at different places Mr. Jewell demonstrated potato diseases, pests and blight.

Mr. K. D. Bailly, certified seed inspector from M. A. C., visited us and heard the potato demonstration which our team gave at the State Fair at Detroit this year. All of the club gave this demonstration at the county fair at Wolverine.

This fall I hill-selected my potatoes, as that is better than bin-selection.

Enclosed please find a snapshot of my sister and myself; I have greatly enjoyed club work and hope to do better next year and I think the club leaders are doing great work for the boys and girls. Here's hoping they continue.

My best wishes for success, I remain, Clyde Williams, Member of the Weadock Peppy Jazz Potato Club.

WHY SOME BOYS DO NOT QUIT THE FARM.

THIS is the story of Howard Young who lives on a farm in Summit county, Ohio, and who is now entering on his third year of poultry club work.

Howard is seventeen, and in his second year in high school. Until he enrolled for club work in 1920 he had, he says, no particular interest in farming. That year he hatched out 258 chicks and raised 228 of them. From these he selected out 100 for his laying pens and kept records on them over the winter. The records show that he made \$296 above feed costs on these 100 White Leghorns from November

to April. He was champion of his county in 1920.

Last year he fixed up the old hen-house as best he could, installing electrical illumination to stimulate winter egg production, and adding to the flock 100 birds of high-production strain. In all, he hatched 1,150 chicks and raised 800. His records for the year have yet to be compiled, but those who have followed the work believe he will clear at least \$1,000.

The record-year in poultry extension and club work starts in November and Howard is entering again. He now has entire charge of the farm poultry, and he and his father are building a 500-hen poultry house under the latest plans approved by specialists of the Ohio State University. He says he is going to stay on the farm and specialize in poultry raising.

HOW I RAISED MY PIG.

I JOINED the Gresham Pig Club in order to secure for myself a pig from which I hoped to receive great profit.

Her weight was about sixty-five pounds when I received her on May

27 from Parker Brothers, Niles, Michigan, at the price of \$20.

I fed her three times daily, the feed consisting of different proportions of ground wheat, oats, corn and skim-milk. As she grew older I gave her a greater proportion of feed. When she was eight months old she weighed two hundred and eighty-seven pounds. She gained a pound a day.

I sent my pig to the Michigan State Fair at Detroit, along with two other pigs from our club. While she was there she took first in the open class, reserve junior champion, and second in the club class. She was then sent home and I had then about two weeks



Nellie Ames and Her Prize Pig.

to get her ready for the Eaton County Fair. All the members had their pigs there. Mine took first again in the open class. I was much pleased with her, and was very glad I entered into the club work.—Nellie Ames.

Miss Ames sent with her story the following letter which tells of the unfortunate death of her prize pig.—Eds.

Dear Sirs:—I have been delayed in writing my story as I have had some bad luck. I lost my prizewinning gilt about three weeks ago. She was found dead in the morning when we went to feed her. We had the veterinary and he pronounced it heart failure. But I will write my story.

MAST FOR AMATEUR WIRELESS.

THE amateur wireless station has been greatly influenced by the war. Methods employed in radio work in the field are being imitated, more or less, even in the smallest stations. Take, for example, the metal masts used in the field sets. This method of raising the aerials is at once so simple and efficient that amateurs have been quick to imitate it.

It is possible to erect a very serviceable and satisfactory mast by using a few lengths of common iron pipe such as may be purchased at any hardware store. By using pipe of different size a telescopic mast may be readily constructed. In some cases, such masts have been raised as high as a hundred feet, which is sufficient for ordinary purposes. If the mast goes higher it is, of course, necessary to use a rather extensive system of guys. Many amateur radio men will be able to find a few lengths of pipes about the home, which may be utilized for this purpose. The iron mast has, of course, several obvious advantages. When firmly planted in the ground and braced, it will be found to withstand wind and rain which might prove disastrous to many make-shift masts.—Boys' Life,

Protect the Winter Birds

It is One of the Best Investments You Can Make

DURING the stormy months of January, February and March the brave birds who remain to do service for you, perish when the ground and trees are snow and ice covered. Obeying the instincts of nature they remain to do their duty, even at the cost of their little lives. It is no uncommon occurrence after a severe storm to go about the countryside and see many lifeless bodies of these feathered friends lying about on the ground, or buried beneath the snow. We should not permit this to be the case, but provide some shelter for them, as well as food. As long as their bodies are kept warm with food they can combat old man winter's cold blasts quite well. They need plenty of bird houses and other places to crawl into, away from the raging winds and snow.

None of us are so poor in material things that we cannot spare the trimmings of meat, raw or cooked meat bones, as well as suet for the birds. Either mutton or beef suet will provide heat and nourishment, and sunflower seed heads, which are about nearly every farm, are relished by nearly every winter bird. The writer also brings in the apples which cling to the branches in the fall, thaws them out, and places them with the other food in the feeding shelf. The birds fairly scream with delight for the dessert which the apples apparently are. Can we deny these bird friends so little?

When these winter birds remain to search out the eggs of insects, and the dormant forms of insect life from the crevices of bark, so that they will not have a chance to hatch out in the spring, we should certainly respond by placing out the simple food that they require to have their lives. For the quail, and the stray meadowlarks, cracked corn and oats can be placed

in a sheltered spot. Short boards stood up on ends, tepee fashion, and then covered with cornstalks make a very good feeding station for the ground-feeding species.

The tree sparrow, junco, horned lark, and snow bunting, may come to your farm and pick up the weed seeds which the summer birds had to leave. They often join the barnyard fowl at feeding time, and also come to your doorstep for the crumbs and other food you may throw out. All of the winter birds, excepting perhaps the blue jay, are sociable and friendly, and pleasant company for gray winter days. The blue jay will appreciate a raw meat bone to pick at, as well as suet, and acorns that the children of the house may have picked and stored away. If you are fortunate enough to have a cardinal guest, be sure to hang out an ear of corn for him as well as suet. He will also partake of the other foods mentioned above.

The downy woodpecker, the guardian of your orchard, does enough good work in wiping out the codling moth, to warrant any grower putting up a monument for it. Your appreciation can be shown by giving it suet and other food for stormy days, as well as bird houses or other shelter, if there are no natural tree cavities in your orchard. I doubt very much whether you would need to undertake the very unpleasant and expensive spraying for destructive insects in the spring, if you have enough downies and other winter birds in your orchard.

The downy, woodpecker and other winter birds are synonymous with wormless apples. Are we going to see that our winter bird life does not perish? Let us prove ourselves friends to them by helping them with food and shelter during these lean months.

PAULINE WARD.

The Light and Dark of 1921

Our Weekly Sermon—By N. A. McCune

GIVE us help from trouble: for vain is the help of man. Through God we shall do valiantly: for he it is that shall tread down our enemies." Psalm 60:11,12. Looking back over 1921, there are gray skies and bright. No one can say that the times are wholly bad, judging from some untoward events. Neither can he declare that they are the best ever known, drawing his conclusions from cheering issues. They are times which ought



to make men think. The battle is neither all one way or all another. In the middle of the summer came the report that "England has no time for God." The spiritual pulse of the nation beats feebly, we are told. The churches and chapels are largely empty. "Something like soul sickness has seized the people, all classes alike, driving them mad for pleasure in which there is no joy, a mania for materialistic indulgence, for stimulation of the senses, for exasperation of the nerves."

One of the most eminent of English bishops says that modern society is anti-Christ, and the dean of Mansfield College, Oxford, agrees, saying that "England is pagan. The people of this country do not know what Christianity is." On this side of the ocean, there is much that leads us to similar conclusions. The nation is still on a joy-ride. "Only when cruel hunger grips the vitals of millions will the nation once more sanely face reality." Perhaps that time is coming now. Taxes are terribly high, we all say, yet the bill for elementary schools was only a trifle more than that for rouge and other cosmetics.

THE bill for chewing gum is several times what it is for foreign missions. The soda fountains took in three hundred and fifty millions, which is much more than the expense of all the church enterprises of the nation. The joy-rides of the United States run to the neat sum of three billions. (Some of these statements cover a part of 1920, as it is impossible to divide one year from another exactly). The larger cities are spending five billions on luxuries and amusements. About one billion is being spent on the movies and theaters alone. The smokers' tax amounts to two hundred and fifty millions, and twenty-three million cigarettes are consumed every twenty-four hours. To make a general statement, one might feel like quoting the Englishman and saying that America has no time for God.

On the significant other hand, the horizon is not all black. The church made a new achievement in 1920-21, in evangelism. Says the secretary of the commission on evangelism of the Federal Council of Churches, "This has been the greatest year in evangelism which America has ever seen." The number of additions to Protestant churches during the year amounted to two millions. The northern Baptists received approximately 160,000, the southern Baptists 200,000, the Presbyterian church reported at the last general assembly 124,000 new members, and the gains of the Methodist Episcopal church amounted to 182,000, with a larger gain expected this coming year. The Lutheran church reports 110,000 new members, the Reformed church a net gain of 6,000. Of course, one cannot estimate the strength of

the church by membership alone. Yet people do not unite as a rule with any organization they do not believe in, and a growing membership is one sign of vigorous life. In Canada the most remarkable work of church union of modern times has taken place, in the uniting of the Congregational, Presbyterian and Methodist denominations, under the happy title of the United Church of Canada. Already one or two churches in small towns are closing, and the people meeting in one church, with one or two ministers.

WORLD peace has received an immense impetus, from the rapid course of events. Probably more preaching and lecturing has been listened to on the subject of peace this year, than in any year hitherto. And as the crown and climax of it all, there came the peace congress in Washington, beginning Armistice Day. The results to date are greater than the most sanguine had dared to hope. The United States, Great Britain, Japan have agreed on a limited naval program, and France has within a very few days given her assent to the plan. China is to have a more just treatment by the great powers. The attempt to do away with submarines has not been successful. But even so, it will yet be possible for the minister to take as his text, "Neither shall they learn war any more," without exciting the risibles of his congregation.

Race prejudice among us has shown its teeth in various ways. We are a pagan people, in some things. Going overseas, our soldiers fought for the overthrow of autocracy and tyranny. Yet we have both in some of their worst forms. In Florida an Episcopal minister was accused of preaching race equality, and was taken into the woods at night, whipped on his bare back, tarred and feathered. When the bishop came he found the minister innocent of the utterances for which he was flogged. Information was brought that he was to be lynched, and he left the community. At the same time, there is a better idealism growing in the nation. President Harding uttered vigorous words while in the south. There were mutterings and curses by a certain class, but the more enlightened applauded him. In Georgia a bill was passed by the council of one city forbidding colored and white children from attending the same school, but on the petition of the pastors the mayor vetoed the bill. Prohibition has had its ups and downs, mostly ups, we hope. The permission given by the secretary of the treasury for brewing beer for medical purposes was speedily stopped by congress, and the measures for prosecuting violators of the law are becoming more and more efficient. A man who recently traveled in sixteen states said he had seen but two drunken men, fewer than he had seen in license days in one city block.

America sent ship loads of supplies and angels of mercy to Belgium during the war, and saved the stricken provinces of China last year. She can do no less for the millions of starving children in Russia. A bill introduced into congress appropriating twenty millions for the help of the Russians has not at this writing passed. After all, looking all over and putting it in one word or two, doesn't it amount to this, that the greatest need of the world is the babe of Bethlehem, and the Christmas spirit carried the year through? Is that a bit old-fashioned? The old is the true.

Home is a part of the farm. It needs and deserves equipment as much as the fields and barns.



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INVINCIBLE to the wear and tear of the elements, impervious to time itself, MULE-HIDE remains an unparalleled example of quality, reliability and craftsmanship.

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We turned away orders for thousands of chicks last spring as our supply is limited and we absolutely refuse to sell anything but our own stock. So order early and avoid disappointment.

