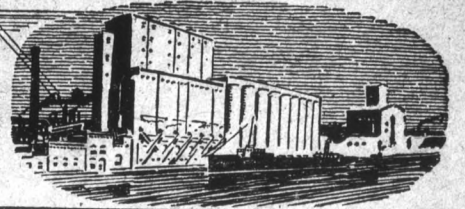


The Michigan **BUSINESS FARMER**



An Independent
Farmer's Weekly Owned and
Edited in Michigan



Vol. VIII, No. 38

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\$1 PER YEAR.



"Who Said My Offsprings Were Worth Only 9 Cents a Pound?"

Watch Your Step! Grain and Bean Prices Are Advancing Every Day.



Current Agricultural News



CREAM IMPROVEMENT CAMPAIGN

MICHIGAN'S 240 creameries and their 1,048 cream buying stations through their state association have launched and are getting under good momentum a Cream Improvement Campaign that bids fair to be of considerable direct financial gain to her 150,000 cream selling farmers and also have a wholesome tendency to encourage farther consumption of this most important product of the Michigan agriculturist, according to R. F. Frary, Lapeer, secretary of the creamery owners and managers.

The plan carries with it the adoption of two grades of cream, the cream to be graded at the station and separated according to the buyers' judgment. These grades for the present will both come under the same price, but the object of grading is to school the buyer in a correct knowledge and also show the farmer the difference between his cream and his neighbors, when such difference exists.

Simultaneously, a series of letters are going out to station operators and another series to the farmers. It is through this medium of contact that the Association is able to clinch the importance of its campaign. These letters entitled "Money Talks" are going out regularly twice a month to about 50,000 cream selling farmers; and the few short,

spicy, well directed, straight from the shoulder utterances contained in each letter cannot fail to get and hold the attention from time to time of their readers.

With this definite program well under way, the Association is soliciting as near 100 per cent participation on the part of the creameries in the distribution of the literature and the actual practice of grading cream, as can possibly be had.

Mr. Frary says that ultimately, as it becomes possible under competitive conditions and when a fairly uniform dependable knowledge on the part of the large number of cream buyers of the real quality and merits and various kinds and flavors of cream, it will be the purpose of the Association to pay a price to the farmer commensurate with the grade of his cream.

There are now large areas in the state where 60 to 80 per cent of the farmers' entire income is through the dairy cow. Conservative estimates show over 40 per cent of Michigan's crops and total farm sales are cashed in through sale of dairy products, and about one-half of this total is for cream that goes into butter.

The cocoanut cow of the South Sea Islands and the cotton-seed cow of the southern states are keen competitors through their contribution in butter substitutes to the good old-fashioned cow of the Michigan farm. Michigan creamery men believe

the Michigan public is debtor to the cow milkers of the state to the extent of the consumption of home product in reference to a questionable substitute, and are setting about to assist in the encouragement of the Michigan agriculturist by attempting to create a more eager demand for his product.

JACKSON COW-TESTING ASS'N

TWENTY-FIVE progressive farmers living in the vicinity of Jackson have organized a cow-testing association with the assistance of County Agent C. V. Ballard, and J. A. Waldron, dairy extension specialist of the M. A. C. Mr. L. L. Wheeler of Parma, a member of the M. B. F. family is president of the association and Mr. Arthur Pertine, of Hives Junction, also an M. B. F. member is secretary-treasurer. Others making up the board of directors are Harry Boardman, Jackson; Verne Clough, Springport; Walter Ray, Albion. The testing will be carried on under the direction of Mr. E. J. Granbau, who says that he's going to do his level best to help the members of the association detect the "boarders" in their herds and get rid of them.

TRYING TO TAKE PLUS OUT OF STEEL FREIGHT

FARMERS and other users of steel implements in the west have found gratification in the announcement that the Federal Trade Commission has filed a complaint against the U. S. Steel Corporation, protesting against the addition of freight rates from Pittsburg on the price of rolled steel even if it is manufactured in some western city. The agitation which brought about this claim is due in part to the American Farm Bureau Federation. According to President Gary of the steel corporation the cost of making rolled steel at Gary, Indiana, is 25 per cent below the cost at Pittsburg. Yet Gary steel is sold throughout the west on the basis of the Pittsburg cost plus the freight from Pittsburg. This higher price is handed down to farmers and other users of steel implements and constitutes another one of those inequalities in the economic world whereby certain groups of men make millions while the farmer helps contribute those millions or gets along the best he can on old machinery.

Clifford Thorne, legal counsel for the American Farm Bureau Federation says, "The Federal Trade Commission deserves great praise. If finally successful, this will mean much toward establishing competition in the manufacture of steel products, and it will foster the industrial development of the west."

The relation of this "Pittsburg plus case" to the farmer is described by President Howard of the American Farm Bureau Federation as follows: "Setting aside the Pittsburg plus plan should result in a substantial discount to the farmer on the prices which he has to pay for wire, nails, machinery and other steel commodities. It is a source of great satisfaction to me to know that the action of the American Farm Bureau Federation has had something to do with opening the investigation."

SYRUP PRODUCTION LOW IN 1921

PRODUCTION of maple syrup in the United States in 1921 was the smallest for many years. Only 26,315,000 trees were tapped, compared to 18,982,000 in 1920 and 18,975,000 in 1919. Syrup produced in 1920 totaled 2,583,500 gallons, compared to 3,657,000 in 1920 and 3,854,000 in 1919. Sugar totaled 5,093,000 pounds, compared to 7,555,000 in 1920 and 10,169,000 in 1919. Average price of syrup on April 15 was \$2.21, compared to \$2.92 in 1920 and \$2.03 in 1919; of sugar 25.7c per pound, compared to 37.0c in 1920 and 26.9 cents in 1919.

EAST TAWAS BUILDS COMMUNITY HOUSE

WHEN THE state legislature two years ago created a state park commission, with the idea of establishing a string of parks to be used as public playgrounds along the lakes of Michigan, East Tawas was the first city in eastern Michigan and the second in the state to give a park site to the new commission. The site consists of 12 acres, with over half a mile of sandy beach on Tawas bay, located at the very door of the city's business section.

Work was started on improvement of the park early last season, grading completed and a commodious bath house erected. Then East Tawas people decided that they wanted a community building on the park and they found a way to build it. The old state park commission, now succeeded by the conservation board had planned to build a rest room and comfort station on the park at a cost of about \$6,000 but East Tawas people proposed to provide the money necessary to enlarge upon that plan and make the rest room a community building.

The building is 54 by 93 feet, with concrete foundation, stucco walls and brick trimmings, is planned to provide for all of the purposes of a real community building. There will be an auditorium, seating several hundred people, with a stage, dressing rooms, etc. At one end will be commodious rooms suitable for club meetings and a wide covered porch will face the lake, adjacent to which will be a large kitchen so arranged that meals can be served equally well on the porch or in the auditorium. The basement will provide room for modern bowling alleys.

The building is to cost \$18,000 and East Tawas people are raising their share by popular subscription, much of which has already been secured, money coming not only from the people of East Tawas but in goodly sums from nearly every state in the union, subscribed by former residents of the city. Many East Tawas people and farmers in the vicinity who did not want to subscribe money made their contributions in days' work and when the excavation for the basement and foundation was started scores of people, many with teams and scrapers, turned out and made a "bee" for several days, until the work was completed.

CO-OP. EDUCATORS AND FARM BUREAUS ENDORSE FINANCE PLAN OF U. S. G. G.'S

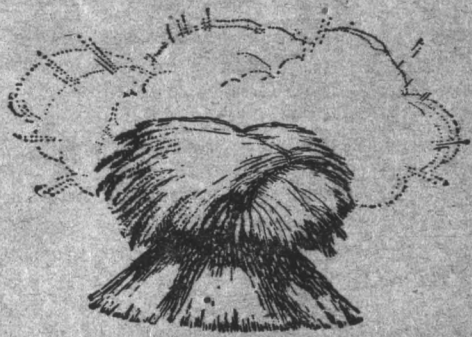
THAT WE endorse the finance plan of the U. S. Grain Growers, Inc., and will report to our several state organizations of farmers that it is sound and businesslike, was the substance of a motion adopted by representatives of six state associations of co-operative elevator and eight state farm bureau federations when they met in Chicago on Monday, May 2, to consider financing the initial organization expenditures of the U. S. Grain Growers, Incorporated.

Eighteen presidents and secretaries represented co-operative elevators of South Dakota, Nebraska, Indiana, Illinois, Iowa and Kansas and state farm bureau federations of Michigan, Indiana, Minnesota, Missouri, Wisconsin, Kansas, South Dakota and Ohio. The financing plans of the new co-operative company were explained by Wm. G. Eckhardt, treasurer of the U. S. Grain Growers, Inc. Further explanation of the aims and purposes of the movement were made by President C. H. Gustafson and Secretary Frank M. Myers. Inquiry into details of the organization plans contemplated, for which funds will be needed before the new company is on a paying basis, were answered to the satisfaction of the farmer representatives who were present.

A suggestion was made by these farm organization officials, that the organization department of the (Continued on page 17)

Insure the gathering of the entire crop by using good twine—the old reliable

McCormick—Deering—International



This is Not a Year for Twine Experiments

THE difference between the price of poor twine and good twine varies from 3 to 6 cents per acre. The difference between the cost of poor twine and good twine cannot be measured by any such small change as pennies and nickels. Out in the harvest fields when time is money, this difference must be figured in dollars. And you pay this difference, with heavy interest, if you use poor twine.

When the Bundle Breaks

Suppose you are harvesting the crop on a fifty-acre field and you have a break of one bundle per acre. What is it worth to stop the binder 50 times to make 50 adjustments? And will you get by with an average of but one broken bundle to the acre? Whenever your past experience has included twine troubles, what did the cheap twine really cost you?

International Harvester twines have quality woven into them. Uniform length means uniformity in thickness; there are no extremely light and heavy places to cross in the knotter when the thin strand passes through the heavy strand without knotting. These twines are correctly twisted so that they will not kink and snarl when running from the ball.

INTERNATIONAL HARVESTER COMPANY

CHICAGO

OF AMERICA

U.S.A.

92 Branch Houses and 15,000 Dealers in the United States

Farmers Back Farm Bureau Wool Pool to Limit

Indications are That 1921 Pool Will Exceed the Three and a Half Million Mark of Last Year

THE NEW order of things—the new determination of the farmer to handle his own business—is well illustrated by the results of the first eleven days of this year's wool pool. The farm bureau reports that 130,524 pounds of wool were pooled.

With four times as much wool already in the pool as there was this time last year and every bit of it graded, except 2,000 pounds at Delton where the grader could not get to it all in the one day, the prospects for the co-operative sale of as much or more wool than was pooled last year seems to be probable.

Accompanying this announcement comes the report that the last of the 1920 wool was graded last week. The grand total was 3,558,552 pounds. Experience has proven to be a great teacher in the last year. Take for instance this matter of grading. The method of last year's pool was the best known at the time and, even against great odds, is believed to have been a big success, the final results not being available until all the wool is sold. The wool department reports that three-quarters of a million pounds still remain in the 1920 pool saying also that the wool has been moving freely during the past few weeks and it may not be long before all of the last pool is disposed of. But, it took a whole year to get the 1920 pool graded. The wool was first brought to local assembler, then shipped to Lansing or Grand Rapids where it was stored in warehouses. A single grader worked all last summer without making much of an impression upon the vast pile of wool on hand, but a second grader was added in the fall. Winter days, however, made the time for grading too short and the time it took to take the wool out of bags lengthened the process. This year the wool is being graded immediately after the grower loads it out of his automobile or wagon at the local warehouse. Two graders were on the job from the very first, and a third grader with a crew of men were added last Monday. The wool department profiting by last year's experience does not intend to let the grading get behind this year.

Another important difference between this year's pool and last, and an important advantage also, is that of the cash advance of one half of the market price of the wool. In the first ten days the wool department reports that it had advanced \$12,129.70. The department makes an arrangement with a local bank at the town where the grading is being done, a bank at which the farmers are accustomed to doing business, to accept the grading

Does It Pay?

A FARMER DELIVERED 194 pounds of wool to the farm bureau wool department last Friday. His local buyer offered him 18 cents a pound, making a total of \$34.92 for the entire amount but believing the wool department of the farm bureau could do better by him he brought it to Lansing. When he left that office he carried a check for \$32.55 as his advance payment. As the wool department advances 50 per cent the total value of his clip was \$65.10. Does this farmer believe in the saying that Friday, the 13th, is an unlucky day? We would say he does not.

certificates and issue cash on the day the grading is being done and for one day after. Practically every wool-grower is reported to be making use of this arrangement.

At Hastings the other day wool-growers brought in 11,000 pounds of wool. They came up alongside the platform of the warehouse and waited their turns. The grader stood at the door where he got the natural sunlight. The grower himself usually passed his fleeces in to the grader and watched which way the

The Direct Route to Greater Grain Profits

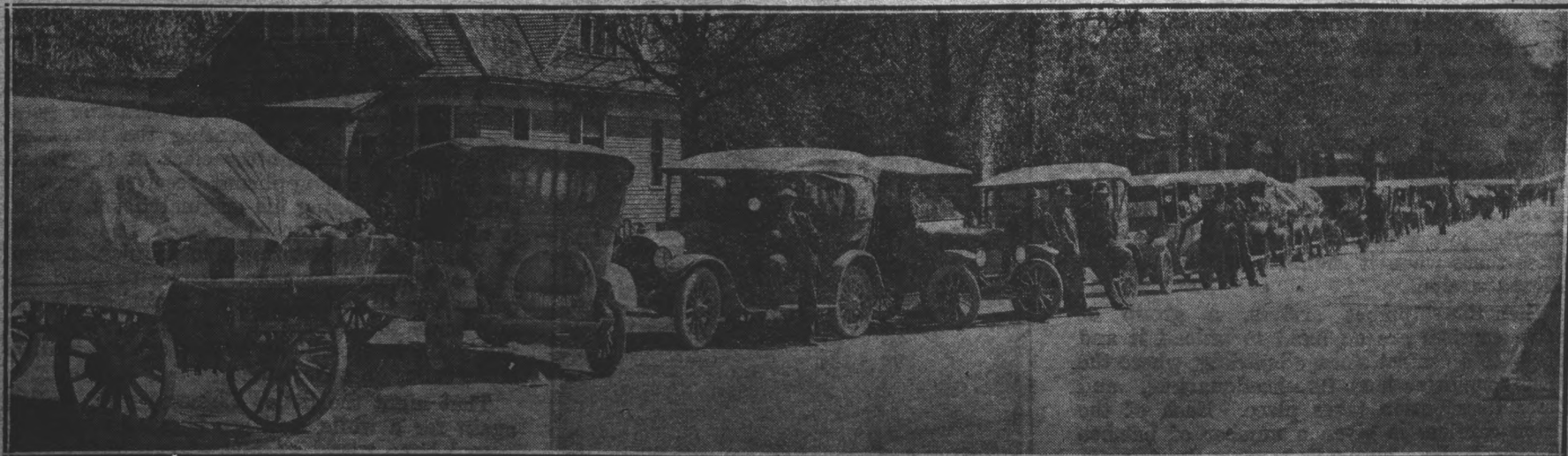
FOR YEARS farmers have been looking for a shorter route to market and greater profits. At last a plan has been discovered which seeks to put the control of marketing into the farmers' hands. Through the organization of the U. S. Grain Growers' Inc., working with the co-operative elevators, a gigantic sales organization covering every grain state of the Union and represented in the marts of the world is placed at the service of the farmers. It remains with the farmers whether they shall remain in chains to the present system of marketing and the speculators who control it or whether they shall be free, and market their grain through an organization which they themselves own and manage. The benefits of this plan have already been partially discussed in these columns. Fuller details are contained in a booklet put out by the U. S. Grain Growers' Inc., which may be had for the asking. Clip the coupon on the back page of this issue or write the U. S. Grain Growers' Inc., Dept. of Information (Desk D), Chicago, Ill., for a copy of this book. It will pay you to do so.

wool was thrown. If there was anything wrong with the way the fleece has been put up, something that would injure the market value of the wool, the grader said so directly to the grower. If an excess of chaff made the fleece a "reject" the grower saw it thrown in the reject pile. A helper stood beside the grader and placed each fleece on the floor in a little pile where it would be recognized later. As soon as the entire clip was graded the helper threw each grade on the scales to be weighed and the grower watched the weighmaster balance the scales. After it was weighed the wool was placed in large piles in the warehouse where it lost its identity so far as its owner was concerned and became a part of the pool. At the same time the grower was given the weight of each grade of his commodity. The amount which he could secure at the bank was checked opposite each grade and the total amount placed below. Growers also watched the grading of the wool of other farmers and asked frequent questions of the grader and the assistants. The farm bureau is working on the theory that a grower cannot have much incentive to produce high quality wool if he does not have an independent judgement of the difference between the grades of wool just the same as a man could not be expected to grow good hogs and cattle if he did not get to see competent judges appraise his stock at county fairs and exhibitions once in a while.