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Whittaker's R. I. Reds Both combs. Michigan's Greatest Color and Egg Strain. Free, by blood test, from bacillary white diarrhea. If you are interested in Breeding Stock, Day Old Chicks or Hatching Eggs write for our Twelfth Annual Catalog. It is free. INTERLAKES FARM, Box 39, Lawrence, Mich.

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Additional Poultry Ads. on Page 31

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"SUCCESSFUL" Incubators and Brooders
Used by the big money-makers who stay in business year after year. Poultry Lessons Free. Booklet, "How to Raise 48 Out of 50 Chicks," 10 cents. Catalog Free. Write today. DES MOINES INCUBATOR CO. 368 Second Street, Des Moines, Iowa

GET MORE EGGS

Make more money from your poultry. Let us prove to you that Lay or Bust Poultry Tonic will make them lay. Keep them free from disease and working overtime to fill the egg basket. Get eggs regardless of the weather. Satisfied users everywhere. Write today. Send 65c for package on our guarantee—money back if not satisfied.

THE CONN PRODUCTS CO., Dept. N, Waterloo, Iowa

Detroit Incubator \$12.45
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. Detroit Incubator Co. Dept. 11 Merritt St., Detroit, Mich.

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5 MONTHS' TRIAL 25 cts.
For over 30 years the leader in down-to-date poultry helpfulness. Tells how to get more winter eggs, how to hatch, feed, house and breed successfully. Issued Monthly, 40-160 pages. Only 25c. stamps or coin, for 6 months' trial. Full year subscription, \$1.00. Poultry Success, Box 15, Springfield, Ohio

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Eleven popular, money-making breeds. Easy to buy—priced low. Easy to raise—husky, healthy, vigorous. And guaranteed! Write today for FREE catalog showing many breeds in full colors. OHLS POULTRY YARDS and HATCHERY Box 27, Marion, Ohio

Free-Conkey's Poultry Book
80 pages chock full of information about the feeding and rearing of chicks, culling of hens, etc. Tells how to keep chickens healthy and how to make them pay. Whether a beginner or a professional, Conkey's Book is worth dollars to you. Sent for 6 cents in stamps to pay postage. THE G. E. CONKEY CO. 6514 Broadway, Cleveland, Ohio

Poultry Book Latest and best yet: 144 pages, 215 beautiful pictures, hatching, rearing, feeding and disease information. Describes busy Poultry Farm handling 63 pure-bred varieties and BABY CHICKS. Tells how to choose fowls, eggs, incubators, sprouters. Mail for 10 cents. Berry's Poultry Farm, Box 136, Clarinda, Iowa

64 BREEDS Most Profitable pure-bred Northern raised chickens, ducks, geese, turkeys. Fowls, eggs, incubators at reduced prices. 29th year. Largest plant. Large valuable poultry book and catalog free. R. F. NEUBERT Co., Box 834, Mankato, Minn.

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Trapped and Trapped. Lay 301 to 313 eggs per year. Winners at 50 shows. Chicks, eggs, pullets, hens and males shipped C. O. D. at amazingly low prices. Write for Free catalog and prepaid bargain list to the World's largest Leghorn Farms. GEO. B. FERRIS, 634 Union, Grand Rapids, Mich.

Farm Poultry

Layers May Be Show Birds

SOME people have the erroneous idea that a well-bred or prize-winning fowl is not a good laying one, but they may be if properly bred. For instance, I had a pullet a few years ago from which my present strain originated. This pullet commenced to lay early and I wished to show her at our Barred Plymouth Rock state meet. She laid in the crate both going to and coming from the show, as well as in the coop while at the show, and kept it up after returning home, besides winning first in her class and special female in the show. This in spite of the fact that changing living quarters usually stops hens laying.

Nature itself is one of our greatest

only, use the light color mating. They dress nicer also, and have richer yellow shanks and skin.—J. A. BARNUM.

WHY INCUBATORS PAY.

IN the days when brooders were poor in quality some poultryman doubted the value of incubators because of the large mortality among chicks, brooded artificially. But with modern brooding equipment to care for the chicks, we find that the incubator is practical and profitable.

When only hens are used for hatching it is difficult to hatch early. Often the best hens that lay through the winter are the hens that wish to set first in the spring. Sometimes these hens are set on eggs laid by the poorer layers that have started to lay later in the winter. This means that the best hens are turned away from the production of eggs when they are most needed to produce chicks. The hens of less value which have not become broody are then producing the eggs for hatching.

The incubator enables the poultryman to keep all of his hens busily producing eggs. For example, a 360-egg incubator will be doing the work of twenty-four hens. Those hens will be laying and I believe the strain on the vitality of a hen due to laying is less than the devitalizing effect of three weeks steadily on the nest, followed by a long period of worrying while penned up in a brood coop mothering the chicks.

It seems to help in breeding out the tendency to broodiness in a flock if incubators and brooders are used and the hens are broken up promptly and returned to laying condition. One of the items of work in managing flocks of the American and Asiatic breeds is to constantly be penning up broody hens from spring until winter and even during the coldest part of winter. It certainly pays to breed from hens with the smallest possible tendency to broodiness. A good incubator not only produces vigorous chicks but pays for itself by saving time for the hens.—K.

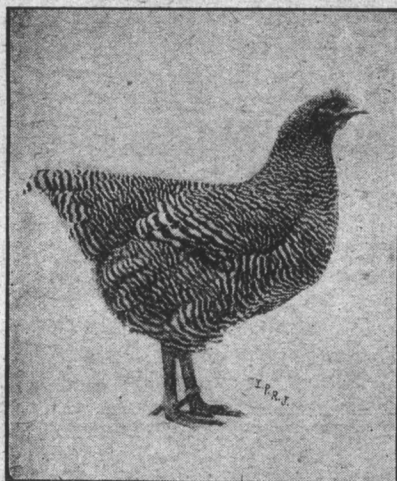
ABSCESS ON FOOT.

We have a year-old rooster whose feet got all red, and were that way for some time. Then they bursted and bled, now they are as good as ever. Would you kindly tell me the cause of this and cure for same?—J. R. H.

The bird may have had abscesses in the feet, due to a bruise from being stepped on by a larger animal. Bumblefoot or an abscess on the sole of the foot is caused by jumping from the perch to a hard floor. Other foot abscesses are caused by thorn wounds or nail punctures which have become infected. Such troubles are often easily cured by lancing and removing the pus and washing out the wound with a solution of some coal tar disinfectant. Pus in the fowl is of a solid cheesy nature and must usually be scraped out after making a wide incision rather than drained out through a small opening.

A red condition of the legs may also be due to scaly leg. This is a mite which burrows under the scales. It can be destroyed by washing the legs in warm soapy water and then wiping them with a cloth wet with kerosene oil.

Laying hens are paying hens. And feeding egg-producing rations will make them lay.



One of J. A. Barnum's Prize-winning Utility Barred Rocks.

Horticulture

CANNERS AND GROWERS TO COOPERATE.

THE cooperative committee of the Michigan Canners' Association and the officials of the Michigan State Farm Bureau, representing the fruit growers of the state, will hold a conference early in January for the purpose of working out some arrangement for a producer-canner pack of fruit during the coming season. Cherries probably will be the first fruit used for experimental purposes.

A more friendly spirit exists between the canners and growers than ever before. Harold Royal, of Shelby, president of the Michigan Canners' Association, points out that the problems of the growers are identical with those of the canners, and what interests the one, interests the other.

BETTER BOAT SERVICE FOR FRUIT SHIPMENTS.

ASSURANCES of better facilities for the transportation of south-western Michigan fruit crop in 1922 are given by the Graham & Morton Transportation Company, of Benton Harbor, in the announcement that it has purchased two new steel steamers which will ply Lake Michigan between Chicago, St. Joseph, Benton Harbor, Saugatuck and Holland, all large fruit ports. The vessels will move fruits and vegetables in season. There now are five vessels in the company's fleet.

BENZIE COUNTY FRUIT GROWERS TAKE INTEREST IN CANNING FACTORY.

A BLOCK of \$50,000 worth of stock in the Grand Traverse Packing Company of Traverse City, is being subscribed by Benzie county cherry growers for the purpose of building a canning factory in Benzie county. More than \$10,000 worth was subscribed at the first meeting. If the deal is consummated the Benzie growers agree to deliver all of their sour cherries to the factory. It is estimated the crop will total one million pounds in 1922.

Growers meeting at Leland in Leelanau county and at Old Mission also have made arrangements to deliver their cherries next year to the Grand Traverse Packing Company.

This packing company in 1922 paid the growers ten cents a pound for their cherries in addition to seven per cent interest on stock investment. Practically the entire crop in the Grand Traverse region went into cans, only a small part of it being sold to the fresh fruit trade.

FRUIT COOPERATIVE ASSOCIATIONS TO FORM EXCHANGE.

ORGANIZATIONS which have been invited to elect two delegates each to a committee which probably will perfect the organization of a Michigan Fruit Exchange are as follows: Michigan Fruit Growers' Exchange of Benton Harbor, Fennville Fruit Exchange, Bangor Fruit Exchange, Kibbie Fruit Exchange, Fennville Farm Bureau Association, Grand Rapids Growers' Association, Grand River Valley Cooperative Association of Grand Haven, Fremont Cooperative Association, Mason County Cooperative Association of Scottville, Grand Traverse Packing Company of Traverse City, Southern Michigan Fruit Association, Paw Paw Fruit Association, Lake Shore Fruit

Association of Sawyer, Saugatuck Fruit Exchange, Shelby and New Era Fruit Association, Hart Cooperative Association, Kent City Marketing Association, Onkama Cooperative Association, Leelanau Cooperative Association, Benzie County Fruit Exchange, Eau Claire Farmers' Cooperative Association, Hartford Fruit Exchange, Coloma Fruit Exchange, South Haven Fruit Exchange, Lawrence Fruit Exchange, Lincoln Township Fruit Association, Ludington Produce Exchange, St. Joseph Fruit Association, Benton Center Fruit Association, Millburg Fruit Exchange, Riverside Fruit Association, Bridgman Fruit Exchange and Brunswick Fruit Exchange, and Sodus Fruit Exchange.

COUNTY POOLS NURSERY ORDERS.

THE nursery stock pool being formed by the Benzie County Farm Bureau now lists orders for twelve thousand trees. Growers in Manistee and Leelanau counties also may join in the project and if they do their contribution of orders would practically double the volume. County Agriculturist James L. Kraker, who is in charge of the pool, reports receiving a number of bids at greatly reduced prices which indicate that the growers are going to save thousands of dollars through this new cooperative deal.

GROW YOUR OWN GRAPE AND CURRANT PLANTS.

THE grape and the currant will grow and bear fruit anywhere in Michigan. They need no special soil or climate. They should be on every farm. Grape plants have been unreasonably high in price owing to the great demand. Currant plants are very high owing to the restrictions on shipping. Currants are grown mostly by eastern nurseries and they are not allowed to ship plants into Michigan.

Grow your own plants easily. Here's how! Make cuttings from currant bushes. Cut the tips about six inches long, it will not injure the old plant in the least. Tie your cuttings in bunches of twenty-five or fifty. Dig a shallow pit in well-drained soil—the side of a ravine is ideal—place your cuttings in the pit, butt ends up, and cover them with a foot of soil. Do this any time this winter up to February 28.

Make grape cuttings the same way from trimmings, leaving three buds to the cutting. Choose vines with buds growing rather close together. Tie them and store them in the ground the same as the currant cuttings. Leave your cuttings in the ground until June 1. Take them out and set them in rows six inches between the plants. Bury two buds and leave one above ground. Cultivate them well. They will be ready to set out the next spring or fall if you prefer. Set currants three feet in the row, rows six feet apart, set grapes eight by ten feet.—L. B. R.

SUNSHINE HOLLOW.

Melvin Hogan says that he notices when they have a 'phone strike that the girl that makes out the monthly bills don't go out with the rest of the strikers. He says he had a veal for sale a while ago but it took so long to get 'phone connection with the stock buyer that they had to beef it.

Look for blight cankers while the tree is leafless. Trim them out as they are a source of infection.



What Makes Your Garden Grow?

Good, productive, well fertilized soil, free from weeds, is one thing to produce big crops. But pure, tested, sterling quality seeds, adapted to your location, are first in importance to make your garden grow and yield the biggest cash returns.

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American Headquarters for Seeds

Farmers for over half a century have sown Salzer Seeds because they know that they are sure crop seeds. When you want seed that will yield highest returns with surest germination, you go to Salzer because experience has taught you that Salzer seeds are reliable.

We have been particularly fortunate this season in securing the finest assortments of all field and garden seeds we have ever had, in spite of conditions elsewhere. Our northern-grown field seeds are safest for you. Before ordering any seed, whether for field, vegetable garden or flower garden, write to us for our beautiful 1922 Seed Catalog, the triumph of our 54 years as the leading seed house of America.

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Established 1868

Dept. 240, La Crosse, Wis.

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If you wish to know real strawberry satisfaction you must grow our new variety Cooper, the greatest strawberry ever introduced. Our new catalog tells you all about the Cooper. Don't buy a plant until you get our catalog; we can save you money on standard and ever-bearing varieties of strawberries, also on raspberry, blackberry, grape, and other fruit plants. Big cash prize offer. Send for catalog. STEVENSVILLE NURSERIES, Box 80, Stevensville, Michigan

SWEET CLOVER For several years I have specialized on raising sweet clover seed and selling direct to farmers. Am equipped with hulling and scarifying machine and my fields are kept free from noxious weeds. Will guarantee satisfaction or your money back. Have both white biennial and Hubam, the new annual. Write for prices. E. E. Basil, R. 3, Latty, O.

Michigan New Ground

Berry Plants—The kind Baldwin grows on his Big Berry Plant Farms have deep, heavy roots—are hardy and healthy. They start their growth quickly, produce largest fruit crop. **IT'S READY FOR YOU.** Baldwin's Big Berry Plant Book will be sent on request. It's a down-to-date Fruit Grower's Guide, beautifully illustrated, chock full of useful information on best ways of growing strawberries and other small fruits. Our plants all freshly dug to fill your orders. Scientifically packed for safe shipment. Write tonight—get our book and start right. O. A. D. BALDWIN, R. R. 16, Bridgman, Mich.

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BUY handsome, thrifty trees, grapevines, berry bushes, roses, and shrubs from your own state and secure prompt receipt in vigorous condition. Kalamazoo County is famous for hardy, well-rooted stock. We guarantee healthy and true to name. You ought to plant more fruit trees this season. Special rates if you order now. Our handsome catalog of dependable trees for the asking.

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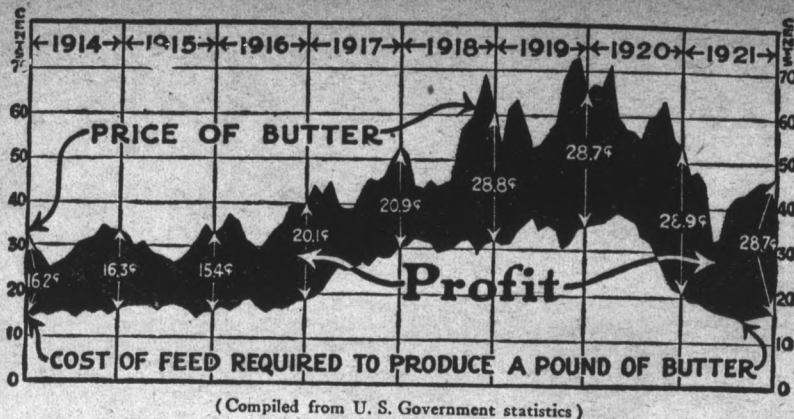
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Produces finest quality. Saves time, fuel and labor. Pays for itself in a couple of seasons—lasts many years.

Write for free illustrated catalog and mention how many trees you lap. S. A. Spouts, Tanks, Full Line of Sugar Maker's Supplies.

Champion Evaporator Co., Hudson, Ohio.





Look at this diagram!

It shows just how profitable the production of butter or butter-fat has been since 1914, and that it pays just as big today as ever.

The top line of the black area shows the price of butter, while the bottom line shows the cost of feed required to produce a pound of butter. The thickness of the black area then shows the spread between cost of feed and price of butter—or the net profit. For example, near the end of 1921, feed to produce a pound of butter cost 16.9 cents; butter sold for 45.7, leaving a difference of 28.8 cents per pound, or 170% profit.

De Laval Cream Separators have helped more than any other factor to put the butter business on such a profitable basis—by saving cream, improving butter in quality, saving time, and saving skim-milk in the best condition for feeding.

Let a De Laval start making and saving money for you now. See your De Laval agent or write for full information. Prices on pre-war basis. Sold on easy terms.

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The better way of milking—cheaper, faster and cleaner than any other way of milking. In use on thousands of dairy farms.

Live Stock and Dairying

MILK HAS NO SUBSTITUTE.

REPORTS on feeding tests with white rats bear out the dairy farmer's contention that "there is no substitute for milk."

Twenty-seven white rats, animals especially for experimental purposes were taken to the laboratories of the Ohio University and divided into groups of nine. The first group got bread and milk; the second, bread and meat; the third, bread alone.

The test ran eighteen days. At the end, the milk-fed rats had gained an average of 38 grams; the meat-fed rats had put on twenty-seven grams, while the bread-fed group showed advances of only three grams.

TWO FARMS AND TWO RESULTS.

TWO Michigan dairymen began keeping accounts upon the advice of extension men of the Agricultural College. One dairyman had an investment of \$24,000 in his equipment and animals and the other an investment of \$25,000. The cows belonging to the first dairyman produced an average of 10,300 pounds of milk, while those of the latter had a 6,000 pound average. The books showed that the first was getting a return of eight and one-half per cent on his investment while the second was getting a return of only two and one-half per cent.—W.

year. The poorest herd had ninety-one cows, averaging 155 pounds of butter-fat in a year. The first herd made an average income of \$75 per cow over the cost of feed consumed; the latter made an average return over the feed cost of only sixty-four cents per cow.

The introduction of a few variations on these figures will help to show just how far apart were these cows in the two herds. The average cow in the best herd produced more income above the cost of feed than all of the ninety-one cows in the other herd. It would require 117 cows like the average in the poor herd to equal in profit production one of the cows in the top herd. To equal the herd of sixteen good cows a farmer would have to keep 1,872 animals like the average cow in this poor herd.

ALFALFA AND TIMOTHY.

INCREASING the yield of hay by twenty-five per cent was the result obtained when fifteen pounds of alfalfa seed and five pounds of timothy was used per acre instead of alfalfa alone. Experiments conducted in Wisconsin gave these results. It was also found that the timothy plants aided materially in keeping out bluegrass, especially in spots where the alfalfa was winter-killed. The time of harvesting of hay also resulted in a product of superior feeding quality.

DO NOT GET DIZZY WHEN YOU READ THIS.

WITH figures from a cow-testing association as the basis for calculations some convincing comparisons of the best herd and the poorest herd, bring out with unusual emphasis the value of testing.

There were 511 cows owned by association members. The best herd consisted of sixteen cows, with an average of 306 pounds of butter-fat in a

FIVE-DAY CALF BRINGS GOOD PRICE.

AT a dispersal sale of Holstein cattle owned by G. A. Weed and Ernest Rhues, of Lake Odessa, one calf only five days old was auctioned off at \$380. The best cow with daughter at side went for \$1,500. Receipts of the sale totaled \$18,000. Bidders were present from Detroit, several state points, Canada, Wisconsin, Indiana and Ohio.

Annual Breed Meetings

To Be Held Next Week

FOLLOWING is a list of the meetings of the various breed organizations of Michigan to be held at East Lansing on the dates and at the places mentioned. These meetings will be in conjunction with the annual meeting of the Michigan Live Stock Breeders' and Feeders' Association, the program of which appeared in the last issue of this journal.

Michigan Sheep Breeders' and Feeders' Association.

President, J. N. McBride, Lansing; secretary, Don Williams, Lansing.

Wednesday, January 11, 10:00 A. M., Room 206.

Address by the president.
Wool Pools and Wool Marketing, by C. J. Fawcett, head of the Wool Division, American Farm Bureau Federation, Chicago.

The Outlook for the Sheep Breeder, by representatives of the different breeds of sheep, Messrs. Wing, Parsons, Powell, Tyler, Nye, Calhoun and others.

Michigan Swine Breeders' Association.

President, Newton Barnhart, St. Johns; secretary, P. P. Pope, Mt. Pleasant.

Wednesday, January 11, 1:00 P. M., Room 109.

Placing Pure-bred Swine on Every Farm, by E. C. Stone, Secretary American Hampshire Swine Association.

Breed Ideals, by W. M. McFadden, Secretary American Poland-China Association.

Types—Present and Future, by W. J. Carmichael, Secretary National Swine Growers' Association.
Fitting and Showing, by J. W. Clapp, Northville.

Forty Years with Pure-bred Swine, by E. N. Hall, Hamburg.

Michigan Horse Breeders' Association.

President, Ray Whitney, Onondaga; secretary, Ralph S. Hudson, of East Lansing.

Wednesday, January 11, 3:00 P. M., Room 206.

President's address, by R. E. Whitney, Onondaga.

The Come-back of the Horse, by Wayne Dinsmore, Chicago; Secretary Horse Publicity Association of America.

The Draft Horse, by Jacob DeGeus, Alicia.

Report on Stallion Registration, by Judson Black, Richmond.

Colt show, 3:00 P. M., January 12.

Sale 10:00 A. M., January 13.

Michigan Holstein-Friesian Association.

President, Dudley E. Waters, Grand Rapids; secretary, H. W. Norton, Jr., Lansing.

Tuesday, January 10, 7:00 P. M.

Annual banquet held at Plymouth Congregational Church, Lansing.

Wednesday, January 11, 9:30 A. M., Room 402.

President's Address, by Dudley Waters, Grand Rapids.

Report of secretary-treasurer.

Awarding of prizes for official records.

Business session.

Afternoon Meeting 1:30 P. M., Room 402.

The Better Sire Train, by E. J. Leenhouts, Lansing.

Address by O. E. Red, Professor of Dairy Husbandry, M. A. C.

Address by F. O. Lowden, president Holstein-Friesian Association of America.

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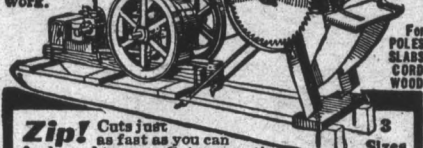
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Before churning add one-half teaspoonful to each gallon of winter cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.

Wells & Richardson Co., Burlington, Vt.

Michigan Guernsey Cattle Club.

President, F. H. Ormston, St. Johns;
secretary, H. G. Ray, Albion.
Tuesday, January 10, 1:30 P. M.;
Room 109.

Reading of minutes.

Report of secretary-treasurer.

Report of committees.

Address by James E. Harper, Field
Man for Ohio Guernsey Breeders' As-
sociation.

My Experience with Advanced Reg-
istry Work, by Fred C. Gleason, Sodus.
Discussion.

My Experience with Marketing of
Guernsey Dairy Products, by George
J. Hicks, Saginaw.

Discussion.

Hints for Breeders—Old and Young,
by H. W. Wigman, Lansing.

Discussion.

Tuesday, January 10, 8:00 P. M.
Annual banquet at Hotel Downey,
Lansing.

Wednesday, January 11, 9:30 A. M.,
Room 110.

New business, outlining work for
1922, field day, exhibit at fair, state
consignment sale.

A Guernsey sale.

Election of officers.