The wool department reports that its belief that the labor expenses would be cheaper by the localized warehouse plan seems to be well substantiated from its first eleven days experience. Country labor is cheaper than city labor. Actual labor cost has been cut in half. The freight charges, amounting to from three-quarters to a cent a pound from most wool-growing counties to Lansing has been eliminated entirely.

The total amounts of wool graded up to date, except those brought in the first three days which were announced last week, are as follows: Charlotte, 29,111 pounds; Bellevue, 13,690; Hastings, 10,771; Nashville, 5,279; Delton, 16,494, with 2,000 pounds more left ungraded; Middleville, 8,063; and Tecumseh, 9,585 pounds.

The grading dates for next week are as follows: Monday, Centerville, Holly and St. Johns; Tuesday, Centerville, Holly and Mt. Pleasant; Wednesday, Centerville, Oxford and Mt. Pleasant; Thursday, Colon, Oxford and Mt. Pleasant; Friday, Colon and South Lyons; Saturday, Colon and Howell.



A few of the automobiles loaded with wool lined up before the receiving station at Charlotte. "Our farmers are standing loyally by the wool pool," says County Agent Decker. Similar scenes as the above are witnessed in all other counties where wool is being graded and pooled.

Select Seed With Care for 1921 Potato Crop

To Give Crop a Good Start Use Only High-Grade Seed Carefully Treated

By H. C. MOORE
Extension Specialist, M. A. C.

TO GET the best results with potatoes it is essential that the crop be handled properly from the start. No amount of labor expended on the crop late in the season will correct mistakes that are commonly made at planting time. One mistake often made is to plant potatoes on soils that are unsuitable for them. The best potato soils are fertile, well drained and amply provided with organic matter. Potatoes grown on poorly drained clay soils are rough and poor in quality.

The lighter soils ordinarily produce the best quality potatoes, however, the yields on such soils are often low due to their lack of insufficient plant food and moisture. Organic matter added to the soil in the form of stable manure, alfalfa and sweet clover sod, etc., will add plant food and will increase the moisture holding capacity of the soil. Many potato growers make the mistake of planting too many acres of potatoes and too few acres of alfalfa and sweet clover. Potatoes quickly exhaust a soil of its fertility while such crops as alfalfa, sweet clover, etc. add fertility to the soil. It has been estimated that a good alfalfa sod turned under adds to the soil practically the same amount of plant food as does ten tons of stable manure. This helps to explain the reason why increased yields are secured when potatoes follow alfalfa or clover in the rotation.

Barnyard manure is invaluable in potato growing, since it carries not only plant food but also millions of the bacteria that work for the welfare of the potato plant. Fresh manure applied to the land shortly before the planting season may increase the percentage of scabby potatoes. It is better to apply the manure during the winter or early spring months. Some growers apply it on the sod the summer previous to planting.

Commercial fertilizers have not been gen-



A Northern Michigan Potato Field in Blossom.

erally used by Michigan potato growers. In demonstrations that have been conducted over the state during the past few years commercial fertilizers have shown good results. They should be used more generally as a supplement to barnyard manure and alfalfa or clover. In most cases 16 per cent Acid Phosphate applied at the rate of 200 to 400 pounds per acre has given increased yields. Good results were secured on several farms last year from complete fertilizers that analyzed approximately 3 per cent Nitrogen, 8-10 per cent Phosphoric Acid and 3 to 5 per cent Potash. The rate of application were from 200 to 500 pounds per acre. In order for fertilizer to become effective it must be mixed with the moist soil. It can be sown broadcast before planting or it can be applied in the furrow at planting time. The former practice is the more general one in this state. If applied in the furrow care must be taken that it does not come in contact with the seed pieces.

Importance of High Grade Seed

It is essential that good seed potatoes be selected for planting, if the crop is to be given a good start. Good seed potatoes should

be free from serious diseases and free from varietal mixtures. They should come from fields that were carefully inspected and rogued the previous season. The best seed potatoes are those that were selected in the field from healthy high yielding hills. Many of the most progressive growers are now relying on this method of selecting seed potatoes.

If the seed stock has to be selected from the bin only those tubers that are symmetrical, smooth and that are typical of the variety should be used. Avoid using for seed purposes potatoes that have pointed ends and those that show any forms of rot. When seed stock is selected from the bin, it is never safe to use the small potatoes as they are likely to have been the product of weak diseased hills. Select those that average six to ten ounces.

Growers whose seed potatoes are of poor quality will be benefitted by securing high grade seed potatoes that have been inspected and certified. Names and addresses of growers having certified seed potatoes for sale can be secured by writing to the Secretary of the Michigan Potato Producers' Association, East Lansing, Michigan.

Seed Treatment Is Essential

Before seed potatoes are cut they should be treated with corrosive sublimate to kill the scab and black scurf diseases. Potato scab is generally recognized by growers, while the black scurf which shows on the skin of the potatoes as small black lumps resembling dirt is often overlooked. Black scurf is one of the most serious potato troubles since it is often the cause of poor stands and yields of small rough tubers.

Seed potatoes should be soaked for 30 minutes in a solution the strength of which is four ounces of corrosive sublimate to 30 gallons of water. The (Continued on page 15)

How Your Dollar Reaches the People of Famine Stricken China

Money Given To-day Will Bring Relief to Victims of Starvation Within a Fortnight

WITHIN TWO weeks of the time you subscribe a dollar to aid the starving Chinese, the equivalent of your gift in food is placed in the eager hands of the person for whom it was intended, thousands of miles away across the Pacific. That is the average time required under the system of relief machinery that has been set up by the American Committee for China Famine Fund.

Taking as typical the case of a little girl living in a small village some distance from Paotingfu, in the Province of Chihli, the manner in which relief reaches her is explained in this way: The local relief committee for the Hsien, or county in which she lives, which includes missionaries, officials of the Chinese Commercial Guilds and prominent native residents, wires to the central committee at Peking a definite statement of the needs in that particular neighborhood. Such reports are taken care of in the order of their emergency. When the turn comes for Paotingfu to receive relief, money for the purchase of grain is wired to an agent of the relief committee stationed in Mukden, Manchuria, 700 miles from Peking, and in the center of the nearest district where there is a large surplus supply of grain. This agent despatches the allotted number of bags of grain to the particular district scheduled to get it, and wires the Hsien committee there when it should reach the nearest railroad station.

When the shipment arrives, a group of native carriers are on hand to unload it and take it to a central storage building, where the relief committee has its headquarters, and where distribution takes place. Each of the native carriers is given a number of bamboo slips, each slip representing one sack of grain. These he presents to the man in charge of the train, which is heavily guarded, and is al-

BECAUSE OF the excellent response made by our readers in the Hoover European Relief, the Business Farmer will not directly solicit subscriptions to the China Relief, although we feel that it is fully as worthy a cause. In every county of the state there has been organized a committee to solicit funds for this cause and readers of the Business Farmer desiring to aid in the work are requested to contribute through their local committee.—Editor.

lowed to depart with the number of sacks called for. He either takes them on his



He is looking to you to save him from starvation.

shoulders, with the aid of a long carrying pole, or uses a wheelbarrow or Peking cart. A crew of Chinese can unload a whole train in from six to eight hours—quicker than it can be done anywhere else in the world.

When the grain reaches the village for which it was intended, a method of storage and distribution is carried out, on a smaller scale, but based on the same principle, as at the main distributing center. A careful examination—a hunger census—has been taken of the region lying about the village, and the exact condition of every family is known. Tickets—in some cases brass checks are used—are issued to destitute homes, each indicating exactly the number of dependents, whether they are children or aged and infirm, and the ration called for in each case is just enough, and no more.

The holder of the ticket takes his basket and starts from his home for the village, there getting into line to receive his allotment for his family. If the father of the family has been fortunate enough to get work to feed himself, his wife or one of his children goes for the ration. On presenting the ticket or brass check to a volunteer clerk at the relief headquarters, the applicant receives a requisition slip, retaining his original ticket, which is marked with a record of each dispensation of relief. On presenting the requisition slip at the granary, the man, woman or child receives the allotted amount of grain, and hastens home to prepare it for eating. Usually the grain is ground up in the age-old mill, a stone roller on a flat stone.

That night the little Chinese girl smiles again for a while, and her happiness and renewed hope would be reward enough for the little girl in America who sent the dollar, only a fortnight before.

Making Blankets and Suitings From Wool Pool

State Farm Bureau Keeps Two Mills Busy Manufacturing Clip Pooled by Farmers

BLANKET manufacturing as a supplementary outlet to the 3,000,000 pounds of wool placed in the Michigan State Farm Bureau wool pool has proved to be a strikingly successful venture, according to the reports of the farm bureau wool department. Upwards of 5,000 virgin wool blankets, ranging in price from \$6.50 to \$9.50, have been sold to the Michigan public. Two mills are kept busy supplying the demand for blankets, which averages 100 a day, despite the coming of warmer weather.

The venture has proved so successful in a financial way that the wool department made arrangements for the manufacture of a large portion of both the remainder of the 1920 and much of the 1921 clip into ladies' and men's virgin wool suitings of the highest grade. The department proposes to continue the manufacture of blankets throughout the summer in anticipation of a gigantic blanket sales campaign to be waged throughout the state, beginning with the early fall season.

The story of Michigan's venture into the manufacture of woollen products as an outlet for wool in addition to the connections already established with manufacturers, is told by A. J. Hankins, in charge of the pool.

As soon as the wool market began to drag, says Mr. Hankins, the Michigan State Farm Bureau wool department opened negotiations with a woollen mill in the state for the manufacture of the lower grade fleeces in the pool into horse blankets and automobile robes. A contract was let which provided that the wool pool should furnish the wool and pay for its manufacture into blankets on a cost basis. The blankets then came back to the state farm



Main building of Clinton Woollen Manufacturing Company which contains the machinery for carding, spinning, spooling, and dressing the cloth as it comes from the looms.

bureau headquarters at Lansing, from whence they were placed on sale to farm bureau members and other consumers at actual cost of production price, plus a small handling cost, which included clerk hire, postage, wrapping and all other incidentals.

The only person to make a profit aside from the manufacturer, whose return was small, was the wool grower himself, who actually stood in the role of a manufacturing producer. His wool went into the blankets at an advanced valuation, which brought him more than one-third the best price it would have got otherwise, even though it had gone to the manufacturer correctly graded and sold on its merits. Dead wool, tag ends and other inferior grades which ordinarily would have sold for nine cents, brought the grower sixteen. About four carloads of wool have gone into the manufacture of blankets to date.

Then the wool department went into the manufacture of high grade bed blankets, both double and singles. Better grades of wool went into these blankets and brought even a better price to the farmer. Farmers were permitted to buy blankets and charge them against their wool account, and the same plan

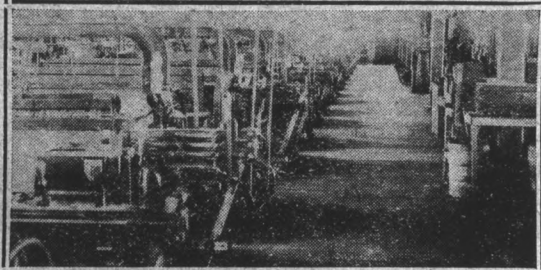
will prevail when the manufacture of suitings is under way. Wool going into blankets has brought the grower eight to ten cents a pound more than could have been gotten otherwise, says Mr. Hankins, and the manufacture of suiting will increase the growers' return on wool going into suitings by at least fifty per cent. The wool department expects to sell half to a million dollars worth of manufactured virgin wool goods this year, says Mr. Hankins.

The suitings proposition is now in the last stages of its development. The blanket mill has taken over the manufacture of the suitings on about the same arrangement that featured the blanket deal. A wide assortment of samples has been prepared and is now going forward to the farm bureau locals and cooperative associations of the state. They are accompanied by charts which make the measurement for a tailor-made suit a simple matter.

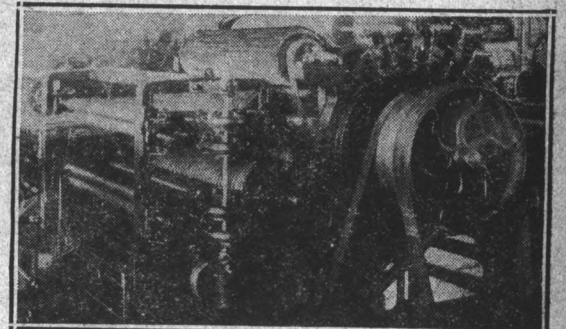
These virgin wool suitings will cost the wool grower and the consuming public of Michigan far less than the wholesale price on ordinary quality fabrics. An arrangement has been concluded with a big Michigan tailoring house to make the suitings up to order at a nominal cost. This year the Michigan wool grower will be able to buy the finest virgin wool suit to be had at less than half the cost of an ordinary suit. Every suit sold will be giving the Michigan wool grower a better price on his wool. All business on manufactured goods is done from the state office through the farm bureau locals and cooperative associations throughout the state. Sales are also made to individuals. (Cont. on pg. 11)



Spool room, where the yarn is placed on spool preparatory to making the warp.