Michigan Jersey Cattle Club.

President, Alvin Balden, of Capac;
secretary, Alfred Henrickson, Shelby.
Wednesday, January 11, 10:00 A. M.,
Pavilion.

Stock judging contest, captained by
Messrs. J. F. Eardley and Arthur Edi-
son, Grand Rapids.

Stock judging demonstration, by H.
E. Dennison, Assistant Professor of
Dairy Husbandry.

Afternoon Session, 1:00 P. M.,
Room 110.

The Jersey in Michigan, by O. E.
Reed, East Lansing, Professor of Dairy
Husbandry.

The Jersey as an Economical Pro-
ducer, by H. F. Probert, Jackson.

Feeding Problems, by H. C. Moore,
Durand.

Business session, election of officers,
and outlining work for 1922.

Michigan Hereford Breeders' Association.

President, Jay Harwood, Ionia; sec-
retary, Earl C. McCarty, Bad Axe.
Wednesday, January 11, 1:00 P. M.,
Room 111.

How the Hereford Assists me in
Farming, by E. E. Cole, Hudson.

Laying the Foundation for a Here-
ford Herd, by E. J. Taylor, Fremont.

The Hereford, by R. J. Kinzer, Kan-
sas City, Secretary American Hereford
Breeders' Association.

Herefords at our State Fair, by
Jacob DeGeus, Alicia.

Hereford Calf Clubs, by R. A. Tur-
ner, State Club Leader.

White Faces at the International, by
W. W. Crapo, Flint.

Advertising, by A. L. Smith, Eckford.

Michigan Shorthorn Breeders' Association.

President, G. A. Prescott, Jr., Tawas
City; secretary, W. E. J. Edwards, East
Lansing.

Thursday, January 12, 4:00 P. M.,
Room 109.

President's address by G. A. Pres-
cott, Jr.

Business meeting.

Modern Tendencies in the Shorthorn
Show Ring, by J. L. Tormey, Chicago,
American Shorthorn Breeders' Associa-
tion.

Address, by a member of the M. A.
C. Veterinary Division.

Shorthorn Breeders' Banquet will be
held at 6:30 P. M.; place to be an-
nounced later.

Friday, January 13, 8:30 A. M., show
of sale cattle, Live Stock Pavilion.

Friday, January 13, 1:00 P. M., Sale
of forty-five head of Shorthorns.

Michigan Aberdeen Angus Breeders' Association.

President, Alexander Minty, Ionia;
secretary, Ward Hathaway, Ovid.

Wednesday, January 11, 2:00 P. M.,
Room 405.

National Breed Affairs, by Charles
Gray, Secretary American Aberdeen
Angus Association.

Advancing Aberdeen Angus Interest
by the Use of Better Sires, by Dr. K.
J. Suelke, Ithaca, New York.

Michigan Red Polled Breeders' Association.

President, N. C. Herbison, Birming-
ham; secretary, Mark R. Westbrook,
Ionia.

Wednesday, January 11, 2:00 P. M.,
Room 113.

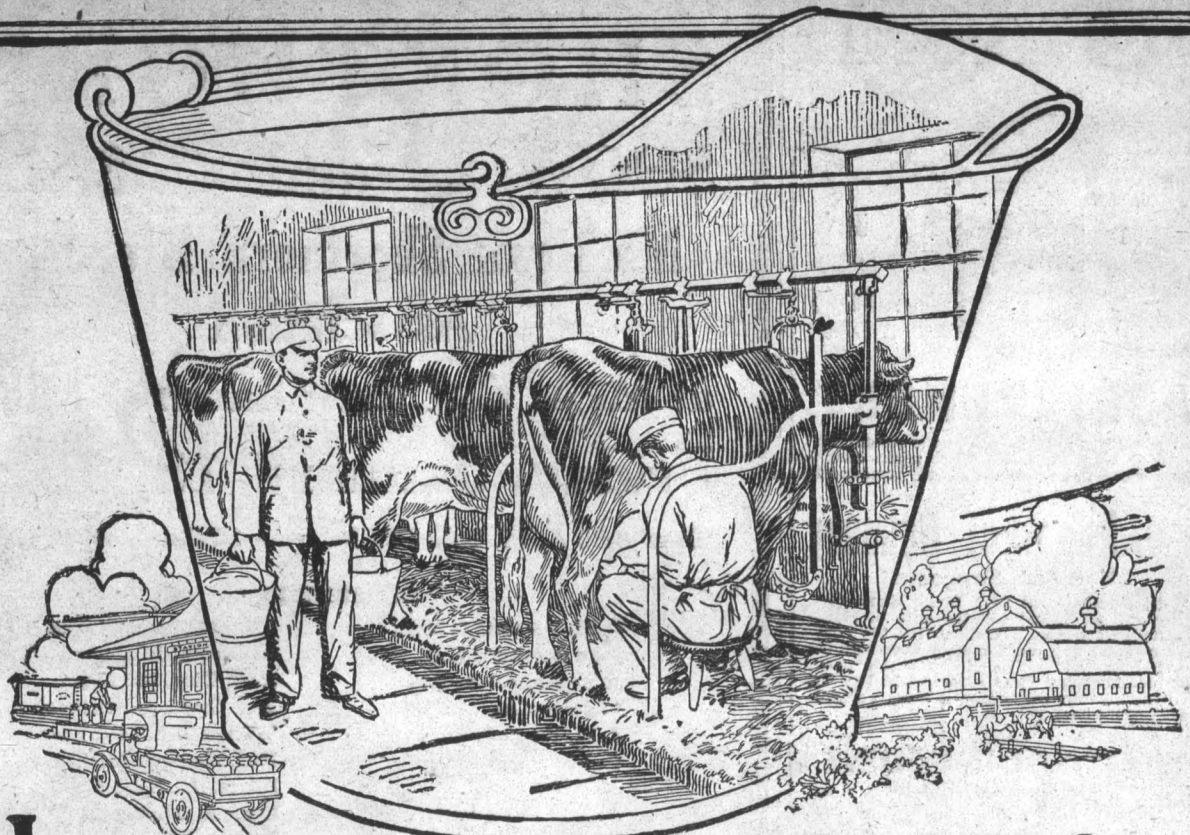
More Steers and Fewer Common
Bulls, by R. L. Westbrook, Ionia.

How Can we Interest New Breeders,
by J. A. Battenfield, Fife Lake.

The Use of Better Sires, by E. W.
Lackie, Filton.

Ayrshire Breeders to Organize.

The Michigan Ayrshire Breeders
will meet at the Dairy Building, Wed-
nesday, January 11, at 2:00 P. M. for
the purpose of organizing a state as-



Increased Milk Production

—and a better grade of milk

MORE and richer milk is well worth trying for. It means more money on the profit side of dairying. And it is far from being just a dream. In every herd there are certain cows that are not yielding up to capacity, just because of some reduced vitality of genital or digestive organs—some sluggish condition of the milk-making organism that proper medicinal aid would quickly correct.

It is just such conditions—very common to hard-worked milch cows—that Kow-Kare is able to clear up; because this famous cow medicine has properties that act directly on the organs of production and reproduction, making them function as Nature intended. Besides effectively preventing the ailments that make cows unprofitable, Kow-Kare has a nation-wide reputation as a reliable remedy in the treatment of Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite, etc.

Play safe; know what to do when a cow is sick. Send for our free book on cow ailments, "The Home Cow Doctor." It tells the right treatment for various ailments, and has a wealth of information valuable to cow owners.

Kow-Kare is sold by general stores,
feed dealers and druggists, at the
new reduced prices—65c and \$1.25.

DAIRY ASSOCIATION CO., INC.
Lyndonville, Vt.

"Penny-a-Day Prevention"

The cheapest health insurance you can invest in is to use Kow-Kare regularly a part of every week during the winter to keep the assimilation and digestion in good order and throw off disease. Many of the most serious disorders that arise during calving period can be prevented by using Kow-Kare for a couple of weeks before and after. Don't overlook this suggestion.



HORSE SALE

Friday, January 13th, 1922. 10:00 A. M.

Stock Judging Pavilion

Michigan Agricultural College

Registered Percherons, Belgians and Clydesdales

Stallions and Mares

A Few High Class Work Horses

Michigan Horse Breeders' Association

R. S. HUDSON, Secretary

Auctioneers: J. P. Hutton, Andy Adams

COLT SHOW 3:00 P. M. Jan. 12th, 1922

SHEEP

Shropshires 7 yearling rams also ram and ewe
lamb. Butter and Senator Bib-
by breeding. C. J. Thompson, Rockford, Mich.

A Real Bargain at Kope Kon Farms

We offer 40 big healthy yearling Shropshire and
Hampshire Rams all registered at \$25.00 each.
Come or write while the picking is good.
S. L. WING, Coldwater, Mich.

600 Breeding Ewes

for sale, choice young ones, bred to Shropshire rams.
Mostly black faces. ALMOND B. CHAPMAN, So.
Rockwood, Mich.

Registered Shropshire Rams

Priced to sell. Dan Booher, R. 4, Ewart, Mich.

Reg. Shropshire Rams and ewes all ages. Quality
and price are right. Will
ship on approval. H. F. Mouser, R. 6, Ithaca, Mich.

Shropshires—Yearling and lamb rams with quality,
sired by an imported Winton ram. Write for prices
and description. W. B. McQuillan, Howell, Mich.

Ten Aged Feistered Delaine ewes and ten
ewe lambs for sale.
CALHOON BROS., Bronson, Mich.

HOGS

EVERY'S BIG BERKSHIRES

Choice boars. Sows bred or open. Satisfaction guar-
anteed. W. H. EVERY, Manchester, Mich.

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

DUROC JERSEYS: A few choice
sows, bred gilts for
sale. CAREY U. EDMONDS, Hastings, Mich.

Additional Stock Ads. on Page 29

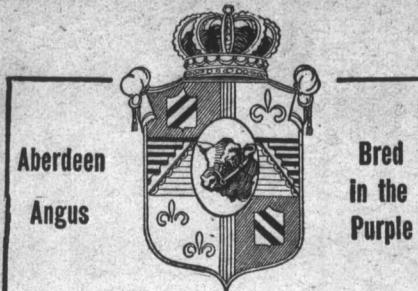
O. I. C. HOGS

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.

BREEDERS' DIRECTORY

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

**ACHIEVEMENT**

The reward of pure breeding; the accomplishment of quality. Success has again contributed more laurels to the already remarkable record of

Imp. Edgar of Dalmeny

The Sire Supreme

At the International Live Stock Exposition, where gathers each year the elite of North American Cattle to compete for the coveted awards, five more honors have been bestowed upon the "get" of Edgar of Dalmeny. You too may share these honors. A bull by this world famous sire will prove a most valuable asset to your herd. Write us today.

WILDWOOD FARMS

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

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

Registered Guernseys

We have a special proposition on your Bull for next year that will interest you now.
J. M. WILLIAMS, North Adams, Mich.

Choice Guernsey Bulls. 14 and 18 months old. Priced \$150 and \$250. Dams A. R. records 627 and 515 lbs. b. f. and on retest gave over 60 lbs. milk per day. Federal accredited Herd. Satisfaction guaranteed.
G. W. and H. G. RAY, Albion, Mich.

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

For Sale Register Guernsey bull calves out of A. R. dam. \$40.00 each if taken soon.
JOHN EBELS, R. 2, Holland, Mich.

For Sale, Reg. Guernsey Cows or heifers, prices right.
GEO. M. CRAWFORD, Holton, Mich.

FOR SALE One two year old registered Guernsey bull, price \$150.
RUSSEL A. SAYER, Big Rapids, Mich.