One aisle of looms in the weaving department.



Final "breaker" in card room where the wool is made into soft yarn preparatory to spinning.

Rates of Taxation on Income in Several States Show Wide Variation

Thirteen States Have Already Adopted Some Form of Income Taxation With Good Success

By ORLANDO F. BARNES
Chairman State Tax Commission

THE RATES OF taxation and exemptions allowed taxpayers from net income, for both personal incomes and business incomes, are matters that may very properly be considered in connection with any argument advocating income taxation. In the matter of exemptions, there is a remarkable similarity in the laws of the various States. New York may be taken as a typical example. That State allows an exemption of \$1,000 net income to a single man and \$2,000 to the head of a family, and \$200 additional exemption for each person, other than husband and wife, under eighteen years of age and depending upon and receiving chief support from a taxpayer. Prof. Bullock in a report on income taxation read at the National Tax Conference held in Salt Lake City in September last recommended identically the same exemptions. They appeal to us as proper exemptions should Michigan adopt a personal income tax law. As to the rates of taxation, there is considerable variation in the laws of the different States. The Wisconsin income tax law graduates the personal income tax from one per cent on the first \$1,000, or fraction thereof, net income above exemption, to six per cent upon net income in excess of \$12,000. For corporations, the rate in Wisconsin is graduated from two per cent upon the first \$1,000 of net income to six per cent

on incomes of \$7,000 and in excess thereof. The Massachusetts income tax law is not a general income tax, but a tax upon four specified classes of personal income, with flat rates upon each class varying from one and one-half per cent. The New York rates upon personal incomes are one per cent upon the first \$10,000 or fraction thereof, net income above exemptions, and two per cent upon the next \$40,000 or fraction thereof, net income, and three per cent upon all net income over \$50,000. The New York income tax rate upon business incomes is a flat four and one-half per cent upon income from business within the State, but this is in lieu of all ad valorem taxation upon the tangible personal property of the corporation as well as upon its intangible property.

Prof. Bullock in the report to the last National Tax Conference before referred to, in outlining a model tax law, suggested the following rates after deducting from net income, in the case of a single person, an exemption of \$1,000, and in the case of the head of a family an exemption of \$2,000:

On the first \$1,000 of net income, or any part thereof, one per cent; On the second \$1,000 of net income, or any part thereof, two per cent; On the third \$1,000 of net income, or any part thereof, three per cent; On the fourth

\$1,000 of net income, or any part thereof, four per cent; On the fifth \$1,000 of net income, or any part thereof, five per cent; On all taxable income in excess of \$5,000, six per cent.

Prof. Bullock made no recommendation of a rate of taxation for business income other than to declare that, whatever the rate, it should be a flat rate, and he could see no objection to the New York flat rate of four and one-half per cent. The particular rates Michigan should adopt would of course be a matter for careful study and need not concern us at this time except so far as we make use of them for estimating the revenue the income tax would yield.

Amount of Revenue Expected of Income Tax

One of the reasons we have advanced for justifying an income tax for Michigan at this time is, that it would broaden the base of taxation so as to materially relieve the pressure of taxation upon real estate and other forms of tangible property and, at the same time, provide sufficient additional revenue to meet the increasing requirements of existing State activities, and allow for the proper development of new social and economic needs. It will, therefore, be interesting to make some examinations as to how much increase in revenue we might expect. Under the Wisconsin income tax law there (Continued on page 15)

Frost Cuts Fruit Prospects in Many States

Department of Agriculture Finds Fruit Trees of Many Regions Utterly Destroyed

SPECIALISTS in the United States Department of Agriculture call the attention of fruit growers in the northern United States, whose orchards have thus far escaped the disastrous freezes of this spring, to the promising opportunity afforded them for profit through more thorough and careful spraying than usual to insure the greatest possible production of high quality fruit.

The almost unprecedented succession of freezes which occurred March 28-29, April 10-11, and April 17-18, have nearly destroyed the apples, pears, peaches, plums and cherries throughout a considerable portion of the country east of the Rocky Mountains. This frosted area extends from the Virginia-Carolina line southward into the Alleghany Mountains, westward through middle Arkansas to the Rocky Mountains, and northward well up into New Jersey, Pennsylvania, and westward through middle Ohio to Nebraska. Examinations by department experts and reports from experienced fruit growers have shown that in this great area only a remnant of the crop of orchard fruits is left. North and east of this area, in the New England States, New York, and the Lake Region, there is still a fair prospect for a good set of orchard fruits except in certain rather restricted localities.

If the weather in this northern territory continues favorable during the next 10 days to two weeks, the prospect of a profitable crop is excellent, as the probability of good demand for good quality fruit from that region has rarely been better.

Under these conditions it is of unusual importance that every effort be made by growers to produce a crop of fine quality, and since it has been repeatedly demonstrated that only by thorough spraying can the full yield and the maximum quality be produced, thorough spraying this season is likely to be the most important feature of orchard practice.

Peach growers in New England, New York,

The Michigan Fruit Grower's Opportunity

THAT "ONE MAN'S loss is another man's gain," was never better illustrated than by the fruit situation, an investigation of which reveals that the fruit growers of New England and the Great Lakes region are going to reap an enormous benefit from the losses suffered by growers of other sections as a result of the March and April freezes. That is, providing they take care of their fruit trees, and help them to produce a good crop. The Department of Agriculture urges the farmers of the more fortunate states to take advantage of the situation by carefully spraying their trees. It's good advice.—Editor.

and westward who still have a crop on their trees, should use every effort to control the Curculio, scab, and brown-rot by carrying out the spraying or dusting schedules of the Department of Agriculture, or of the state agricultural experiment stations, with arsenate of lead, lime and sulphur, to protect their crop to the limit from these pests. The peach spraying Farmers' Bulletin No. 440, of the Department of Agriculture, is available for those not fully advised.

Apple and pear orchards that make good in setting their crops should be thoroughly sprayed with arsenate of lead and lime-sulphur solution for early treatment in combating codling moth, apple and pear scab, and the other insect pests and fungous diseases, and later, in July, with Bordeaux mixture and arsenate of lead. Only by thoroughly carrying out the methods which have been developing for years can fruits of high quality and finish, and orchard picks reasonably free from second-class fruit, be produced. Every barrel of apples which goes into the cull pile this year from lack of spraying is likely to

mean a serious money loss to the grower and will deprive the consumer of a necessary fraction of his supply. Farmers' Bulletins on apple spraying by the Department of Agriculture can be obtained by a postal card request. The same materials, and essentially the same schedule, are used in spraying the pear for its common pests.

The shortage of canning fruits will make every cherry desired this year by the housewife for canning and other uses. Plums, which are sometimes a glut on the market in years of abundant local supply, will doubtless be in insufficient quantity to fill the great gap in summer and autumn fruits caused by the untimely frosts. Bulletins and circulars are also available for treating the pests of these stone fruits.

While it is true that in Georgia and some other portions of the South the prospects for the peach crop are good, there is reason to expect that this production will be readily absorbed and not interfere with the demand for the product at the more northern districts, as it will be consumed before the crop from the northern states is available. From the Rocky Mountain region and the Pacific Coast, according to present prospects, there also doubtless will be shipped to eastern markets large quantities of cherries, peaches, plums, pears, apples, and grapes, yet with the prospective shortage in eastern fruits this should not prevent an active demand at good prices for the product of northern and eastern orchards that have escaped the freezes.

The department urges all fruit growers, even those having fruit gardens and smaller plantings, to post themselves thoroughly, either by writing to their own experiment stations or to the Department of Agriculture for proper directions for spraying, and to make the applications with more than usual thoroughness this season.

How to Produce the Maximum Yield of Best Quality Corn for Silage

Date of Planting and Variety of Seed Used Important Factors Which Determine Tonnage and Quality of Yield

By J. R. DUNCAN

Farm Crops Department, M. A. C.

THE TIME to plant silage corn depends to a certain degree on the place it is to occupy in the crop rotation and the consideration given economy of production.

On some farms due consideration must be given the harvesting period and its harmonious adjustment with other crops that are being grown and require harvesting about the same time. However economical production of silage is becoming the prime factor of importance with more farmers every year.

Economical Production

When the object is to produce the greatest possible tonnage per acre of the best quality silage it becomes necessary to make use of every favorable day the season affords. Whether this is done or not will be determined by two factors, i. e.: 1st, date of planting; 2nd, variety of corn planted.

In southern Michigan the date of planting extends through a period of 21 days. Logically the ideal planting date would be about the middle of this period. Practically it takes corn from 10 to 14 days to germinate and get through the ground.

While it is true that corn will come up more quickly if not planted until the ground is thoroughly warmed up than if planted sooner, this is also true that the late planted corn never catches up with the early planted corn, consequently the corn should be planted at the earliest possible moment with safety.

If corn is not planted until climatic conditions are just right, seed with any vitality at all will probably grow; consequently a certain per cent of weak unproductive plants will be occupying space in the field which should be occupied by strong thrifty plants. When early planting is practical, it becomes all the

more important to test the seed corn and plant only seed of strong germination, with lots of vitality, because only the strong plants can stand it anyway if adverse conditions exist at, or following, planting time, and nature working through the plants can only transfer about so much food material from the soil into the plants in a given number of days. Early planting will enable one to mature a longer season variety of corn and the longer season varieties produce more tonnage per acre than the short season variety provided both are allowed to reach the same stage of maturity.

Variety To Use

To use all the availing growing season in the production of this year's ensilage, use seed of a high producing leafy strain of corn that is a little too late to depend on for grain in all except the exceptionally long favorable season, and by planting as early as possible, the ears are pretty sure to reach the dented and glazed stage of maturity before frost kills it. This makes the best quality of silage.

On some farms an average grain producing variety of corn is grown for the silo and planted a little late to make the silo filling fit in between the harvesting of other fall crops, when the same result could be accomplished and an increased tonnage per acre secured by planting a larger strain of corn a week or so earlier.

Some farmers like to have their silage corn just reach the dented and glazed stage. Farmers in southern Michigan can accomplish this result by planting Reid's Yellow Dent or

Leaming from northern Ohio, Indiana, or Illinois. Farmers in central Michigan can use Silver King, Lawrence's Yellow Dent or Duncan, and farmers in the northern part of the state would get satisfactory results by using Golden Glow or Early Silver King from central Michigan.

Farmers living near the large cities who prefer bulk for silage rather than quality, and wish to supply the food material in the form of concentrates can plant Red Cob Ensilage with excellent results.

Rate of Planting

The rate of planting depends upon the fertility of the soil ranging from 5 to 8 quarts per acre. Eight quarts per acre will give approximately one kernel every 7 inches in the row if the kernels fit the "medium" cell in an edge drop corn planter. This distance affords a large number of plants per acre and the corn will make a better growth than if the plants are over-crowded.

A large amount of readily available plant food is required to produce a large crop of silage corn and this must all be drawn from the soil, unless some of it is applied in the form of manure and commercial fertilizers. Very frequently it is necessary to make a heavy application of fertilizer in order to produce a real satisfactory tonnage per acre. An application of 6 or 8 tons of manure and 250 pounds of 16% Acid Phosphate will give very satisfactory results in increased yield and advanced maturity.

A complete fertilizer such as a 3-12-2 or a 2-10-2 may give good results.

On muck soils a light application of manure and a heavy application of Phosphorus and Potash should prove profitable.



Farmers Service Bureau



PAID DAMAGE AND RECEIVED BULL

A tears down B's half of the line fence and backs a traction engine into it without permission from B. The strain on the fence breaks over an anchor post. A staples fence up to where he took it from posts but he did not fix the anchor post. B's bull and some cows belonging to B get over the fence and get with A's cattle which are also out and A shut up B's bull charging him \$100 damage. B offers to get appraisers to appraise the damage but A refuses. So B pays the \$100 and when he got the bull he was lame. In a few days his leg swelled so badly he had to have the veterinary. Now B can prove that the bull was alright when he turned him out and that he was lame when he got him again which was in about nine days. What I want to know is could A make me pay \$100 and is there any damage for the fence and the damage to the bull's leg. The bull was pure-bred and can be registered but he is not. A claims he bred a registered cow. —Subscriber, Webberville, Mich.

A could charge you any amount his conscience would permit him to name but you do not have to pay it because he charges it. The law points out a method of procedure if you are dissatisfied with the claim of damages. You can have the amount fixed in the manner pointed out in the statute and tender him the amount fixed. If he does not surrender the animal upon the appraisal you may replevin under the statute. Having voluntarily paid the \$100 you can not recover it back. A would be liable for any damages willfully caused to the animal if you could prove that he was guilty of wrong doing. The mere fact that was lame when returned is little proof that A was to blame for it. —Legal Editor.

SECURING STATE LAND

In your farm service bureau of March 26th, a subscriber of Hardy, Mich., asks about trespassing on state land. It occurs to me that this man, owning undoubtedly a 40 acre tract on each side of a state 40 would like to obtain possession of same, thus linking his lands together in one solid piece.

It is generally understood that one cannot buy state lands, and that is the information you will get if you write to Lansing about it, but there is a way by which the same can be procured, by a deed from the state. Should this be what your subscriber desires, and he will send me a description of the state land he wants, I think I can help him out. —Chas. W. Osmun, Tower, Mich.

CLOSING PUBLIC HIGHWAY

Will you kindly inform me through your paper what steps should be taken to close a public highway which is not traveled much? —S. H., Kalamazoo, Michigan.

C. L., 1915, sec. 4288 and following provide for establishing, altering and discontinuing of highways. The highway commissioner has authority in proper proceedings to discontinue a township highway but the board of supervisors must discontinue state or territorial highways. The directions are too long and complicated to attempt to describe in these columns and the forms are too intricate for one to attempt to prepare without skilled advice as each step must be complied with or the proceedings will be void. —Legal Editor.

THE MUSIC PUBLISHER

I have read in your wonderful paper so many questions asked and answered that I believe you can help me. I am writing in regard to song poems. I have composed several and having sent them to several different music publishers. I have received letters stating they could be made into superior songs. They want anywhere from \$18 to \$60. Some will guarantee a composer and some will not. What do you think of this business? Even if one can get a song published there is nothing sure about the royalties. I do not know the honest publishers. Perhaps there are none. One of the composers to whom I refer is Burrell Van Buren, 604 Bush Temple of Music, corner Chicago Ave. and Clark streets. Another is Songwriters Service Co., 1431 Broadway, New York, N. Y. I shall feel very grateful for information in regard to this. —Mrs. C. R., Livingston County, Michigan.

Don't pay them a cent. If your songs have real merit and you can

(A Clearing Department for farmers' every day troubles. Prompt, careful attention given to all complaints or requests for information addressed to this department. We are here to serve you. All inquiries must be accompanied by full name and address. Name not used if requested.)

get them into the hands of a responsible publisher he will be willing to take his chances on their finding a sale. Most of these so-called "music publishers" are grafters who make easy money out of the amateur song writers. Send one of your songs to the Jerome Remick Company, Detroit, which owns a large music printing establishment. If they want it they will buy it; if not they will return it. —Editor.