Grandsons of King Of The Pontiacs Ready for Service

From 27 to 32-Lb. Dams

Sire:--King of the Pontiac Segis No. 169124 who is by King of the Pontiacs and from Hillsdale Segis, a 33 lb. daughter of King Segis.
No. 1 Dam:--32 lbs. butter and 620 lbs. milk in 7 days.
No. 2 Dam:--28.8 lbs. butter and 30 day record of 118 lbs. as Junior four year old.
No. 3 Dam:--Granddaughter of Belle Koradyke, 2.77 lbs. butter and 640 lbs. milk in 7 days.
No. 4 Dam:--A great cow, 765 lbs. of milk and 28 lbs. butter in 7 days.
Other bulls out of good A. R. O. dams, with records from 15 to 20 lbs. butter as Junior 2 and 3 year old. All nicely marked and good individuals. Herd under Federal Supervision. CALL AND SEE THEM. For pedigree and information write Percy Nye, Mgr.

Priced Right for Quick Sale
James B. Jones Farms,
Romeo, Mich.

HERE IS A GOOD ONE

BORN JUNE 2nd 1920 by MAPLECREST DE KOL HENGERSVELD whose three sisters have each produced over 1200 lbs. of butter in a year. TWO of them former WORLD'S CHAMPIONS. Calf's dam by an own brother of a 1248 lb. cow. Write for pedigree.
F. B. LAY, Kalamazoo, Mich.

The Traverse Herd

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

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

"Top Notch" Holsteins

A Fine Purchase For Some Good Breeder.
Bull born Sept. 21, 1920, from a good A. R. O. daughter of a cow that produced 18,996 lbs. milk and 750.82 lbs. butter in one year, and is from a son of a 30 lb. cow that produced a 31 lb. cow, who in turn produced a 31 lb. cow.
His 6 nearest dams average 26 lbs. butter in 7 days. Handsomely marked in solid colors—a little more black than white. A good individual.
Price \$125.00 f. o. b. Howell.
McPHERSON FARMS CO., HOWELL, MICH.
All herds under U. S. Supervision.

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.

Reg. Holstein Bulls ready for service, sired by a 24 lb. grandson of King of the Pontiacs; also a few reg. cows and heifers; a carload of grade cows soon fresh. Priced right. The Long Lane Stock Farm, The Home of Michigan's Best Bull.
E. A. BOHLFS, Akron, Mich.

SHORTHORN

SHOW and SALE

Michigan Shorthorn Breeders Association

at M. A. C., East Lansing, Mich.

Friday, January 13, 1922

Show 8:30 A. M. Sale 1 P. M. 32 Females, 12 Bulls.

CONSIGNORS

C. H. Prescott & Sons,
John Lessiters' Sons,
John Schmidt & Son,
Michigan Agr. College,
J. M. Hicks & Sons,
V. M. Shoemith,
Andy Adams,
A. & F. Parmenter,
W. J. Baird,
O. E. Bell,
M. B. Hallstead,
W. E. Cummings,
Hoyt Shisler,

Tawas City, Michigan
Clarkston, Michigan
Reed City, Michigan
East Lansing, Michigan
Williamston, Michigan
East Lansing, Michigan
Litchfield, Michigan
Durand, Michigan
Dewitt, Michigan
Mason, Michigan
Orion, Michigan
Coleman, Michigan
Caledonia, Michigan

Every animal Guaranteed, Tested and sold subject to 60 days' retest.

Come to this Sale for Shorthorns of Merit

Auctioneers Hutton & Adams

Write for catalogue

W. E. J. EDWARDS, Mgr.,
EAST LANSING, MICHIGAN

DISPERSAL SALE

At Blissfield, Mich.

Wednesday, Jan. 11, 1922 at 1:00 P. M.

20 Head of Accredited Jerseys 20

In this sale is Arhona of General Cowslip and Rower breeding; 2 of her sons, 1 by Karnak Meridale Owl and 1 daughter; remainder of herd Noble of Oakland Eminent and Hood Farm breeding.

Col. Walter Andrews, Auct.

J. V. Colta, Sale Mgr.

For Catalog Address A. D. Sanderson & Son, Blissfield, Mich.

WINNWOOD HERD

Registered Holsteins

It was through the daughters of Flint Maplecrest Boy that Sir Ormsby Skylark Burke Our Junior Herd Sire produced the Junior Champion and Reserve Grand Champion Heifer, at the Michigan State Fair this year, in a class of 38. His get won first in Calf Herd, also first in get of sire, in a class of 13. A son of either of these great bulls will help the individuality and production of your herd. We have bulls at dairymen's prices, and we also have bulls at the breeder's price, from dams with records up to 38 lbs. of butter in seven days, and 1168 lbs. of butter in one year. Ask us about a real bull, a Maplecrest or an Ormsby.
JOHN H. WINN, Inc., Rochester, Mich.

A BLUE RIBBON WINNER

YOUNG BULL

On the 1921 Show Circuit For Sale at a low price. Out of an A. R. O. granddaughter of Pontiac Kornadyke. Sired by our SENIOR SHOW BULL, Model King Segis Glista 32.37 lbs.

GRAND RIVER STOCK FARMS,
Corey J. Spencer, Owner
111 E. Main Street, Jackson, Michigan.
Herd Under State and Federal Supervision

Reg. Holstein Friesian bulls sired by a gdson of King of the Pontiac's, ages from six months to one year old, nicely marked and good individuals priced to move them to make room for winter calves. Herd under Federal and State supervision. Haven't had a reactor in the herd. Henry S. Rohlf, R. 1, Akron, Mich.

Holstein-Friesian pure-bred bull calves, also good grade heifers; tuberculin tested herd. Prices are right. Larro Research Farm, Box A, North End, Detroit, Mich.

Bull Bargain, \$100 gets a light colored bull ready for service born Apr. 11, 1920, from 21.51 lb. dam, and sire whose six nearest dams av. 33.34 lbs. butter 7 days. Herd under state and Federal supervision. Oscar Wallin, Wisconsin Farm, Unionville, Mich.

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

Reg. Holstein Bulls ready for service sired by a 42 lb. bull. Priced to sell, also a few heifers and calves. B. B. REAVY, Akron, Mich.

Reg. Holstein bull calf, Pontiac and Colantha breeding. If taken now \$25.00. 3/4 white. PETER REYST, R. 2, Orion, Mich.

WE WANT

Beef Cattle Breeders & Feeders

To Prosper and Make Money

In truth the World's Best Beef is made at the lowest cost. If you have a Hereford Bull or herd. If you would produce your own feeding cattle—far better than you can buy. If we supply you cattle that are right. If you would feed cattle profitably.

Sotham's Earlipe Beef Plan
Insures Your Success. Our system is the satisfying substance of 90 years conscientious service to the cattle industry of America by three generations of Sothams. Get the facts. Write, right now, or wire, address

T. F. B. SOTHAM & SON,
(Cattle Business Established 1832)
Phone 250 Saint Clair, Michigan

Herefords

Repeaters, Beau Donalds, Fairfaxes, and Farmers represented in our herd. Repeater 173rd, a son of old Repeater, at head of herd. Both sexes and all ages for sale.

ALLEN BROS.,
(Farm at Paw Paw, Mich.)
Office 616 So. West St., Kalamazoo, Mich.

HEREFORDS For Sale. Bulls, cows and heifers.
RALPH CALHOON, Bronson, Mich.

Here's a Chance to buy a good 5 year registered Jersey bull. Lone Oak Judge, number 150197, will take \$150. First check will take him. FRANK FICEK, Gagetown, Mich.

sociation. Mr. C. L. Burlingame, secretary of the National Ayrshire Breeders' Association, will be present to address the meeting, also Professor O. E. Reed, of the Department of Dairy Husbandry, M. A. C.

Michigan Poland-China Breeders' Association.

President, W. E. Livingston, Parma; secretary, I. K. Maystead, Osseo.

Wednesday, January 11, 3:00 P. M., Room 207.

President's address, W. E. Livingston, Parma.

Constructive Breeding of Poland-Chinas, by W. M. McFadden, Secretary American Poland-China Association.

Impromptu discussions by members.

Michigan Duroc Jersey Swine Breeders' Association.

President, O. F. Foster, Pavilion; secretary, J. B. Miller.

Wednesday, January 11, 3:00 P. M., Room 109.

Durocs in Michigan, by I. R. Waterbury, Detroit.

Our Home Market, C. E. Buskirk, Paw Paw.

Market vs. Show Ring Type, by representative of Swift & Co., Chicago.

Michigan Chester White Breeders' Association.

President, Fred Nickel, Monroe; secretary, A. J. Barker, Belmont.

Michigan Hampshire Swine Breeders' Association.

President, C. M. Case, Adrian; secretary, Alfred J. George, Cassopolis.

Wednesday, January 11, 1:30 P. M., Room 103.

Appointment of committees, President C. M. Case, Adrian.

General discussion of the following subjects:

Mineral Supplements in Swine Feeding, led by Chester Ball, Dowagiac.

Public Sales and Advertising, led by E. C. Stone, Peoria.

Financing the State Association, led by Clarence Campbell, Parma.

Afternoon Meeting, 3:00 P. M., Room 103.

Opening remarks by C. M. Case, of Adrian.

Report of committees.

Election of officers.

Ratification of constitution.

Hampshire Promotion in Michigan, by E. C. Stone, Secretary of National Hampshire Swine Breeders' Association.

Discussion, led by A. J. George, Cassopolis.

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.

Lumbago.—I have a cow that came fresh two months ago. She is not very sick, but suddenly took stiff in hind quarters and I would like to know what can be done for her. W. S. S., Ypsilanti, Mich.—Give her a teaspoonful of nitrate of potash at a dose in feed or in drinking water three times a day. Apply mustard and water to back twice a week. Keep her warm.

Indigestion.—We have an eight-year-old horse that is not thriving, he slavers, legs stock, he is dull and languid, is fed twelve quarts of oats daily and has plenty of hay. He has been treated by two veterinarians for stomach trouble, but horse is much the same as before they treated him. A. H., Kings' Mills, Mich.—Change his feed, give him one dram of fluid extract of nux vomica, two drams of fluid extract of cinchona, and three drams of Fowler's solution at a dose two or three times a day. His teeth must be sound, or your veterinarians would have told you that they required floating.

Sick Pup.—I have a Collie pup seven months old which was spayed some time ago. When I got her home she was all right for a few days, then she was taken sick with what our veterinarian called indigestion. She was very sick for a few days, but is some better, but very stiff and lame in hind legs, can hardly get up. Am feeding her bread and milk. She has a rattling in her throat most of the time. C. Y., Norvell, Mich.—Perhaps she is suffering from mild attack of canine distemper. Feed her some raw red meat, give her small doses of calomel until bowels move fairly free, also give acetate of potash to keep kidneys active, give small doses of salol three times a day.

Loss of Power.—Calf one week old is strong on front legs but unable to stand up on hind legs. G. B. Farwell, Mich.—Plenty of mother's milk is the only remedy; keep calf warm, give it one-sixtieth of a grain of strychnine at a dose three or four times a day.

Rheumatism—Laminitis.—I have a horse seven years old, weighs 1,650 pounds, which was seemingly sound up to hay-making time last summer. At first I thought he was foot sore, but he now walks fairly well on level ground, but it hurts him to go down hill. He can back up as well as any horse and is in good flesh, also has a good appetite, but when the weather is damp and chilly he is stiff and sore. He is stiff in hind quarters and I have had to help him up a few times. S. H. E., Lambertville, Mich.—Give him a teaspoonful of acetate of potash and one dram of ground nuxvomica in feed twice a day. If his fore feet are too hot, stand him in wet clay for two hours a day, apply wool-fat daily. Keep him in a dry, warm stable, but, of course, walk him some daily.

Suppression of Milk.—Have a cow six years old that usually gives about sixty pounds of milk a day for three or four months after freshening, then gradually drops off until two months before due. Last August about ten weeks before she was due, she and the rest of my herd (ten cows and five heifers) got into a field of green corn, ate all they wanted before found, four of the cows were sick for a week, but all lived, an eight-year-old was sicker than the six-year-old. All seemed to get over the effects, although two freshened four to six weeks early, but the six-year-old went full time, although calf came dead and her udder never filled up and she has not given more than four quarts of milk per day. She eats well and acts all right, has been fresh five weeks now. Have been giving Kow-Kure to my cows, beginning one week before due to freshen, and for a week or ten days after, although in her case does not seem to produce results. The cows are fed ground corn, cob and oats, corn fodder and alfalfa hay. The local veterinarian who cared for cows when sick said they would not have any bad effect from getting the corn (green). The heifers were not sick at all, they are not due until spring. The calf was very large and well developed. The cow acts perfectly well and is looking good, but does not give any milk. Will you tell me why? The cows were on pasture when they got into corn field. F. F. S., Ypsilanti, Mich.—Doubtless your six-year-old cow never fully recovered from the ill effects following the eating of too much corn, which produced acute indigestion, and her giving birth to a dead calf is also additional evidence that she failed to make good recovery. The milk secreting glands are also affected, but very little can be done for such a case, other than to give her good care and continue milking her. I have known similar cases and am inclined to believe if you breed her again, she may milk fairly well after she has her next calf. Suppression of milk secretion is likely to follow an attack of acute indigestion, dysentery, fever, shock or chill.

Salting Cows.—I would like to know if there is any danger in cows eating too much salt, provided it is placed in quantity within their reach? I have a small box which I keep filled with common salt. F. L. Y., Alto, Mich.—The most intelligent way to feed any animal salt is to give it a small quantity daily, either in feed or in drinking water. Doubtless some animals eat far too much salt and when they do it acts as a poison.

Feeding Pregnant Animals Cottonseed Meal.—I would like to ask if any harmful effects are likely to follow the feeding of cottonseed meal to pregnant animals, especially the latter period of gestation. C. R. W., Attica, Mich.—You can safely feed pregnant cows a limited quantity of cottonseed meal during pregnancy, but don't feed large quantities for any great length of time to any animal.

GENERAL CONDITION OF WHEAT IS POOR.

THE Crop Reporting Board of the United States Department of Agriculture makes the following estimates from reports of its correspondents and agents:

Winter Wheat.—Area sown this fall is 44,293,000 acres, which is 1.2 per cent less than the revised estimated area sown in the fall of 1920 (viz. 44,847,000 acres). Condition on December 1, was 73.0 against 87.0 and 85.2 on December 1, 1920 and 1919, respectively, and a ten-year average of 89.0. Rye.—Area sown this fall is 5,184,000 acres, which is 22.6 per cent more

than the revised estimated area sown in the fall of 1920 (viz. 4,228,000 acres). Condition on December 1 was 92.2 against 90.5 and 89.8 on December 1, 1920 and 1919, respectively, and a ten-year average of 90.9.

CROP PRODUCTION FOR THREE YEARS.

THE December estimates of the Crop Reporting Board of the Bureau of Markets and Crop Estimates of production of the important farm crops of the United States in 1921, 1920, and 1919, based on the reports of the correspondents and agents of the bureau, are as follows (revisions based upon census report for 1919).

	Total Production.
Corn—	Bushels.
1921	3,081,251,000
1920	3,230,532,000
1919	2,816,318,000
Wheat—	Bushels.
1921	794,893,000
1920	833,027,000
1919	968,279,000
Oats—	Bushels.
1921	1,060,737,000
1920	1,496,281,000
1919	1,184,030,000
Barley—	Bushels.
1921	151,181,000
1920	189,332,000
1919	147,608,000
Rye—	Bushels.
1921	57,918,000
1920	60,490,000
1919	75,542,000
Buckwheat—	Bushels.
1921	14,079,000
1920	13,142,000
1919	14,295,000
Flaxseed—	Bushels.
1921	8,112,000
1920	10,774,000
1919	7,256,000
Potatoes—	Bushels.
1921	346,823,000
1920	403,296,000
1919	322,867,000
Hay, tame—	Tons.
1921	81,567,000
1920	87,855,000
1919	86,359,000
Cottonseed—	Tons.
1921	3,704,000
1920	5,970,000
1919	5,074,000
Cloverseed—	Bushels.
1921	1,411,000
1920	1,944,000
1919	1,484,000
Sugar Beets—	Tons.
1921	7,677,877
1920	8,546,193
Beet Sugar—	Pounds.
1921	2,024,764,000
1920	2,130,242,000
Cane Sugar (La.)—	Pounds.
1921	534,000,000
1920	338,254,000
Maple Sugar and Syrup—	Pounds.
1921	25,761,000
1920	36,813,080
Beans (seven states)—	Bushels.
1921	9,118,000
1920	9,077,000
1919	13,349,000
Onions (22 states)—	Bushels.
1921	12,652,000
1920	23,435,000
Cabbage (25 states)—	Tons.
1921	606,274
1920	1,029,662
Cranberries (3 states)—	Barrels.
1921	373,000
1920	373,000
1919	449,000
Apples, total—	Bushels.
1921	96,881,000
1920	223,677,000
1919	142,086,000
Apples, commercial—	Bushels.
1921	20,098,000
1920	33,905,000
1919	26,159,000
Peaches—	Bushels.
1921	32,733,000
1920	45,620,000
1919	53,178,000
Pears—	Bushels.
1921	10,705,000
1920	16,805,000
1919	15,101,000
Soy-beans—	Bushels.
1921	2,815,000
1920	2,278,000
1919	2,045,000
Cowpeas—	Bushels.
1921	9,581,000
1920	8,904,000
1919	6,026,000

A MISSTATEMENT.

In the November 26 issue of the Michigan Farmer, a short article on beans was made to read that the average yield of beans in the state was from eighteen to twenty bushels per acre. Census figures show that the average yield is around thirteen bushels per acre.

Dispersion Sale of Jerseys

and 170 Acre Farm. Owned by

Mr. H. C. Moore, Route 1, Durand, Mich.

WED. JAN. 25, 1922

The Jersey Herd Consists of 67 Head, of The Imported Jap, Interested Prince Breeding. There are SEVEN Register of Merit cows with their daughters and grand-daughters. Their records run from 446 lbs. 11½ oz. to 626 lbs. 2 oz. butter in one year, and all but one made at two or three years of age.

The herd bulls are great lot, and the herd all through the kind that go on and make good for their new owners. The Farm and Equipment sells as a WHOLE, Liberal Terms on both Farm and Cattle.

Send for a Catalog.

Col. D. L. Perry, Auct. Columbus, Ohio,

THE J. V. COTTA CO., Sale Managers, Crawfordville, Ind.

CATTLE

Jersey Thoroughbreds

Few cows and bull calves. Best breeding line. Guaranteed. Tuberculin tested twice a year. If you have no money will take bankable note. E. W. Yasvary, 509 Free Press Building, Detroit, Mich., Main 1267.

Hill Haven Stock Farm Shortage of feed compels me to sell a few reg. Jersey cows. Sired by grandson of Sophie 19th of Hood Farm. Also a few young bulls and bull calves out of above cows and sired by a fine bred Flying Fox bull. Herd in process of accreditation. Prices reasonable. F. CHAPMAN, Vandalia, Mich.

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

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.

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

Jersey Bulls For Sale ready for service from R. of M. dams. T. B. tested. Will give time. SMITH & PARKER, R. 4, Howell, Mich.

BIDWELL SHORTHORNS

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

BIDWELL STOCK FARM, Box D, Tecumseh, Michigan

Richland Shorthorns

Notice:—Shorthorn Sale M. A. C. Jan. 13th '22. We shall contribute five Heifers and five Bulls. Sired by some of the leading Bulls of the Breed. Attend this Sale and buy cattle in keeping with the times. C. H. PRESCOTT & SONS, Tawas City, Mich.

Francisco Farm Shorthorns and BIG TYPE POLAND CHINAS. Now offering:—Three bulls ready for service. Mastodon, Olansman, Emancipator blood in gilts bred for spring farrow. See them. POPE BROS. CO., Mt. Pleasant, Mich.

The Maple's Shorthorns

Kirk Levington Lad, by imported Hartforth Welfare, in service. Bulls and heifers for sale. J. V. Wise, Gobleville, Mich.

BUY SHORTHORNS of Central Michigan Breeders' Association at farmers' prices. Write for sale list to M. E. Miller, Sec'y, Greenville, Mich.

Milking Shorthorns, accredited herds, males and females, low prices. Davidson and Hall, Beldand and Beldand, Tecumseh, Mich.

For Sale Scotch and Scotch Topped males and females, any age, prices right. Address Northwestern Michigan Shorthorn Breeders' Ass'n. Roy F. Zimmerman, Sec'y, Traverse City, Mich.

Shorthorns at bargain. Cows and young bulls ready for use. Spring calves, either sex; also Poland China pigs. Robert Neve, Pierson, Mich.

Milking Shorthorns of best Bates breeding, bulls, cows and heifers for sale. E. H. KURTZ, Mason, Mich.

HOGS

Brookwater Duroc Jerseys

SPRING BOARS sired by Panama Special 55th, Big Bone Giant Sensation and Brookwater Demonstrator. The best of the breed. Order one by mail or come to the farm. You will like them when you see them. Prices reasonable.

BROOKWATER FARM, Ann Arbor, Mich. H. W. Mumford, Owner J. B. Andrews, Mgr.

Duroc Service Boars \$20 to \$40. Bred sows pigs \$10 to \$15. All registered or eligible. We have one of the largest and best herds in state. Ample opportunity for selection. MICHIGANA FARM, Pavilion, Mich., Kalamazoo County.

Pure-Bred Duroc Jersey Hogs; we usually have good boars and sows of all ages for sale. Reasonable prices. Larro Research Farm, Box A, North End, Detroit, Mich.



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

Phillips Bros, Riga, Mich.

Durocs Herd headed by Great King Orion Col. assis. ted by a good son of King Orion Fancy Jr. HARRY FOWLER, Sturgis, Mich.

Duroc Jersey Swine

Breeding stock for sale at all times at reasonable prices. If in need of a high class boar, or sow any age write, or better, come to farm. Best of Blood line and we guarantee you satisfaction. Herd boars, Panama Special 11th and Home Farm Wonder. Booking order for fall pigs at \$15 each.

Thos. Underhill & Son, Salem, Mich.

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

DUROC SOWS and gilts bred to Jack's Cherry Orion King No. 169259 Son of the \$10,000 boar owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply THE JENNINGS FARM, Bailey, Mich.

For Sale Durocs of the big heavy boned type. Write your wants. CHAS. BRAY, Okemos, Mich.

DUROC JERSEYS

spring boars that will improve your hogs, of Orion Cherry King, Col., and Pathfinder breeding, at reasonable prices. Write us your wants. Bred sows and gilts all sold. W. C. TAYLOR, Milan, Mich.

WEST View Duroc Farm offers spring boars from Home Farm Tippy Orion and Pathfinder Prince, with big bone and type. Ready for service, sows, fall gilts and spring gilts with quality. Write or come and see them. ALBERT EBERSOLE, Plymouth, Mich.

DUROC-JERSEYS A few good Brood sows. E. D. HEYDENBERG, Wayland, Mich.

BIG TYPE CHESTER WHITES

The prize winner kind from the best prize winner bloodlines. Early developers, ready for market at six months old. I have started more breeders on the road to success than any man living. I want to place one hog in each community to advertise my herd. Write for agency and my plan. G. S. BENJAMIN, R. F. D. 10, Portland, Mich.

Chester Whites quality March boars and fall pigs at a very low price, satisfaction guaranteed. F. W. Alexander, Vassar, Mich.

O. I. C's. Aug. and Sept. pigs and bred gilts for Mar. farrow. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C. BOARS

shipped C. O. D. J. CARL JEWETT, Mason, Mich.