DEPENDS ON RATE OF INTEREST

A gives mortgage to B on 40 acres of land. B makes A give \$65 bonus money. A then sells the land to C and C borrows the money to pay B, and A is to pay B interest on B's mortgage to date. B discharges the mortgage for C before A pays the interest. Can A hold back interest enough to cover the bonus B took from him. The mortgage was not due when paid. —W. J., Allen, Mich.

As your letter does not state what rate of interest was specified in the mortgage I can not tell you whether the \$65 was usury. If the \$65 bonus would not make the interest all told for the full time more than 7 per cent it is not usury and he would have to pay it; but, if, with the \$65 added to the rate it would be more than 7 per cent he would have no interest to pay; and the payments of interest that have been made would be deducted from the principal. —Legal Editor.

ROAD WORK

I would like to know in regard to the road repair tax, as we have the old system of pathmaster. I have not been notified to do the road work. Can they collect it in taxes and if not what can I do? —O. H., Cadillac, Mich.

Perhaps your road repair tax was assessed under section 4318 of the C. L. 1915, to be paid in money. The "assessment of statute labor" is under section 4612. I am of the opinion that you must have notice to do the work of the statute labor but not the road repair tax. —Legal Editor.

BEST LAYING HEN

Which are the best all around chickens to keep for laying and hatching, the Rhode Island Reds or Plymouth Rocks? —A Subscriber, Whittemore, Mich.

No one breed is any better than another along this line. It is simply a question of selecting the best layers, and breeding them for egg production. Any variety of fowls can be bred to high egg production. —C. H. Burgess, Professor of Poultry Husbandry, M. A. C.

PAYING TUITION

In our school district the district buys all books, pencils, paper and ink. There are several scholars in this district that are nearer a school in another district so the school board decided to have these scholars go to this other school and pay their tuition. This other school furnishes books but does not furnish paper, pencils, pens, and ink. Does the school district first mentioned have to keep these scholars in paper, pencils, pens and ink after they have paid the tuition? —Roscommon County Reader.

No, their obligation ceases when they pay the tuition. —Legal Editor.

CLIPPING HEADS OF ROSEN RYE

I have a field of Rosen Rye, put in September 1st, 1920, and would like to clip it down to keep down the amount of straw and still get the same amount of grain. At what time should it be clipped? —C. R. H., Stockbridge, Mich.

I do not think it advisable to clip back Rosen Rye even if growing vigorously. I feel certain that clipping or pasturing, while it will keep down straw by shortening to a certain extent, will also lessen the amount of grain.

Pasturing or clipping may be beneficial to very rank growing ryes that are planted early. The Rosen variety is a comparatively short-strawed variety, seldom exceeding five to six feet in height on the average. Pasturing in the spring may be of sufficient benefit to stock to offset the slight loss in grain that

judicious pasturing may cause. Heavy grazing will reduce the yield considerably.

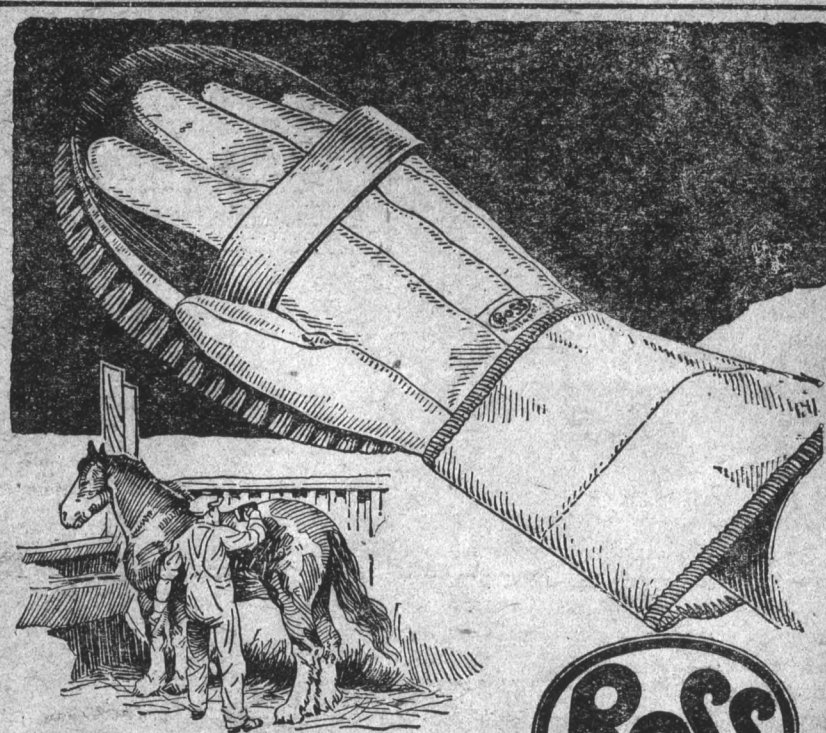
The best time to clip or to pasture would be in early May before too large growth occurs and there is danger of clipping the forming heads. —J. F. Cox, Professor of Farm Crops, M. A. C.

COST OF ANALYSIS OF SPRING WATER

Please print in your paper the address of the state chemist. I have a

mineral spring on my land and I would like to have it analyzed. Can you let me know what the fees are? —J. S., Gladwin, Michigan.

The cost for a complete chemical analysis of mineral water would be fifty dollars, if barium, strontium or lithium are not determined. If these determinations are made the cost will be seventy-five dollars. It will also be necessary for the owner to defray the expenses of a man to collect the official specimen from the source of supply. —C. C. Young, Director of Laboratories, Dept. of Health, Lansing, Mich.



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MARKET FLASHES



TRADE AND MARKET REVIEW

THE CONTINUANCE of unseasonable weather, throughout the country is beginning to have a depressing effect upon many lines of business, the outlook for which would be adversely affected by a general crop failure in this country. Another reason for the hesitancy of business along some lines, is the fact that uncertainty about the coming fall trade has the effect to make dealers ultra-conservative and cautious about the making of commitments. The trade is "between seasons" and it is hard to find anyone who is willing to risk his reputation by making predictions concerning the general character of the business of the coming fall. The settlement of the German reparations problem has given the trade a more hopeful view of the future but economic conditions in Great Britain have, so far, completely offset the optimism that followed the announcement that Germany had signed.

The New York Stock market has been slumping badly lately, a condition which was unlooked for; early in the week industrial stocks were weakest but toward the close all classes of securities were easy and lower. Call money has been, for the most of the time, going at 7 per cent and long-time loans have swung between 6 per cent and the former figure. Banks report large increases in savings deposits and the clearings for the week were considerably in excess of six billions of dollars.

A combination of circumstances, including the unfavorable weather mentioned above, have had the effect to produce a firm market for cereals, both on the Board of Trade and in cash business. Cured pork products continue dull and slow but beef mutton, wool, cotton and hides are firm and gradually working higher. Dissatisfaction, concerning the prevailing retail prices in many commercial lines, is helping to keep down the volume of business, the country over and the prevailing opinion seems to be that the long drawn out "buyers strike" will never end until some of these glaring inequalities are evened up.

WHEAT

WHEAT PRICES PER BU., MAY 17, 1921			
Grade	Detroit	Chicago	N. Y.
No. 2 Red	1.55	1.54 1/2	1.67 1/2
No. 2 White	1.53	1.52	1.65 1/2
No. 2 Mixed	1.53		1.62 1/2
PRICES ONE YEAR AGO			
No. 2 Red	No. 2 White	No. 2 Mixed	
Detroit	3.07	3.05	3.05

The reaction from the upward turn of the market week before last made a weak market the early part of last week but the closing of the week found it not only back to the level quoted on this page in the May 14th issue but 5 cents above at Detroit. News of crop damage came from the west all week and while the greater part of the news showed the damage only of slight nature, reports came from several sections of severe or complete loss. Houses with seaboard connections were in evidence and export clearances large. A report came out Saturday in Chicago that Italy had purchased 1,000,000 bushels. Chicago shipped 671,000 bushels. Receipts at that point amounted to 747,000 bushels. The movement of the grain from the country continued light and the report that dealers have over-sold for May delivery gained strength. Pending legislation which will put the boards of trade out of business if passed also helped steady the market up. News of much frost damage and a fall of snow in some sections over the week end caused prices to advance on the opening of the current week. The Detroit market went up 2 cents. Dealers have sold the visible supply in the country and are dealing in the 1921 crop and any crop scare is

Edited by H. H. MACK

GENERAL MARKET SUMMARY

DETROIT—Wheat strong. Oats and corn show temporary weakness. Rye higher. Beans steady. Hay firm.

CHICAGO—Wheat active. Corn and oats dull. Hogs and cattle lower. Sheep higher.

(Note: The above summarized information was received AFTER the balance of the market page is set in type. It contains last minute information up to within one-half hour of going to press.—Editor.)

quickly felt. Domestic consumption is still light and there is not much doing in the feed market.

CORN

CORN PRICES PER BU., MAY 17, 1921			
Grade	Detroit	Chicago	N. Y.
No. 2 Yellow	.66	.61 1/2	.79 1/2
No. 3 Yellow	.65		
No. 4 Yellow	.63		
PRICES ONE YEAR AGO			
No. 3 Yell.	No. 4 Yell.		
Detroit	2.15	2.10	

Practically the same conditions that ruled wheat predominated in the corn market last week and prices dropped the first few days but the end of the week saw No. 2 yellow at 68 cents at Detroit, which was 1 cent higher than offered 6 days earlier. Chicago supplies are small and receipts were not up to expectations both facts making a strong market. Receipts at that point were 1,100 cars last week. Exporters continued to take a friendly interest in this grain shipment from Chicago amounting to 1,500,000 bushels. Weather conditions held up the planting of the new crop. On Monday, May 16th, corn parted ways with wheat on some markets and was inclined to on others. The Detroit market was off 2 cents before the close of the day while in Chicago prices advanced slightly; however, on every attempt to go higher the Chicago corn market met with ready selling from commission houses and this factor finally forced the market to close with prices from 1-2 to 1 cent lower.

OATS

OAT PRICES PER BU., MAY 17, 1921			
Grade	Detroit	Chicago	N. Y.
No. 2 White	.43	.39 1/2	.50
No. 3 White	.41 1/2	.38 1/2	
No. 4 White	.38 1/2		
PRICES ONE YEAR AGO			
No. 2 White	No. 3 White	No. 4 White	
Detroit	1.26	1.25	1.24

The market for oats last week was quiet and acted much the same as corn. Export buying was not active. Receipts at Chicago for last week totaled 387, compared with 367 a year ago, while shipment sales aggregated 850,000 bushels. Crop news were bullish the early part of last week but better at the close. The week closed with No. 2 white oats at 44 cents on the Detroit market

but Monday of the present week they were off 1-2 cent; and prices at Chicago were also lower than on Saturday. Country offerings continue light.

RYE

The rye market was strong all last week and the prices advanced 2 cents at Detroit. Supplies of this grain are very light and receipts disappointing. On Monday of this week the Detroit price again advanced, this time 3 cents, bringing No. 2 up to \$1.41. In spite of the advance there were no offerings. Foreigners have taken so much of this grain out of the country that it is a big proposition to find any surplus.

BEANS

BEAN PRICES PER CWT., MAY 17, 1921			
Grade	Detroit	Chicago	N. Y.
C. H. P.	3.70	4.25	4.40
Red Kidneys		9.50	
PRICES ONE YEAR AGO			
	C. H.		
Detroit	8.50		

Our forecasts with respect to the future bean market have been so consistently out of line with the actual developments that we hesitate to chance any further prediction with respect to this market. We have not been able to see why bean prices have gone so low, and we cannot now see any reason why they should not be much higher than they are at present. There has been more encouragement in this market the last three weeks than there has been for nearly three years. The market seems to have awoke from its long sleep, and prices are struggling hard to advance. The market today is 50 cents above the low of a month ago, and most of the bean men in the state are predicting much higher values in the near future.

POTATOES

SPUDS PER CWT., MAY 17, 1921		
	Salad	Bulk
Detroit	1.15	
Chicago	.90	
New York		1.15
Pittsburg		1.06
PRICES ONE YEAR AGO		
Detroit	7.50	

The Detroit market for old potatoes firmed up some last week and after losses the fore part the price

again returned to the level quoted in the May 7th issue. The market at New York was lower and supplies plentiful, while at Chicago receipts were small the first part of the week and the tone of the market was firm with buying of good stock fairly brisk. This week potatoes opened firm at Detroit. Receipts are small as shippers are forwarding most of their supplies to other marketing points. Chicago is receiving more than sufficient and the market is weak. Small receipts of the new crop is holding the market for old ones up.

HAY

HAY PRICES PER TON, MAY 17, 1921			
No. 1 Tim.	Stan. Tim.	No. 2 Tim.	
Detroit	19.00 @ 20.18.00	19.17.00 @ 18	
Chicago	21.00 @ 22.19.00	18.17.00 @ 18	
New York	23.00 @ 30	25.00 @ 28	
Pittsburg	20.00 @ 22.18.00	19.17.00 @ 18	
HAY PRICES A YEAR AGO			
No. 1 Tim.	Stan. Tim.	No. 2 Tim.	
Detroit	37.50 @ 38.36.50	37.35.50 @ 36	
HAY PRICES A YEAR AGO			
No. 1	No. 1	No. 1	
Detroit	36.50 @ 37.35.50	36.35.50 @ 36	

Receipts of hay showed some increases last week and as demand remains slight many markets report supplies more than needed to meet requirements. Prices made very little changes and strength in the market was rare. Supplies at Detroit are moderate and the market is firm with prices at last week's level.

DETROIT PRODUCE MARKET

Poultry is ruling stronger than was anticipated in this market. The price has not declined as it has in eastern markets and demand has been good. The supply is light and the market is firm. Broilers, colored, 1 2-2 pounds and up, are 55 @ 60c; small broilers, 40 @ 45c; fat hens, 32c; medium hens, 30 @ 31c; old roosters, 15c; young staggy roosters, 18 @ 20c; ducks, 25c; geese, 15c; turkeys, 35c per pound.

Egg receipts large and the market is easy with a declining tendency. Fresh current receipts were offered at 23c the opening day of this week but only 22c was bid. Butter is weak and lower.

The demand for dressed calves is brisk and the market firm. Best, 13 @ 16c; medium, 11 @ 12c. Dressed hogs are steady with trade light. Light, 11 @ 12c; heavy 9 @ 10c

WOOL MARKETS

The wool situation remains about unchanged, with demand very fair, a moderate amount of most grades of wool moving, and with prices unchanged. All grades move about equally well, and the general tone is not very optimistic and there is no underlying strength to the market, however, so that prices, while unchanged, are generally regarded as being weakly held.

Regarding the Boston market, the Commercial Bulletin says:

"The demand for wool has improved somewhat in the past week, although trade has been by no means brisk and prices are still more or less erratic. Some buying of fine and fine medium wool is reported in the far west at prices varying generally from 14 to 17c, depending upon the wool. Wholesale clothing prices have been named generally this week and show a reduction of about 50 per cent as compared with a year ago."