O. I. C's.

April and May boars at reasonable prices. Weber Bros., 10 Mi. and Ridge Rds., Royal Oak, Mich.

O. I. C. Spring boars and gilts no akin. We breed and own the Grand Champion Boar at West Mich. State Fair. We ship C. O. D. and Reg. free. GEO. M. WELTON & SON, Alto, Mich.

O. I. C's, Boars and Gilts from April and May farrow. Size and quality guaranteed. Ship C. O. D. Elm Front Stock Farm, WILL THORMAN, Dryden, Mich.

O. I. C. & Chester White Swine STRICTLY BIG TYPE WITH QUALITY. Have a few good service boars left that I will sell CHEAP. Also a fine lot of Gilts, bred for Spring farrow. They are of our Prize winning blood lines and priced to sell. Newman's Stock Farm, R. 4, Marlette, Mich.

O. I. C's. 4 last spring boars and 15 gilts, wt. 250 to 300. Also last fall pigs, good thrifty stock. Registered free. ¼ mile west of Depot. Citiz. Phone. OTTO B. SCHULZE, Nashville, Mich.

O. I. C's. choice gilts bred for March and April farrow. A. J. BARKE & SON, Belmont, Mich.

O. I. C. gilts bred for spring farrow to a son of Prince Big Bone. Reg. and guaranteed satisfactory. J. A. WILK & SON, Alma, Mich.

For Sale. O. I. C. Gilts bred for March and April farrow (at a reasonable price). H. W. MANN, Dansville, Mich.

O. I. C's Apr. and Aug. boars all sold, one spring and one July gilt left, two Sept. male pigs, Milo H. Peterson, R. 2, Ionia, Mich. "Elmhurst Farm".

LARGE TYPE POLAND CHINAS

Spring pigs of either sex. Sired by F's Clansman Grand Champion Boar 1920 and by Smooth Buster 1st. Jr. yearling 1920. Priced to sell. Write or see them. A. A. Feldkamp, R. 2, Manchester, Mich.

LEONARD'S Big Type P. C. Herd headed by Leonard's Liberator 458,255, the tallest, longest and leavest boned pig for his age in Mich. Call or write, stock in season. Fall pigs at Bargain Prices. E. R. LEONARD, St. Louis, Mich.

Big Type Poland China

fall pigs either sex, sired by Clansman Buster and by Hover's Giant. Also gilts bred for spring farrow to Hover's Liberator. Priced to sell, satisfaction guaranteed. DORUS HOVER, Akron, Mich.

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

[Additional Stock Ads on Page 31]

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, January 3.
Wheat.

Detroit.—Cash No. 2 red \$1.17; No. 2 mixed and No. 2 white \$1.14; May \$1.22.
Chicago.—Cash No. 2 red \$1.12½; No. 4 hard \$1.01; May \$1.07½.
Toledo.—Cash \$1.13; May \$1.18.

Corn.

Detroit.—Old Cash No. 2 yellow at 56c; No. 3 yellow 55c; new yellow Cash No. 3, 51½@52½c; No. 4, 49c.
Chicago.—No. 2 mixed 46½@47c; No. 2 yellow 46¼@47¼c.

Oats.

Detroit.—Cash No. 2 white 40c; No. 3 white 37@38c; No. 4, 32@35½c.
Chicago.—No. 2 white 35@36½c; No. 3 white 32½@34c.

Beans.

Detroit.—Immediate and prompt shipment \$4.30 per cwt.

Chicago.—Choice to fancy hand-picked Michigan beans at \$4.75@5.25; red kidney beans \$6.75@7.25.

New York.—The market is steady. Choice pea at \$5.15@5.25; do medium \$5@5.25; red kidney \$6.75.

Rye.

Detroit.—Cash No. 2, 87c.
Chicago.—Nominal.

Seeds.

Detroit.—Prime red clover, cash at \$13.75; alsike \$11.35; timothy \$3.15.

Toledo.—Prime red clover, cash at \$13.75; alsike \$11.40; timothy \$3.12½.

Hay.

Detroit.—No. 1 timothy at \$19@20; standard and light mixed at \$18@19; No. 2 timothy \$17@18; No. 1 clover mixed \$16@17; rye straw \$13.50@14; wheat and oat straw \$13@13.50 per ton in carlots.

Feeds.

Detroit.—Bran \$30; standard middlings at \$30; fine middlings at \$30; cracked corn \$27.50; coarse cornmeal \$25; chop \$22.50 per ton in 100-lb. sacks.

WHEAT

Based on the revised estimate, it has been calculated that the United States had at the beginning of the new year only 100,000,000 bushels of wheat available for export and for carryover into the new crop year. The ten-year average carryover has been about 82,000,000 bushels. The official estimate upon the condition of the new winter wheat as of December 1 was 76 per cent which is the lowest on record.

CORN

The department of agriculture reduced the estimated yield for 1921 about 70,000,000 bushels and decreased by that much the apparent surplus of corn. The estimate for 1920 was left practically unchanged. About 3,100,000 bushels of corn have been bought and about 18,000,000 bushels more will be purchased for Russian relief.

OATS

The oat crop estimate also was revised downward. The final report was 1,061,000,000 bushels. The visible supply of oats has begun to decrease but it is still quite large and the reduction in freight rates may increase the movement from farms, otherwise the market appears to be in a strong position.

SEEDS

The final estimate on the 1921 clover seed crop was 1,411,000 bushels. This is larger than the preliminary estimate but the 1920 crop figures were also revised upward and the 1920 yield remains only about 72 per cent of the crop during the preceding year.

BEANS

The consumptive demand for beans during the holiday season is rather light. The market is very quiet and will remain so for a few days. There is not much change in prices.

HAY

Receipts of hay at the distributing markets as well as country loadings are light. Only small quantities are

going south and east. Wisconsin is the most prominent buyer owing to the drouth in that state last summer. The final estimate upon the crop was 96,802,000 tons compared with 105,315,000 tons last year and 104,760,000 tons in 1919.

WOOL

The holiday season, usually a dull period in the wool trade, was marked by further advances in the staple this year. Prices advanced slightly on top of the gains recorded during the recent weeks.

Michigan and New York fleeces, delaine unwashed 38@39c; fine unwashed 29@30c; half-blood unwashed 34@35c; three-eighth-blood unwashed 32@33c; quarter-blood unwashed 31@32c.

POULTRY AND EGGS

Egg prices broke sharply last week on both fresh and storage goods. The dealers report that fresh eggs were never more abundant at this season of the year. In spite of this increase in supply, cold storage holding decreased about seven per cent more than in December last year. The poultry market seems to be working into a stronger position.

Detroit.—Eggs, fresh candled and graded 40c. Poultry, springs 24c; large fat hens 21@22c; medium hens 20c; old roosters 14c; geese 22c; ducks 28c; turkeys 35c.

BUTTER

With an abundance of foreign butter and rather heavy supplies of domestic butter at the principal distributing markets, buyers have not been anticipating their needs ahead and prices declined further during the past week especially at Chicago which was above its usual parity with the east. Top scores were relatively scarce and the supply was cleaned up without much sharp concessions as were necessary on medium and undergrades.

Prices for 92-score fresh butter on December 31 were as follows: Chicago 39c; New York 39½c. In Detroit fresh creamery in tubs is quoted at 37@38c per pound.

POTATOES

Prices for white potatoes have shown a stronger tone as a result of light shipments from producing sections, a common occurrence during the holiday season. Northern sacked round whites are quoted at \$1.65@1.85 f. o. b. shipping points and \$2@2.35 per 100 lbs. in principal consuming markets.

APPLES

The final apple crop estimate was 96,881,000 bushels compared with 224,000,000 bushels last year. The commercial crop was placed at 20,098,000 barrels compared with 33,905,000 barrels last year.

GRAND RAPIDS

The federal crop report issued last week showing the 1921 potato production of 56,000,000 bushels short of the 1920 crop had bullish tendencies on the market and prices in the potato belt of western and northern Michigan advance 10 to 25 cents a hundred-weight. Quotations on other farm products were mainly unchanged.

Vegetables.—Potatoes \$1 bu; dry onions \$3@5 per cwt; carrots, parsnips, rutabagas \$1@1.25 bu; celery, well bleached \$1.75 box; cabbage \$1.50@1.75 bu; hothouse leaf lettuce 16c lb.

Greenville.—Potatoes, market higher; No. 1 white \$1.25@1.50 cwt; beans white \$3.75 cwt; red kidney \$5@5.50 per cwt.

COMING LIVE STOCK SALES.

Shorthorns.—Jan. 13, Michigan Shorthorn Breeders' Association, East Lansing.

Draft Horses.—January 13, 10:00 a. m. under the auspices of the Michigan Horse Breeders' Association, East Lansing.

Live Stock Market Service

Wednesday, January 4.

DETROIT

Cattle.

Receipts 392. Market steady and more active with a good clearance.

Best heavy steers.....\$ 6.50@ 7.00
Best handy wt bu steers..... 6.50@ 7.25
Mixed steers and heifers..... 5.50@ 6.00
Handy light butchers..... 5.00@ 5.25
Light butchers..... 4.00@ 4.75
Best cows..... 4.25@ 5.25
Butcher cows..... 3.50@ 4.00
Common cows..... 2.50@ 3.00
Canners..... 2.25@ 2.75
Best light weight bulls..... 4.50@ 5.00
Bologna bulls..... 3.75@ 4.50
Stock bulls..... 3.50@ 3.75
Feeders..... 5.50@ 6.00
Stockers..... 4.25@ 5.25
Milkers and springers.....\$ 35@ 70

Veal Calves.

Receipts 911. Market slow and generally 50c lower.

Best.....\$12.00@12.50
Others..... 4.00@10.50

Hogs.

Receipts 2,156. Market steady.

Mixed hogs.....\$7.75
Roughs..... 5.75
Pigs..... 8.25
Heavies..... 7.00

Sheep and Lambs.

Receipts 2,755. Market strong.

Best lambs.....\$11.50@11.90
Fair lambs..... 9.50@10.50
Light to common..... 7.00@ 8.50
Fair to good sheep..... 4.50@ 4.75
Culls and common..... 1.50@ 2.00

CHICAGO

Hogs.

Estimated receipts today are 20,000; holdover 6,752. Market steady to 25c lower; lights off more. Bulk of sales \$6.80; tops, early, \$8.

Cattle.

Estimated receipts today are 8,000. Market steady in spots; weak to lower on beef steers. Beef steers medium and heavy weight 1100 lbs up choice and prime \$8@10; do medium and good \$6.60@9; do common \$5.85@6.60;

light weight 1100 lbs down good and choice \$8.25@10; do common and medium \$5.60@8.25; butcher cattle heifers, common, medium, good and choice \$3.60@8; cows common, medium, good and choice \$3.95@6.25; bulls bologna and beef \$3.75@6; canners and cutters cows and heifers \$2.25@3.25; do canner steers \$3@4; veal calves light and handy weight medium, good and choice \$6.50@9; feeder steers common, medium, good and choice \$5@6.50; stocker steers common, medium, good and choice \$4.35@6.40; stocker cows and heifers common, medium, good and choice \$3@4.75.

Sheep and Lambs.

Estimated receipts today are 10,000. Market strong to 25c higher. Lambs 84 lbs down medium, good, choice and prime \$10.70@11.85; do culls and common \$8.25@10.50.

BUFFALO

Cattle.

Receipts 100 cars; butchers 25@50c lower; choice to prime shipping steers at \$8@8.50; good to choice shipping steers \$7@7.50; light native yearlings good quality \$9@10; best handy steers \$6.50@7; fair to good \$6@6.50; handy steers and heifers \$6@6.50; western heifers at \$5.50@6.50; light Michigan butchering heifers \$5.50@6; best fat cows \$4@4.50; cutters \$3@3.50; canners \$2@2.25; best heavy bulls \$4.50@5; heavy bologna bulls at \$4.50@4.75; common bulls \$3@3.50; best feeders 700 to 800 lbs \$5.50@6; medium feeders \$4.50@5; stockers good \$5@5.25; light common \$3@3.50; best milkers and springers \$6@7.50; mediums \$25@35. Calves, receipts 2,000; market is steady; tops \$14; heavy \$9@11; grassers \$3.50@5.