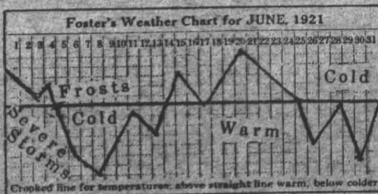
The Bulletin gives wool quotations as follows:

Ohio and Pennsylvania fleeces—Delaine unwashed, 39 @ 41c; fine unwashed, 30 @ 32c; 1-2 blood combing, 31 @ 33c; 3-8 blood combing, 28 @ 29c.

Michigan and New York fleeces—Delaine unwashed, 36 @ 38c; fine unwashed, 30 @ 31c; 1-2 blood unwashed, 31 @ 32c; 3-8 blood unwashed, 27 @ 28c.

THE WEATHER FOR THE WEEK

As Forecasted by W. T. Foster for The Michigan Business Farmer



WASHINGTON, D. C., May 21, 1921.—During the first part of week centering on May 23 the most severe storm of the month will make its appearance in the northwest part of the continent driving before it the warmest weather of the month. That will be a dangerous storm and I warn everyone to be on the watch for it. All its features will be extreme. All the continent will be affected by it. The center of its warm wave is expected to cross meridian 90 near St. Louis not far from May 23, take the usual southeastward course into the Middle Southern States which it will reach near the 24th and then northeastward toward Newfoundland,

reaching the Atlantic near May 26. Unusually heavy rains are expected from that storm and where the rivers and other water courses were high from the rains first part of May probabilities are favorable to floods. Hail is expected in some places, particularly in the Southern States. Much cooler weather and killing frosts in Northern sections are expected to wind up this great storm period.

Crop weather and crop conditions of June will average close to the general normal of that month and therefore will be generally satisfactory. Markets will not be much affected by the weather but probably will be by other causes. First ten days of June will be unusually stormy with too much rain in some sections. Dangerous storms are expected during week centering on June 10 and 26. Unusually cool during the weeks centering on June 4 and 23. Hottest week centering on June 16.

W. T. Foster

LIVE STOCK MARKETS

Last week's run of live stock, at twenty of the leading markets of the country, showed a falling off, from the year before, of more than 500,000 head. Cattle at twenty leading markets gained 1,000 head over the previous week but hogs lost 35,000 and sheep 24,000. The figures printed above would look bullish if the demand for fresh meat was normal or in any way compared favorably with that of other recent years. Fresh meats, shipped out of Chicago last week, totaled 10,439,000 pounds while the showing for the previous week was 24,857,000 pounds and for the corresponding week of last year 55,897,000 pounds. Cured meats shipped from Chicago, last week, totaled 21,806,000 pounds being seven million pounds larger than for the previous week and nearly fifteen million pounds larger than for the corresponding week, last year. Early last week the wholesale selling price of pork loins was cut four cents per pound, pork tenderloins were reduced 10 cents per pound by the Chicago packers, from the price that ruled during the week before. A careful analysis of the figures given above would seem to foreshadow an early decline in selling prices for live hogs. The Chicago packers are not in the habit of buying hogs and cutting them at a loss.

Chicago had an active trade in live cattle, last week, steers gaining about 25 cents per cwt. for the week with a top of \$9.35; the top for yearlings was \$9.75. Receipts of cattle at Chicago last week, showed a falling off of 2,700 from the week before. The animals, in the butcher cattle division showed good average quality, some extra good, long fed cattle coming to hand. The top-priced yearlings averaged 1,170 pounds and went to Armour; the top priced steers were Herefords averaging 1,426 pounds. Eastern demand for dressed beef was at low ebb, all the week, Chicago retailers reported a reduced demand for beef and export buying was smaller in volume than for any preceding week since the trade began. Since the low week in April, cattle prices in the Chicago market, have gained from 50 to 75 cents per cwt.

A new element has recently been injected into the beef and veal equation in the form of gradually hardening values for hides and calfskins; for many months the killer has been in the habit of leaving the hide of the animal he slaughtered entirely

out of the reckoning. The advance in hide prices is small, so far, it is true, but it is enough to make some difference in selling values of live animals. Butchers cattle, fat cows and butchers bulls sold well all the week but bologna bulls were lower on the close. Cannery were steady. The leading feature of the feeding cattle trade was the strong competition put up by Wisconsin grazers for well bred, heavy weight feeders; in many cases the "Badgers" outbid killers for desirable lots. Stocker and feeder prices were called 25 to 40 cents per cwt. higher for the week.

Chicago got 79,677 sheep and lambs, last week, being nearly 20,000 less than for the week before but 40,000 more than for the corresponding week, one year ago, and 17,000 more than two years ago. Direct to packers, 23,600, being 7,400 less than the week before. Handy weight aged sheep showed a gain of 25 cents per cwt. for the week, heavy weights were weak but about steady and yearling lambs were 75 cents to \$1 per cwt. higher. Four double-decks of Colorados, minus the fleec, brought \$11.50 per cwt. on Saturday. The Chicago dressed mutton and lamb trade was active all the week although the importation into the market by the packers of several loads of sheep, direct from Texas, was a bearish feature in the mutton trade. The week's top for shorn lambs was \$12.50 and for clips, \$11.60. Heavy lambs showed the biggest advance, woolled stock, averaging 116 lbs, selling for \$10.75 and 95 pound lambs selling for \$11.75; on the closing days of last March, several bands of lambs, weighing around 115 pounds, sold for \$6.50 per cwt. The average price of fat lambs, at Chicago, last week, was \$11.25, being 90 cents per cwt. higher than for the week before, \$7.25 lower than the corresponding week, one year ago and \$5.40 under two years ago. A few extra California spring lambs brought \$13.50; best native springers sold as high as \$13 and a few, of indifferent feed or quality, for \$7.50 per cwt.

Chicago got 126,000 hogs last week being 9,000 less than the week before, 61,000 smaller than for the same week, last year, and 11,600 smaller than the ten year average. The high price for the week was \$10.10 paid at Buffalo and the lowest price, \$8.25, paid at Omaha.

Chicago's average price for the week was \$8.63 being 30 cents above the week before and 48 cents above two week ago, the low average price of the year, to date. The average weight was 240 pounds, a fact that did little damage to values as packers showed a marked preference for heavy hogs. The speculative provision trade is weak and tending lower in sympathy with declining hog values.

Detroit had a moderate run of stock last week and a comparatively light offering on Monday of this week. Cattle were active and steady, last week but buyers took off 25 cents on Monday on all kinds of butchers cattle, except canners and bulls. Lambs are active and in sympathy with other markets, best selling as high as \$12.25. Veal calves are active at \$10 toll for the best. Detroit is getting small hog receipts, these days, running largely to medium weights of good quality. Local buyers are shading heavy hogs about 25 cents per cwt., drawing the dividing line at 300 pounds. Detroit hog salesmen predict that the spread between light and heavy hogs, will entirely disappear before very long. Receipts of pigs are much smaller, locally, than they were on this date, last month.

A TRIP TO THE THOUSAND ISLANDS

Breeders from all over the United States will travel to Syracuse, New York in June for the annual meeting of the Holstein-Friesian Association of America to be held June 1st, and the Second Co-operative Holstein Sale, under the direction of the New York Holstein-Friesian Association to be held June 2nd, 3rd and 4th.

Among the sight-seeing trips planned is a boat ride among the Thousand Islands, famous for their wonderful beauty. A trip to Cornell University grounds at Ithaca taking in some of the most scenic parts of central New York will also be made.

National sale consists of over 200 head of the best Holsteins of the United States consigned by one hundred and eight Holstein breeders from fifteen states and Canada.

Reduced fares will be available in the following states: Michigan, Indiana, Ohio, Pennsylvania, West Virginia, Delaware, Maryland, New Jersey, New York and from Chicago and St. Louis. When buying tickets to Syracuse ask for reduced fare certificate. Bring certificates to Syracuse where they will be stamped and be good for one-half of the return journey.

House Passes Bill to Curb Speculation on Boards of Trade

THE LOWER branch of Congress has passed the Tinscher bill to abolish speculative future trading on the boards of trade throughout the country. Farm organization leaders who have been instrumental in bringing this matter to the attention of Congress predict that the bill will become a law. The Chicago Board of Trade is the most active opponent of the measure, and has recently made public a number of solemn declarations predicting dire results to follow in the wake of the bill. Despite all these warnings the grain prices have continued to advance during the discussion of the measure.

It is impossible to give all the provisions of the Tinscher bill in detail here. As stated above it aims to destroy speculative future trading, but to safeguard legitimate transactions involving the insurance feature, such as hedging. The bill regulates the manner in which wheat, corn, oats, barley, rye and sorghum may be bought and sold upon any board of trade, exchange or association, engaged in buying or selling grain or receiving same for sale on consignment. It imposes a tax of 20 cents a bushel on each and every privilege or option for a contract of purchase or sale, such as "privileges," "bids," "offers," "puts and calls," "indemnities" or "ups and downs." It levies a tax of 20 cents a bushel on each contract of sale for future delivery, except,

(a) Where seller is owner or

grower of actual grain covered nor either party owner or renter of land on which the same is to be grown, or is an association of such owners, growers or renters of land.

(b) Where such contracts are made through a designated "contract market" and a full complete record of the transaction kept for at least three years.

Contract Markets

Contract markets shall be designated by Secretary of Agriculture only when they comply with following requirements.

(a) Terminal markets handling cash grain in sufficient quantities as to reflect general value and grade differentials.

(b) Keep a detailed, complete record of all transactions by board or members, either cash or for future deliveries. Form of record prescribed by Secretary of Agriculture, and open to Department of Agriculture and Justice.

(c) Prevent the dissemination of misleading or inaccurate reports of crop or market conditions.

(d) Prevent manipulation of prices and include a reasonable limitation upon total quantity of same kind of grain in open unsettled transactions held by or in behalf of one person.

(e) Admit lawful and responsible co-operative associations of producers to full membership and privileges.



The Clean-Up

of stables, pig-pens, poultry houses, cellars, outbuildings, etc., can be done with less labor, in less time and with better results if you will use Carbola—the combined paint and disinfectant. It helps prevent the start and spread of contagious diseases that might wipe out your entire flock or herd. It makes your work easier. It increases the light in your buildings—makes them sweet-smelling—improves their appearance—puts them in shape to pass the inspection of milk companies or health authorities.

Poultry and livestock never produce their best in dark, dirty and gloomy living-quarters. The liberal use of Carbola means more dollars and cents in your pocket.

CARBOLA
The Disinfecting White Paint

is a white paint in powder form, combined with a disinfectant twenty times stronger than carbolic acid. Mix it with water and in a few minutes you have a smooth-flowing paint and a disinfectant that goes on the wall in one operation. It can be applied with a brush or spray pump to wood, brick, stone, cement, plasterboard, etc., or over whitewash. It will not clog the sprayer nor blister, flake or peel off. It is non-caustic and harmless to the smallest chick or stock that licks a painted surface.

Use It Instead of Whitewash and Disinfectants

where you have been using whitewash and disinfectants or just whitewash. One gallon covers 200 square feet, and it dries with a smooth finish. Use the dry powder as a loose powder on poultry, cattle, horses, hogs. You will find it excellent for this purpose and it costs only one-third as much as other brands.

Your hardware, seed, drug or paint dealer has Carbola or can get it. If not, order direct—prompt shipment by parcel post or express. Satisfaction or money back.

10 lbs. (10 gals.) \$1.25 and postage 20 lbs. (20 gals.) \$2.50 delivered 50 lbs. (50 gals.) \$5.00 delivered
200 lb. bags \$18.00 delivered Trial package and interesting booklet 30c postpaid.

Add 25% for Texas and Rocky Mountain States

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BEE HIVES, SECTION BOXES, SMOKERS



Comb Foundation, etc. Everything for the bees including Beginner's Outfits. Agents in Michigan for the A. I. Root Co. goods. Send for catalog.

BERRY BASKETS AND 16 QT. CRATES

Immediate shipment. Special POSTPAID offer for points within 150 miles of Lansing as follows:

200 Wax-lined baskets postpaid \$1.95
600 Wax-lined baskets postpaid \$5.35
1,000 Wax-lined baskets postpaid \$8.25
Deduct 10c per 100 for baskets by express or freight. Send for price list and special prices on larger quantities.

M. H. HUNT & SON,
508 Cedar Street North
Lansing, Mich.

A WORD ABOUT RENEWING!

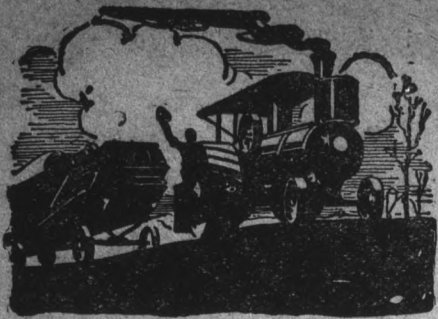
When you send in your renewal it will pay you to do two things.

1.—Enclose the address label torn from the front cover of any recent issue of M. B. F.
2.—Send money in check, money-order or registered letter.

The first avoids our entering your name as a new subscription and thus sending you two papers every week and bothering you to pay up the old subscription.

The second avoids the possibility of your money going astray in the mails or being lost. We often have our friends write us that they sent currency or stamps, which we cannot find any trace of, but money sent by mail in any of the above forms, are a receipt in themselves, or if lost, can be secured.

The change in date of expiration following your name on the address label is your receipt, and in the busy spring months, when our mails are loaded with renewal and new subscriptions it generally takes from two to three weeks to acknowledge your remittance and correct your date.



Is Your Thresherman Welcome?

Of course, you're glad to see him go. But you'll be glad to see him come if you choose the thresherman who owns a

Red River Special

The Machine that saves you money by doing good work quickly. The "Man Behind the Gun," the Big Cylinder, the Beating Shakers—all help to save your grain.

Nearly three-quarters of a century of experience are back of Nichols-Shepard threshing machinery. Every year sees more Red River Specials in the field.

Save the price of your thresh bill this year by threshing with the Red River Special. If your crop is large enough to justify buying an individual machine, ask us about our "Junior" Red River Special.

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Nichols & Shepard Co.

(In Continuous Business Since 1848)

Builders Exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines. Battle Creek, Michigan

\$7.50 After 30 Days Free Trial

The Belgian Melotte Separator is the wonderful Self-Balancing Bowl. No other like it.

30 days' free trial—then, if satisfied, only \$7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is YOURS.

No Money Down!

Catalog tells all—write.

Caution! U.S. Bulletin 201

shows that vibration of the bowl causes cream

waste! The Melotte bowl is self-balancing. Positively

cannot get out of balance therefore cannot vibrate. Can't remix cream with milk.

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Catalog FREE

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of this wonderful cream separator and the story of M. Jules Melotte,

its inventor. Don't buy any separator until you have found out all

you can about the Melotte and details of our 15-year guarantee which

is infinitely stronger than any other guarantee. Write TODAY.

The Melotte Separator, H. B. Babson, U.S. Mgr. Dent. 3305 - 2843 W. 19th Street, Chicago, Ill.

These Roofing Samples Sent FREE

We have slashed our prices on slate surfaced roofing right down to rock bottom. Extra high quality—sold direct from factory to you at the lowest prices. Write for these free samples of

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Then you can see what a big bargain this guaranteed 15 year roofing is.

Made in 2 colors, red and green, in rolls and shingles. Write for samples and our money saving prices.

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World renowned for Rheumatism, Nervousness and that run-down condition. Open all the year. Twenty miles from Detroit. Write for Booklet. Business Men's Association, Mt. Clemens, Mich.

An ad. in our Business Farmers' Directory will bring results!

Threshing and Marketing Hairy Vetch in Michigan

(Continued from last week)

HAIKY-vetch seed is threshed with ordinary grain separator and presents no special difficulties if vines are dry. Mixed rye and hairy vetch is run through the machine in the ordinary manner, usually without any adjustment of the cylinder or of the screens. A little care must be taken that the machine is not run too rapidly, as the hairy-vetch seeds are apt to crack and split, especially in dry weather or when the seeds are dead ripe. A good thresherman, of course, does not run his machine so fast as to injure the hairy vetch, but many operators habitually run at an excessive rate of speed and these must be cautioned to proceed more carefully. At times it may be necessary to change the pulleys, to allow the cylinder to run more slowly than the rest of the machine. Just as much seed is threshed in a day by running slowly, because less seed goes over in the straw. When the speed of the cylinder is not reduced it is advisable to remove some of the concave teeth.

The greatest difficulty in threshing is likely to come in attempting to thresh a semigreen crop. All threshermen object to working with the tough, wiry vines, as they wind around the cylinder, become tangled in the shakers and cause an endless amount of trouble and loss of time. Cases are known where farmers have been charged as high as 18 cents a bushel for threshing such a crop, and the charge is not wholly unreasonable in view of the difficult nature of the work. In order, therefore, to avoid argument as to price and to insure running the machine at the proper speed, it is usually best when threshing green hairy vetch to pay for the threshing by the day instead of by the bushel as is commonly done.

Cleaning and Separating

Since hairy vetch is usually grown as a companion crop with grain, the seed must be cleaned and separated from the grain before it can be marketed as commercial seed. Cleaning is accomplished by means of an ordinary fanning mill or seed cleaner, which removes the trash, weed seeds, and more or less of the grain.

To remove the grain from the hairy vetch is a more difficult process, as the seeds are so nearly of the same size, shape and weight that no ordinary machine separates them. Small lots of seed can be separated fairly well in a fanning mill and the excess grain picked out by hand. A better method is to pour the mixed seed on a smooth slanting surface, such as a tin shed roof, to which have been fixed horizontally thin strips of wood. By sweeping the mixture up the slope with a broom, the grain is held back, while the hairy vetch seeds roll down the slope and off the edge. A similar plan consists of a series of inclined steps, arranged about 2 inches apart over which the mixture is allowed to run. About three-fourths of the rye falls through the openings. The simplest method of all is to spread the seed on a barn floor and allow chickens to pick out the grain, which they will do, leaving the hairy vetch. Separation can also be accomplished on clover graders or wild oats separators, which consist essentially of endless belts of felt or Canton flannel set at such an incline that the rye is carried up and over the top while the vetch rolls to the bottom.

Large lots of seed can not be handled in such a manner, however, but must be separated on a spiral separator. This simple but ingenious device is really the keystone of the hairy-vetch seed industry, as without it there would be no way to separate seed in large quantities.

Much time is saved and more hairy-vetch seed separated in a day if the mixed seed is first "scalped" by running through a regular seed cleaning machine to remove some of the grain. The seed cleaner works more rapidly than the separator and will remove 50 per cent or more of the grain, thus leaving the mixture

much richer in hairy vetch. The rich mixture not only runs more rapidly thru the spirals, but the hairy vetch is graded more evenly. If the seed cleaner is not used, the vetch must often be run through the separator several times to obtain a good separation.

The charge for separating hairy-vetch seed is usually 10 cents per bushel of mixture. This is based on a capacity of 50 bushels of mixed seed a day, although a well arranged outfit can handle 65 to 75 bushels in 10 hours. On the basis of 5 pounds of hairy vetch per bushel the cost of separating is about 2 cents a pound. Ordinarily, a man who grows 8 acres or more of hairy-vetch seed each year can afford to own his own machine.

Marketing

About three-fourths of the hairy-vetch seed grown in Michigan is sold directly to country elevators or to



Rye and hairy vetch in the proper proportions for a seed crop. More hairy vetch would drag down the rye.

the large seed jobbers, either thru their local agents or by correspondence. A few farmers make enough of a specialty of this vetch to advertise in the local papers and sell directly to the consumers. Others are able to dispose of all their product to their neighbors. On account of the rapidity with which the hairy-vetch seed industry developed in Michigan, some time was required to establish a satisfactory marketing system. Many farmers who grew seed with the expectation of receiving high prices found that there was no way to dispose of the seed after it was harvested, as the local dealers were not prepared to handle it. Thus, there has been a considerable inequality in the prices paid to farmers in different sections, and some growers have been forced out of the business because of uncertainty as to the returns. This difficulty is being gradually overcome as business machinery for handling the crop becomes better organized. A serious obstacle in the marketing of hairy-vetch seed is the length of time that the seed must be carried over between harvesting and sowing. Hairy vetch is harvested late in July and planted not later than September 15, leaving an interval of only four to six weeks for thresh-

ing, cleaning, selling and shipping. A few farmers are able to get their seed on the market in time for sowing the same year, but the arrangements must all be made before the seed is harvested and the operations of threshing and hauling hurried with all speed. Most farmers are unable to do this; consequently the bulk of the seed must be carried by some one for a year before it can be sold. This naturally adds to the cost of doing business and increases the price of the seed.

Disposal of the Straw

Hairy-vetch straw is often used as winter roughage for cattle, horses, and sheep, for which purpose it is considered equal to clover straw or somewhat better than bean straw. Sheep especially are fond of the hairy vetch, seeming to relish it better than coarse hay or sweet clover straw. When mixed rye and vetch straw is fed the animals eat more or less of the rye along with the hairy vetch and maintain their weight or even make appreciable gains when wintered principally on this feed. There seems to be little or no difference in feeding value or palatability between mature hairy-vetch straw and that which is slightly green.

Hairy-vetch straw is sometimes plowed under for soil improvement, especially on farms in need of organic manure. This practice is not the best, as dry hairy-vetch straw decays slowly and tends to dry out the soil, besides interfering with cultivation. However, it contains practically the same amounts of nitrogen, phosphoric acid and potash as the green plant, and where no better means is available for its disposal, it should be plowed under. The very best way to dispose of the straw is to feed it to live stock and plow under the manure.

Under favorable conditions hairy vetch yields as high as 10 to 12 bushels of seed per acre. A high yield, however, is not necessarily the most profitable, for it usually involves the handling of such an excessive quantity of tangled vines as to greatly increase the cost of production per bushel. Most growers do not seek high yields, but, in fact, carefully avoid them. Occasionally a large yield of seed is obtained from plants which are small in size but heavily set with pods. Such a crop is, of course, highly profitable, but the conditions which produce these plants are not well understood and they are apt to be the result of chance rather than skill.

From 5 to 6 bushels of hairy vetch in 25 to 30 bushels of mixture per acre is considered a very satisfactory yield, comparable to 25 bushels of wheat or 150 bushels of potatoes. A common way of expressing this is to say that a good crop of rye should contain 20 per cent (12 pounds) of hairy vetch per bushel. Nearly all farmers secure such yields in occasional years, but only the most expert growers average that quantity. Probably the average yield approximates 15 to 20 bushels per acre of mixed seed, containing 5 to 8 pounds of hairy vetch to the bushel. This is equivalent to 13 bushels of rye and 2 bushels of hairy vetch for the lower yields, or 17 bushels of rye and 3 bushels of hairy vetch for the higher yields. With reasonable success one should be able to exceed the latter figures at least once in three years.

The profits from growing hairy vetch and rye are increased considerably by the use of improved varieties of rye such as Rosen or Mammoth White, which commonly yield at the rate of 25 to 30 bushels per acre. At the present time the seed of these varieties, if pure, sells for about twice the price of ordinary rye, on account of being in great demand for seeding purposes. Some effort is required to produce pure-bred rye seed, since rye, unlike wheat, crosses very readily, and the improved varieties therefore must not be grown within half a mile of other rye. The extra care is well worth while, however, in view of the greater returns.

Uncle Sam's Hired Men Who Serve Farmers

Thomas H. MacDonald and the Bureau of Public Roads

By MARY R. REYNOLDS

THE MAN who has more to do with making happy the life of the motorist than any other one person in this country was born 40 years ago in a log cabin up in the mountains of Colorado. His name is Thomas H. MacDonald and the job he holds down is that of Chief of the Bureau of Public Roads, United States Department of Agriculture. As head of this bureau, Mr. MacDonald not only has direct supervision over the highway engineering activities of the department and the expenditure of the federal aid funds but of farm drainage investigations, irrigation investigations, and rural engineering as well.

The federal aid operations alone constitute one of the largest systematic plans for public works ever undertaken in the history of mankind. Approximately \$80,000,000 was spent in 1920 on this project and more will be expended during 1921. When the Panama Canal was constructed, the performance of the government in respect to the dispatch with which it was carried out was regarded the world over as a record-breaking achievement. The cost of that work, however, was \$373,000,000, and 10 years were required to complete it. The average rate of expenditure was \$37,000,000 per year, or less than one-half of the expenditure on federal aid roads in 1921.

Work of Bureau Which Spends Millions

It is a far cry from the period when actual road work was pretty generally confined to the amount which could be done by the men in the community working out their poll tax, to the present age when the millions annually appropriated by state and federal governments for good roads are expended under centralized and scientific supervision. In point of time the years are few, but the effect upon the life and habits of the American people has been revolutionary.

The chief of the Bureau of Public Roads believes that the fundamental justification for good roads in the rural districts is that they make life more stable and attractive for the farm people. It is rather generally conceded that the bulk of farm crops is moved when dirt roads are in passable condition. The country needs roads which admit of easy transportation of human beings over them at all seasons of the year to transact social, religious, and business affairs. Mr. MacDonald says: "No matter how much a hard surfaced highway may be used for moving heavy loads, its chief justification still remains the moving of people."

The question as to whether better roads have come because the constantly increasing use of automobiles and motor trucks demanded them, or whether the use of automobiles has been increased because of better roads, is still a mooted point. One thing is sure—the road problem has changed greatly in the past 15 years. In 1914 there were only 1,700,000 motor driven vehicles on the highways. In 1920 there were over 9,000,000, and the use of the highways had increased in a period of five years from 500 to 1,000 per cent.

Outstanding Results of Federal Aid

Up to March 1, 1921, a total of 4,976 miles of road had been completed under the Federal aid plan, and at that time there were 17,056 miles additional under construction, upon which work estimated at 45 per cent of the total cost had been completed.

The difficulties of transportation, the lack of materials, the insufficient number of contracting organizations, the scarcity of adequate equipment, and the general shortage of engin-

ering personnel in connection with highway construction during the past two years, however, have kept road building activities down to about three-sevenths of the full program. This year the bureau is ready, the states are ready, and the funds are available to push highway construction on a 100 per cent program. It is estimated that from all sources approximately \$622,000,000 is available for county, state and federal highway work during 1921.

The Division of Farm Drainage Investigation renders assistance to farmers mainly along the two principal lines of drainage, namely, the drainage swamp and overflowed land, and the improvement by drainage of land already under cultivation. The principal field of drainage work lies east of the 100th meridian, although the irrigated section has its own drainage problems due to the artificial application of large volumes of water to the soil and the leakage from irrigation canals.

The Division of Rural Engineering is especially concerned with making life on the farm even more worth living. The development of domestic water supply, sewage disposal, electric light plants and power, gas engines and mechanical equipment for the farm constitutes a large field of possibility. This division handles problems of this nature and all mechanical problems relating to the farm.

MAKING BLANKETS AND SUITINGS FROM WOOL POOL

(Continued from page 5)

In 1920 wool was shipped to the state office for grading, weighing and all handling, which was accomplished at less than five cents a pound. More than 1,500,000 pounds of this wool have been sold. In late March the farm bureau was getting 16 1-2 cents for the very poorest grade wools up to 33 1-2 cents for the best grades. Local buyers throughout the state were said to be offering ten to twenty cents for the 1921 clip.

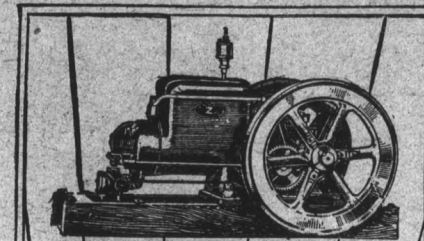
Experience and study has taught the Michigan State Farm Bureau even more economical methods of handling wool. When the state pool opened April 1, for the 1921 clip there were 100 wool department grading warehouses which were scheduled for the state's 83 counties, several to a county in the more important wool sections. Three teams of expert graders were touring the state grading and weighing wool in the presence of growers and offering a substantial cash advance on the spot. The educational feature of the 1921 wool handling program of the farm bureau is augmented by extension men from the Michigan Agricultural College.

Wool will be stored in the various grading warehouses until it is sold. In 1920 the entire 3,000,000 pounds of wool paid a freight of half to three-quarters of a cent into Lansing, plus additional unloading, hauling, piling, storage and sorting charges which could not be avoided, but which were handled with remarkable economy. In 1921, says Mr. Hankins, the state-wide grading and storage plan will eliminate local freight charges, the foregoing extra handling. The fact that the wool is handled locally and in relatively small lots is expected to expedite the grading of the entire pool. Warehouses have been rented at nominal fees, says Mr. Hankins, and the initial reduction in handling expenses together with what assistance is expected from the sale to wool in manufactured form, is expected to reduce wool pool handling costs to an absolute minimum.



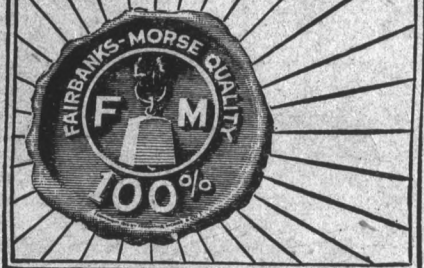
Thomas H. MacDonald

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The second avoids the possibility of your money going astray in the mails or being lost. We often have our friends write us that they sent currency or stamps, which we cannot find any trace of, but money sent by mail in any of the above forms, are a receipt in themselves, or if lost, can be secured.

The change in date of expiration following your name on the address label is your receipt, and in the busy spring months, when our mails are loaded with renewal and new subscriptions it generally takes from two to three weeks to acknowledge your remittance and correct your date.