Hogs.

Receipts 100 cars; market higher; medium and heavy \$7.75@8; yorkers \$8.25@8.50; pigs \$8.75@9.

Sheep and Lambs.

Receipts 50 cars; market is slow; top lambs \$12; yearlings \$8@10; wethers \$6.50@7; ewes \$5.25@5.75.

They Wear-Wear-and WEAR!

IF you have ever worn a pair of Goodyear white-rubber BESTO Boots or Bootees, you already know how hard a job it is to wear them out. They cost a few cents more than you would pay for just common quality, of course—but isn't it worth a few cents more when you get in return three times the wear an ordinary pair of rubber shoes can give you?

Won't Leak, Crack or Peel

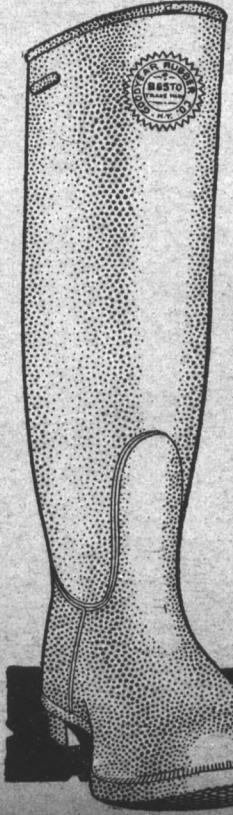
Made by an advanced and exclusive vacuum process, the upper, heel and extension sole are firmly vulcanized into one solid, long-wearing piece. Combined with the highest grade pure Para rubber, this manufacturing process makes a boot or bootee which won't leak, crack or peel. Doubly re-inforced at points of greatest strain, yet wonderfully comfortable and flexible on the foot.

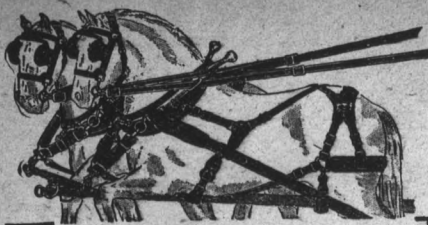
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GOODYEAR RUBBER CO., of New York.
Milwaukee, Wis., Branch: 380-382 East Water St.

Look for the BESTO
Trade-Mark When
You Buy.





\$7.50 Puts this Olde-Tan Metal-to-Metal Harness on Your Horses

We trust you wherever you live. Small payment down. Pay the rest monthly. Write for free harness book. Learn all about this improved metal-to-metal harness construction. Metal wherever there is wear or strain. No old-fashioned buckles.

Olde-Tan Harness

First Olde-Tan leather produced 70 years ago. Now known throughout America for its pronounced superiority. Olde-Tan harness is made by a tanner-manufacturer who follows every step from the raw-hide to the completed harness.

Write for Free Book

Ask for free harness book. Learn all about our \$7.50 offer and the Olde-Tan metal-to-metal harness.

Henry Blake Harness Co., Dept. 3101
19th Street and Marshall Blvd., Chicago, Ill.



Study This HOOSIER Block

Those four patented corner-braces (exclusive HOOSIER features) make it the strongest, most efficient block on the market. Exceeds all others in load-bearing capacity. HOOSIER Block is standard 5-wall clincher-joint, fire-clay blocks. Absolutely first-class material. Prices reduced to rock-bottom with special discount to early buyers. Buy NOW for prompt delivery from stock. Put your farm on a PERMANENT basis with HOOSIER Block dwellings, poultry houses, hog barns, etc. Write for literature, prices and free plans of buildings you need.

Hoosier Silo Company, Dept. M99, Albany, Ind.



\$24.95 ON TRIAL American CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$24.95. Closely skims warm or cold milk. Makes heavy or light cream. Different from picture, which illustrates larger capacity machine. See our easy plan of

Monthly Payments Bowl a sanitary marvel, easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan.

Western orders filled from Western points.

AMERICAN SEPARATOR CO.
Box 3061 Bainbridge, N. Y.

Peach, Cherry and Apple Trees

at Wholesale both 1 yr. and 2 yr. by mail and Express. Special prices to orchardists. Send for 1922 Guaranteed Seed and Tree Catalog. Send today. Allen Nursery & Seed House, Geneva, Ohio.

Wanted, bright young aggressive men, with spare time to sell high grade line of implements. Liberal terms. Address 1131, Indianapolis, Ind.

HAY SHIPPERS, for highest prices bill all cars to The E.L. RICHMOND CO., Detroit.

HOGS

The Thumb Herd Big Type Poland Chinas. For 30 days I am offering bargains in Poland Chinas. My herd boar which won five firsts grand champion at Bay City, 2nd at State Fair in 1920. Spring boars, gilts and pigs, all ages by him. Peace and Plenty and Tuscola Lad. Out of Miss Smooth Jumbo, Model Magnet, Orange Maid and others. Largest herd of prizewinners in the thumb, sold on approval. Write your wants.

E. M. ORDWAY, Millington, Mich.

Fire Sale sell any fire sale on earth. We are making a special price on Big Type Poland China Boars Sired in the purple. We can furnish just what you want. Over 100 head on hand. Bell Phone. JNO. C. BUTLER, Portland, Mich.

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

We have a fine lot of fall pigs sired by Harts Black Prince and Right Kind Clan. HART, FULCHER and CLINE, address P. T. Hart, St. Louis, Mich.

L. S. P. C.

1 yearling herd boar as good as you ever saw. Spring boars by Nov. 1st. You can't beat the price nor the breeding. H. O. SWARTZ, Schoolcraft, Mich.

DECEMBER CROP REPORT.

AN increase of nearly one million acres of rye sown in the United States, and a condition of wheat in Michigan seventeen per cent better than the average for the United States are the predominating features of the December crop report issued today by Verne H. Church, agricultural statistician, United States Bureau of Markets and Crop Estimates, and Herman H. Halladay, State Commissioner of Agriculture. The report was delayed in order that the revision of crop acreages for 1919, 1920 and 1921 in accordance with the information furnished in the 1919 census could be completed by the United States Crop Reporting Board. The average farm price of leading crops and the average wages paid, in comparison with one year ago, are included in the report.

Winter Wheat.—The acreage is five per cent greater than that sown last year, and amounts to 923,000. The weather has been generally favorable throughout the fall and early winter, while much of the crop was sown later than usual, it has made a normal growth. The condition is rated at 93 per cent, three per cent above the ten-year average and four per cent better than on the same date one year ago. Hessian fly is reported from a number of counties but is not as widely distributed as last year. The United States acreage is 44,293,000, which is slightly under the revised estimate for last year. The condition for the country as a whole is only 76 per cent, due to the extremely poor outlook in portions of Kansas, Oklahoma, Texas and other western states.

Rye.—The acreage sown this year is estimated to be 653,000, or the same as that of last year. While some counties report an increased acreage others show a corresponding decrease. The outlook is generally good throughout the state, and the average of reports received from correspondents is 94 per cent, one per cent better than last year and two points above the ten-year average for December 1.

There is a marked increase in the acreage for the country as a whole, the gain being estimated at 22.6 per cent. This unusual change is due to heavy plantings in the northwestern, or spring wheat states. The condition for the United States is 92.2 per cent.

Fall Plowing.—The percentage of fall plowing done is 34 as compared with 27 last year, weather conditions being favorable for that work up to and even after December 1, except for brief intervals.

Wages of Male Farm Labor.—Wages paid to men hired by the month, including board, averaged \$34 as compared with \$53 in 1920. Without board, they were \$51 and \$75, respectively. Harvest labor, by the day, with board, dropped from \$4.10 in 1920 to \$2.60 in 1921; and from \$4.95 to \$3.30 where board was not included. Common day labor dropped from \$3.30 with board to \$2; and from \$4.15 without board to \$2.60.

Necessarily, the proportion of farmers will decrease. Not so many are needed relatively, for a man's power to produce has been multiplied.

Put down what you think you are! Subtract what you really are! The remainder is the cause of most of your unhappiness.—T. B. B.

A gentleman may be a scholar but he doesn't show it.

Tiles laid above the water-table might better be back at the factory. They'll never discharge water unless placed down where the water stops and hunts a way out.

Unless he keeps accounts how can any farmer "know his business?"

LARGE TYPE P. C.

Home of the largest herd of individuals in Michigan. Come and see. Compare and be convinced. Expenses paid if not as represented; priced in keeping with the times. Young boars ready to ship, that grow into winners, also sows. W. E. Livingston, Parma, Mich.

Big type Poland China boars and gilts of April farrow. Also one yearling boar that is hard to beat. Prices right. CLYDE FISHER, R. 3, St. Louis, Mich.

BIG TYPE Poland Chinas, leading strains at lowest prices. Both sex, all ages, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

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

Big type P.C. Spring boars and choice fall pigs, either sex. Sired by Big Bob Mastodon. Priced low guaranteed. C. E. Garnant, Eaton Rapids, Mich.

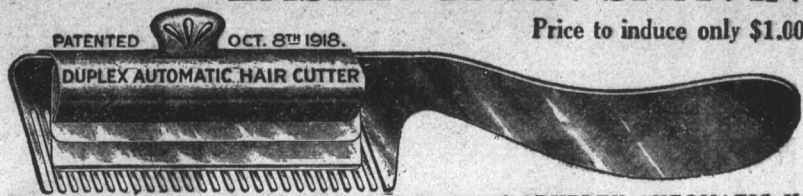
Poland China gilts sired by a 900 lb two years old and bred to a son of Mich. 1921 Grand Champion. ROBERT MARTIN, R. 3, Woodland, Mich.

Hampshires place your order for bred gilts, and fall pigs at a bargain. 9th year. JOHN W. SNYDER, R. 4, St. Johns, Mich.

YORKSHIRE BOARS

ready for service. WATERMAN & WATERMAN, Packard Rd., Ann Arbor, Mich.

CUT YOUR OWN HAIR EASIER THAN SHAVING



Patented OCT. 8th 1918. DUPLEX AUTOMATIC HAIR CUTTER

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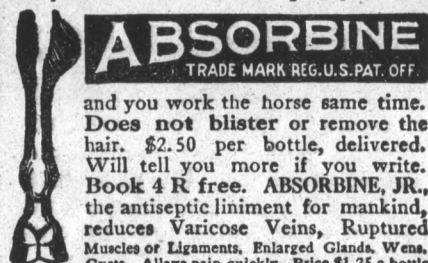
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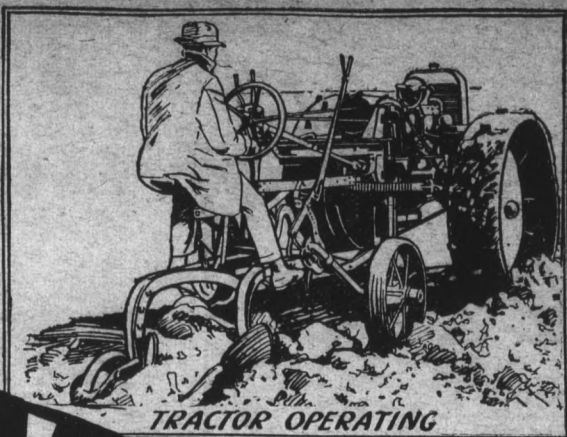
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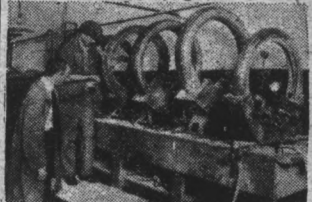
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