The Michigan BUSINESS FARMER



An Independent
Farmer's Weekly Owned and
Edited in Michigan



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China Relief

ONCE MORE the gaunt specter of hunger rears its ugly form threatening the lives of millions of people and once more the rest of the peoples of the world are asked to give of their substance to relieve the suffering. In a certain province of China, men, women and children are dying like rats in a flood. Most of them are farmers. Last year there was no rain and the crops failed. The meager surplus remaining at the close of the great war was soon exhausted, and then there was nothing for many of them to do but to lie down and die. Pitiful, almost unbelievable, stories have come from the affected province. Investigators tell of old men and women and crippled children devoured for food when the pangs of hunger robbed the stronger of their will and reasoning powers. Possibly some of the stories may be exaggerated, but the authenticity of enough of them have been established by actual photographs and investigation, to prove that a vast nation of people are slowly dying of starvation. America is asked to contribute money to feed these suffering ones. True, they are not of our blood and our faith. But shall we hesitate for that? It is enough that they are human beings descended from the same divine source whence came all the other races of the world. We must not let them starve. We will not let them starve. Small though our contributions may be, we are sure that they will receive the blessings of the Most High.

Are There Too Many Organizations?

"I would like to ask what your opinion is of a Grange organization that is antagonistic to the Farm Bureau and why is it necessary to belong to both or to finance both, also the co-operative sandwiched in between. Why can't either one do the work of the others or are all three being boosted just to get the last and only dollar the farmers have left after all others have gotten through with him?—A reader of the best farm paper published, Charlevoix county.

WELL, READER of the best farm paper published,—that's a fine compliment,—you have asked a question which has been ranking in the minds of a lot of other farmers ever since the Farm Bureau came into existence. My opinion of a Grange or any other farm organization that is antagonistic to the Farm Bureau, or of the Farm Bureau that's antagonistic to other farm organizations wouldn't look well in print. Jealousy and dissension have destroyed farm organizations before and will destroy them again, "if you don't watch out". I'll have to admit that the Farm Bureau hasn't used the tact that it should in its relations to other farm organizations. It came into the field too much like a young upstart that intended to have everything its own way and tried to elbow the other farm organizations off the map. Naturally the other farm organizations being older in

years and experience, resented that kind of treatment. Their dignity was offended. They became antagonistic right from the start. The farm bureau has seen the error of its ways and is trying to make amends, but it hasn't yet gone as far as it should to establish working relations with other farm organizations without destroying their integrity.

There is no good reason why there should be so many competing co-operative farm organizations. Co-operation is the opposite of competition. The co-operative idea carried out to a logical conclusion should end all competition among farmers and farm organizations. But at the present time the functions of the existing farm organizations are so radically different that it is virtually impossible to dispense with any of them. The Grange has always been primarily a social and educational organization. It has given little attention to marketing problems. The exact converse is the case of the Farm Bureau. It is taking great strides in the marketing field but its progress along social lines has been unimportant. The Gleaners, on the other hand, embody all these functions, social, educational, marketing, as well as a fourth, its primary function, supplying its members with insurance. Who would say that either of these three organizations should be destroyed or even impaired at the present time? It may be during the leavening processes of time that some one of these organizations may take over the functions of the others and fill all the co-operative needs of the farmers. But that time is not in the immediate future. Certainly it would be folly for Grangers to even think of quitting their Grange or Gleaners their Arbor until the Farm Bureau has fully demonstrated its usefulness, and even when that happy time arrives, we think there will still be an important place for the other farm organizations mentioned.

Ignorance

"THE FARMERS are making money," says an ignoramus residing in the city of Detroit. Commenting upon agricultural statistics showing the comparatively meager returns from farming, this pretender to knowledge says, "As time goes along the only result of the statistics is that the farmer is still going along in the biding satisfaction, comfort and profit of his farm home, occasionally adding another automobile to his present stock on hand." In one breath this intellectual giant compares the farmer with the laboring man and says: "How many ministers, teachers, city clerks, employees in city conditions, the increasing number of unemployed now occupying the park benches, are making 5 per cent on any investment and banking an average of \$500 after home and fuel and food are accounted for?" In the next breath he compares the farmer to the capitalist. "The American farmer today," he says, "owns as much property as the combined valuation of all the railroads, all the manufacturing industries and all the banks in the United States, and in addition owns a goodly share of these banks, factories and railroads."

Oh, ignorance, what crimes are committed in thy name! What misunderstanding and injustice follow in the wake of thy preaching! It is forsooth singular that the man who seeks to "enlighten" his fellow men upon the superior pleasures and financial rewards of farming by comparison with the rewards of other occupations should always leave out of the reckoning the only class of people with whom it is fair to compare the farmer, to wit, the banker, the merchant, the manufacturer and other owners of invested capital. Always the farmer must be set alongside the down-trodden laborer who employs neither capital nor, in many cases, brains to aid his hands. The man who starts life with nothing but a good set of muscles and a willingness to work is not entitled to receive the same compensation as the man who has trained his brain, and through labor, industry and thrift has saved and invested capital. No business enterprise of a town or city is considered a success that does not yield at least six per cent upon the capital after a good salary is paid to all execu-

tives. A much larger percentage of commercial and industrial ventures yield dividends ranging from ten to thirty per cent, and the salaries paid are proportionally high. In no case are the risks so great, the labor requirements so exacting, or the profits so meager as in the farming business. Compare the farmer's returns with the returns of other owners of invested capital, and see where you get off at.

Shall I Plant Potatoes?

SEASONS WHEN potatoes are high and seed is scarce farmers do not ask themselves. "Shall I plant potatoes?" They simply go ahead and plant. But seasons when prices are low and seed can be obtained for a song, many worthy farmers ponder long over that portentous question. Today in Michigan there are thousands of farmers utterly sick at heart over their losses in potatoes, and have made a solemn vow "never to plant another spud." Of course, that is a foolish vow. But enough farmers make that vow one year and break it the next to cause an under-production of potatoes one year and an over-production the next.

To get some idea how acreage and yield fluctuates from year to year let us consult the figures of the U. S. Department of Agriculture covering a period of ten years. We immediately discover a very remarkable fact. We find that the acreage in 1910 was 3,720,000 acres. In 1911 the acreage was 3,619,000 and for five consecutive years the first two figures of the acreage alternated between 37 and 36, until 1916 when it dropped to 35. In 1917 it jumped to 4,384,000, and then dropped the next two years. In 1920 it was 3,929,000. Although the yield per acre during this period varied greatly, the production generally alternated in somewhat nearly the same proportion as the acreage, and with a few exceptions the price received per bushel followed suit.

In consideration of these facts it would seem like the farmers of Michigan would be taking very little chance in planting a normal acreage of potatoes this year. There will always be a few farmers in every state who cannot be convinced that this is good business and will accordingly drop out of the game so that it should be fairly safe as in other years following a year of over-production to plant potatoes. What do you think about it?

Future Trading

A BILL intended to abolish "future speculative trading" on Boards of Trade has been passed by the House of Representatives and will be acted upon shortly by the Senate. This bill does not forbid "hedging" which is considered a necessary and legitimate method of protecting both buyers and sellers of grain. The bill imposes a tax of 20 cents per bushel upon all speculative future trades which, it is believed, will wipe out that form of trading and reduce the number of times in which the nation's cereal crops may be "bought" and "sold" without actual delivery of grain. Of course, there is opposition to the measure on the part of the Boards of Trade, which like the booze seller of other days, have awakened too late to the evils of their business. No amount of reforming at this late date will prevent the adoption of legislation making boards of trade public markets under the supervision of the Secretary of Agriculture and allowing farmers' co-operative organizations the full use of their facilities.

Bandits got \$10,000 at a chauffeurs' club in Buffalo. Just one chauffeur's fares for a day, we would judge, from the rate one recently charged us for a four mile trip.

A Kalamazoo photographer specializes in photos of departed spirits. Our friends with cherry red nose will probably be having portrait sittings made.

"Says Wife Married Twice in Two Months," reads a headline in a Detroit paper. Another example of how quick a woman can change her mind.



What the Neighbors Say



"WHO GOT THE PLUNDER?"

WHO GOT the Plunder," editorial of April 9, is good. Now before Congress can do what your closing paragraph demands somebody must find out how to do it. What is your idea for that "gyroscope?" Until that is invented nothing else will do any permanent good. Get that in practical working order and the thieves will be punished just like the pig who finds his hole in the garden fence stopped up.

The law of supply and demand works too slowly to be an efficient price regulator. Moreover it is unjust when it does work. It cannot be ignored but can and should be intelligently enforced. The way to do that is to so regulate production and distribution that enough of every commodity will always be in sight to supply all reasonable demand, without forcing a surplus upon any market at any time. Quite a problem, especially for the farming industry which produces so many perishable commodities and whose rate of production is so largely controlled by unmanageable weather conditions. To solve it we must perfect our Farm Bureau organization until we own or control the means of transforming our perishable products into less perishable forms and local storage warehouses for all our products. As for terminal warehouses, it seems to me that every industrial center should own and operate storage warehouses large enough so it can buy food products in quantity direct from the producer and keep sufficient supplies on hand to avoid danger of shortage thru any possible transportation trouble. Storage expenses would thus be divided between producer and consumer to their mutual advantage.

But such control of production and marketing would make the Farm Bureau as powerful a "trust" as any now existing, and farmers are too much like other human beings to be safely trusted with absolute power to fix their own prices. Fair prices for farm products depend largely upon the relative price of other commodities and will remain fair only so long as these other prices remain unchanged. In order to stabilize fair prices for any one industry, fair prices for every other industry must be determined and stabilized. This can be done only with full knowledge and consideration of the peculiar problems of each, and by persons familiar with those problems. Imagine every American industry as efficiently organized as a few big trusts are now. Suppose that, instead of sending smooth-tongued lobbyists to Washington to confuse the minds of Congressmen, at exorbitant salaries, they select honest representatives, thoroughly familiar with their own industries, to meet each other at some convenient place and talk things over.

Their first problem would be to fix the price of labor, to standardize wages, salaries and interest rates so that the cost of each grade of labor would be the same for every industry. It would then be possible, taking the simplest raw materials first, to figure out reasonably fair prices for all commodities and revise them from time to time as conditions change. It would also be possible to check over-production and head off undue scarcity of any particular commodity in advance, by transferring labor quickly from one industry to another according to the needs of each.

But an industrial congress exercising such powers must fully represent labor as well as management. The Plumb railroad plan divides representation equally among labor, management and the "general public." As the latter consists merely of the laborers and managers of all industries it needs no special representation in such a body as we are considering. But if labor is to be fully represented its representatives, in most industries must be more numerous than those of management

but in the nature of things, however, they could not understand some problems of management as fully as those whose duties require them to meet such problems every day. It would seem wise therefore to have the two classes of representatives vote separately and require a majority of each for final decision, much as the two houses of congress do now. Besides the fixing of prices and wages the tariff question and perhaps others relating to industrial government might well be turned over to such an industrial congress.

This is but the rough outline of a plan. Many details of any such plan can be perfected only in the light of experience. Please expose its weak points and suggest something better. —Stacy Brown, Ionia County, Mich.

The success of your scheme is predicated upon the theory that each party involved wants only a square deal and a fair share of the profits of industry. Capital is convinced that labor wants more than its share of the profits and labor is equally convinced that capital wants to hog them all. If we could be sure that capital is willing to give labor a fair wage under all circumstances, and that labor does not seek more than it is entitled to, and that both want to see the farmer prosper, then we might have some hopes of solving the problem of their relations by an industrial congress. But we have noted very recently how utterly futile arbitral efforts at settling wage disputes have been. No method of arbitration can succeed unless its decisions are agreed to voluntarily by the parties involved, or rendered binding by law. The industrial relations court of Kansas comes the nearest to solving the problem, because under the Kansas law its findings are binding. An industrial court composed of judges elected by the people, with power to investigate industrial conditions, such as wages, working and living conditions, profits, etc. and to render their decisions accordingly which would be absolutely binding except for appeal to the Supreme Court, might be a satisfactory solution to the problem. But even that is doubtful because we are already receiving complaints from Kansas that the law of that state interferes too much with the "personal liberty" of both the employer and employee.—Editor.

*PUBLICITY FOR THE FARMER

I HAVE BEEN reading your comments, and also the letters of your readers on the Michigan Farm Bureau, and the Federation of Farm Bureaus, with much interest.

I have been wondering why Congress was so much more friendly to the Federation in the early days of the last session and showed a marked lack of interest in the latter part of the session. No bills designed for the relief of the agricultural interests of the country having become laws.

Is it a lack of the proper kind of publicity? In the experience of the writer, many of the residents of the smaller cities in this state carry the idea that no matter how low a price the grower gets for his produce, it does not cost him anything, but is clear gain.

The Bureau or the Federation

should not expect the press of the country to always give them free space in their publications.

As stated above, if some of the smaller cities need an educational advertising campaign, the large cities surely do.

This brings up the question, why has none of our dues been apparently used for a series of educational advertisements in the cities? I wonder how many of the Farm Bureau members know how their \$10 is apportioned? What the expenses of the Bureau are? Is its present method of doing business wasteful or not? What does the M. B. F. think of an advertising campaign as suggested above?—Arthur Hamlin, Gratiot County, Mich.

I think it is an excellent idea. In fact I am hoping for the day may come when the Business Farmer may be prosperous enough to buy advertising space in the journals read by the consumer to teach him the truth about the farmer. But it costs a lot of money to do this. They should set aside a hundred thousand dollars for the purpose of telling the farmer's story through the national magazines. A proper publicity campaign would win millions of friends for the farmers and assist them wonderfully in securing needed legislation. When the people of the world understand each other's problems better there will be less need for them to organize against each other.—Editor.

FARMER BANKS

I HAVE for several years advocated strictly farmer banks which could loan money at a low rate of interest,—not more than four per cent,—on long time terms. I read that they have such a system in Australia which is highly satisfactory to all. Give the farmer a loan on his farm at 50 per cent cash value exclusive of the buildings at 4 per cent, 12 to 15 years and witness the prosperity of agriculture. To me the action of Congress placing \$70,000,000 to aid the farmers is all "bosh," and done by those who do not care about the interests of anyone but themselves. Only for the strong resistance of the money power this method of which I speak could soon be in operation. If the farmers would only awake to a true appreciation of the advantages of better credits and lower money, they could soon obtain their wishes despite all. See the report of the delegation from the United States in the spring of 1913, of what they found in Austria and Germany. Would be pleased to see your views in M. B. F.—C. E. Hersey, Shiawassee County, Mich.

I'll admit that we are a long way yet from meeting the credit needs of agriculture. The "big idea" has not yet been discovered. There is a bill before Congress patterned after a German plan to provide a system of "personal credits" for farmers. Whether that will do the business I am not sure. While in Europe this summer I expect to investigate the co-operative credit systems which have proven such a success and see if they would be applicable in this country.—Editor.

Musings of a Plain Farmer

SABBATH morning. On my entrance to the stable I found the team standing quietly among splinters of rails and mangers. I was frantic. Refused them feed and started to milk swearing infinitely. My wife seemed to share my feelings and broke the handle from my stable scraper. It fell violently over the back of our pet registered Holstein.

We are in no state of mind for workshop this day.

I ate a hasty breakfast. Now with hammer and saw I must repair the wrecked stalls.

This is a quiet morning. How can I muffle the sound of this hammer so the neighbors cannot hear? I'll shut the door.

Good thing the Sunday blue laws are not in force.

Well I've locked the tool box again.

Hope the horses don't have any more such parties. I'll cut down on the 28c oats.

Guess I'll call a meeting in the house. See if we go visiting or go to church. The visit carried unanimously.

We are travelling with the gas lever down for fifteen miles. Spend a few hours with some old and cherished friends. Meet another very delightful family at their home.

We are home again. The cows are obliging tonight; they are up in the yard.

Chores passed off without a slip.

Say, it's soothing to go away from the farm occasionally.

I am going to read a chapter from the Bible and then to bed.—Arthur P. Ballard, Ubly, Mich.

JENNIE BUELL APPROVES

THEY SAY one should have at least one hearty laugh each day to maintain good health. Well, you furnished me with several doses when you answered the Kansas woman on the Non-Partisan League question!

I must tell you that I found myself seated at table, one night at a dinner during the Cleveland meeting of the League of Women Voters, with a woman from Kansas, one from New Jersey, one from Minnesota, two from Illinois and one from North Dakota. When I realized that Kansas and North Dakota were face to face at short range, I wondered what would happen; but it was not long before all of us were leaning forward and exchanging information and opinions as fast as women could talk. The North Dakota woman was wife of the Lieut-Gov. of that state and the Kansas woman was Woman Publicity Member of the State Republican party of her state and therefore well posted. Every woman of the group recognized the fearful odds at which the North Dakota farmers have had to work to better their conditions and there was expressed only hope that something better will come out of their struggle than they have had in the past. It is very important that we should get the facts about that struggle before our Michigan people. Not long ago I heard a Dr. F. A. Perry, representing the Coalition Committee of Detroit, speak most rabidly against the League, fearful lest Michigan farmers might embrace its faith. He gave the impression that the League was disloyal to the constitution, but acknowledged, in reply to the question, that he did not know that the U. S. Supreme Court had eight months before upheld the lower courts in the opinion that the state of North Dakota had a right to its plan of state elevators and mills. It is not necessary that we take sides either for or against the League, since the contest between its friends and opponents is so bitter that at our distance we can hardly judge impartially; but there are a few facts that are fundamental that should be more generally known. Whether the outcome is for or against the League as an organization, there is being staged in North Dakota one of the fiercest and most dramatic struggles that has ever been led by farming people who seek to better conditions under which they live and work.

May I comment, also, upon your editorial, regarding Mrs. Carrie Chapman Catt's remarkable little speech at Cleveland, in the last Farmer? Mrs. Catt followed Will Irwin's portrayal of what the next wars would mean—"Slaughter, by wholesale, rather than by retail as in past wars." She urged that the people within sound of her voice "might make of themselves a wedge that would turn the world away from war." The convention, before it adjourned elected to send six women to present their resolution for disarmament to President Harding. This they did, going from the convention to Washington, but the President was behind with his schedule and could give them but ONE MINUTE. It is to be hoped, however, that the pilgrimage will not be lost upon other people and that women and men will ally themselves with the movement for disarmament. Every one counts.—Jennie Buell, Secretary, Michigan State Grange, Ann Arbor.

Thanks for your letter, Miss Buell. It is very encouraging. We know you as one who has an open mind, progressive, unafraid to be tagged "radical" for your views, believing always in the right. Your attitude upon these subjects carry with it a good deal of influence, and I am proud to acquaint our readers with your opinions.—Editor.



The Farm Home

A Department for the Women



THE SMALL TOWN

TO FIND your niche and be happy therein, I believe that is what I have done. I live in a small town and am happier here than elsewhere having lived on a farm with the nearest neighbor a mile or so away.

It was lonely for me. Few friends calling, no clubs and seldom a party. I was glad when circumstances permitted us to move to a city. I had a small apartment on the corner of one of the city's most prominent avenues, very noisy and very expensive. I lived there two years and knew only the woman in the apartment next to me. We were not intimate but out of the loneliness of our hearts we spoke and smiled at each other whenever we met. Our apartment was one of ten. I never found what the people in the other apartments looked like. There were clubs and social affairs but they did not interest me for I knew no one and was not invited to join anything. My world was within my four walls and the days were long waiting for my husband to return for dinner in the evening. This surely was not my niche and I was very lonely and unhappy.

We are now living in a town of about ten thousand. We have a circle of friends. I belong to several clubs and take an active part in the civic and social affairs of our small city. Have a home of our own on a lovely, quiet street, surrounded by a lawn whereon are my trees, shrubbery and flowers.

A home like this in a city would be impossible on our income. The big city is near by and a fine paved boulevard stretches between, giving us many advantages.

We have nerves that are steady because they are not frayed by constant noise, bodies that are healthy because we get plenty of fresh air the surrounding country blows in on us and friends to make us happy. I have found my niche.—A Reader of the M. B. F.

Here we find the small town coming into its own. It is generally left out of the conversation altogether. Truly it does have many advantages and I am glad our reader has seen fit to mention some of them.

A FEW MORE RECOLLECTIONS

THE HOME of Wm. E. Gladstone is near Chester on the river Dee (famous in song) and also that of the Duke of Westminster, at that time England's richest landlord, whose place we visited. The grounds about the residence are very beautiful, sloping down in terraces to the river Dee, with the Welsh mountains in the distance. The interior of the residence almost baffles description; in no other place did we see such magnificence. We wandered through the rooms for hours, lost in admiration and wonder, trying to realize how it would seem to live in such a place amid sculpture in cararra marble, paintings by old masters, rare tapestries, tables with tops of solid amethyst and countless other rich and beautiful things. The library, an immense room, was finished in American black walnut inlaid with boxwood and mother-of-pearl. It easily contained 2,000 books.

The estate of the Duke of Chester comprised 32,000 acres, while the residents of the village had yards so small that it took two of them to hang out a fair-sized washing. It seemed to me at that time that England's greatest need was a fair division of the land. The Duke also owns 600 acres in the heart of London, in the aristocratic west end. Even the houses of parliament and Westminster Abbey stand on land which is part of his holdings and as his estate is entailed, the government can never buy nor the owner sell the land. An American gentle-

man who had the bad taste not to want to live in his own country wrote to the Duke of Westminster asking if he could lease a certain piece of land in the west end of London on which to build a house. He received the reply that the Duke would lease him the land if the house to be built would not cost less than 2,000 pounds. The American sent in the reply that his stables would cost that much.

From Chester we took one of those funny little English trains to Liverpool and then on to Glasgow and the highlands of Scotland filled

spoons shortening and enough flour to make a smooth batter. A trifle thicker than cake batter. Stir lightly, do not beat. Set in warm place to get light, about 1 1-2 hours.

When risen to double its bulk, stir in warm flour to make a dough that can be kneaded. Knead 15 to 20 minutes then mold into loaves at once. Let rise to double the bulk and bake in quick oven. I test my oven by placing 1 teaspoon flour on a pan and placing in the oven. If it browns evenly in 5 minutes the oven is right.

Remember, warmth is necessary

Old Times, Old Friends, Old Love

THERE are no days like the good old days,

The days when we were youthful!

When humankind were pure of mind
And speech and deeds were truthful,
Before a love for sordid gold
Became man's ruling passion,
And before each dame and maid be-
came

Slave of the tyrant, Fashion!

There are no girls like the good old girls—

Against the world I'd stake 'em!
As buxom and smart, and clean of heart.

As the Lord knows how to make 'em!
They were rich in spirit and com-
mon sense,
And plenty all supportin';
They could bake and brew, and
taught school too.

And they made such likely courtin'!

For that precious grace; God gave us!

When we were boys together!

When the grass was sweet to the
brown bare feet
That dimpled the laughing heather;
When the pewee sang to the sum-
mer dawn

Of the bee in the billowy clover,
Or down by the mill the whippoorwill
Echoed his night song over.

There is no love like the good old love—

The love that mother gave us!
We are old, old men, yet we pine
again

There are no boys like good old boys
So we dream and dream of the good
old times,

And our hearts grow tendered,
fonder,

As those dear old dreams bring
soothing gleams,
Of heaven away off yonder.

for making good salt-rising bread. I have used this recipe for 10 years and have never had a failure.—Mrs. Bert J. Van Oss.

DEBATING CLUBS

IN YOUR debating club why not take the "Country Paper" as one topic. The country paper is the real voice of the people and reflects public opinion with greater accuracy than the big city daily.

If more attention had been paid by Europe during the peace conference to our small town weeklies, a more accurate idea would have been held as to the real sentiment of our people in regard to the League.

There are wonderful and almost unlimited possibilities in the movies. Taken as an educative force their influence might be untold. What an easy and lasting acquaintance we could have with the best books, with geography and history. Alas, they are often put to less noble and worthy purposes! Would you not like to see the books of Dickens and Stevenson and even Victor Hugo on the screen and the novels of George Eliot? A really good thing always attracts.

There is one thing on this continent that should be and possibly is a splendid example to all of Europe, seething with age-old disputes, and that is the 3,000 miles of peaceful boundary between the United States and Canada. We may well point to it with pride.

Another interesting subject is the movement toward the west of the center of population and the reason for it.

What about the League of Women Voters? What are they doing and are their efforts repaid with good results.

I can furnish a little material on most of these subjects.

CORRESPONDENT'S COLUMN

MANY THANKS, Mrs. Van Oss, for the salt-rising bread recipe — hope many of our readers will have the success you have had in making it. Last week's recipe sounded very good indeed but we are glad to publish several.

To Mr. A. W. W., of Julesburg: Your postal received. I would be glad to publish the directions for making a fireless cooker but we would have to give up our entire department to it for at least two weeks so I will send you the full directions illustrated and suggestions for its use which I have no doubt will be very valuable to you.

These directions are issued by the U. S. Department of Agriculture and may be procured by writing to the Division of Publications for Farmers' Bulletin 771. I hope you get your "good hot dinner" and get it when you want it. I admire your pluck.

Market for Stories

As I am very much concerned about earning a few extra dollars, I thought I would turn to your corner of the Business Farmer and ask some advice.

Will you kindly tell me what papers will buy short stories, children's stories, news, or feature stories?

An early reply will be very much appreciated. Thank you very much.—A Farmer's Young Daughter, Marlette, Michigan.

The best way to find out what papers or magazines will accept your work will be to try a number of them.

So much depends on the class of material you send in and what subjects you write about.

Go to some news stand, look over the papers and magazines and decide where your writings would best fit in and then write and ask if they will look over something from your pen with the view of buying it if satisfactory. If you will send me your address, I will mail you two offers that may be attractive to you.

In writing for any paper or magazine, use one side of paper and leave a good margin. Always enclose stamps for return.

LIFE IN A SMALL TOWN

HAVE YOU read "Main Street," by Sinclair Lewis? It is one of the most talked of of all the new books.

It is a pretty true picture of life in a small town, if not in Michigan, then just a little farther west. There is nothing inspiring in it and no really lovable characters which it seems to me are to be found in every community. But as you read it, you realize the truth of conditions pictured, although the picture is not very pleasant. My test of a good book is with how much reluctance I lay it down and how often my mind recurs to the characters and incidents. I closed Main Street and said "It is sordid." I do not care to remember it.

METHOD OF LAUNDERING

WHILE cotton, linen, wool, and silk are all laundered by washing and ironing, certain modifications of the process are made according to the nature of the fibre and whether it is colored or white. Washing displaces the dirt by forcing soap and water through the fabric. In doing this more or less friction may be used, the soap may or may not be rubbed directly on the fabric, and the process may be carried on with widely varying temperatures. Allowing clothes to get too soiled is more destructive to them than hard wear, because of the increased scrubbing needed to clean them.

The family washing should be sorted into groups of white and colored clothing, with separate piles

for wool, for silk, and for linen and cotton. Colored clothing, silks, and wools should be washed separately, for they can then be given special treatment. Torn places should be mended, and stains should be removed before the garments are washed.

White Cottons and Linens

Soaking clothes overnight or even for a shorter time loosens the dirt, saves time and lessens wear. Clothes may be soaked by covering them with cold or lukewarm water, or by wetting, soaping, rolling and putting them into a small amount of water. The latter method takes more time but is more effective if there are no stains. Soaking for a short time in lukewarm water is as effective as longer soaking in cold water. Putting very dirty clothes to soak with cleaner ones may add greatly to the labor of washing the latter. Washing soda, ammonia, borax or other chemicals are sometimes added to the water if the clothing is very dirty. This may be done simply to soften hard water or as an extra help in loosening dirt when the water is already soft. In the latter case the chemicals are not likely to help unless soap is used with them.

It is safe practice to dissolve 1 pound of washing soda in a quart of water and mix 1 tablespoon of this solution in a gallon of soapy water. If the soda is mixed directly into the water used for soaking, there is danger that it may not be entirely dissolved and may eat holes in the clothes. The necessary amount of ammonia depends on its strength; about 3 tablespoons to the gallon is perhaps a safe allowance either for the dilute "household" ammonia bought at grocery stores or for the concentrated ammonia bought at the drug store and diluted at home to about eight times its original volume. From one to one and one-half teaspoons of borax to a gallon of water is the amount commonly suggested for soaking in soft, soapy water. If the water is hard, soaking of any kind is unsatisfactory because of the scum that settles on the clothes. Soap will help to prevent scum from forming.

FROM HERE AND THERE

SOME FARM women have solved the problem of machine oil on their husband's work clothes by rubbing lard into the oil spots, or if the grease is spread dipping the garment in gasoline, airing, and then washing. If the men will rub a few drops of kerosene over their hands before washing in soap they will find the black grease comes off.

Sixty-four muscles of the face must work to make a frown while a beautiful smile can be accomplished with thirteen muscles. There is a whole sermon back of this physiological fact.

Baking soda in rain water will remove discolorations from enamel ware if boiled long enough.

Clothes that have become yellow may be made white by laying in sour milk a few days and then washing in the usual way.

SELECT SEED WITH CARE FOR 1921 POTATO CROP

(Continued from page 4)

Corrosive sublimate crystals should first be dissolved in a small quantity of boiling water and then added to the 30 gallons of water.

Corrosive sublimate corrodes metal, therefore, all of the vessels used in this work should be earthen or wooden. One should also keep in mind that this material is a deadly poison and every precaution should be taken to keep it away from children and livestock. After four batches of potatoes have been treated the solution loses its strength and is not effective. It can, however, be kept at its original strength by adding one ounce of corrosive sublimate dissolved in one quart of hot water after each batch of potatoes is treated. Enough

fresh water should be added so that the 30 gallon quantity is maintained.

After the potatoes have been treated they should be spread out in a thin layer and dried quickly. Do not place them in piles or in bags as they are liable to heat. Many poor stands have resulted as a lack of this precaution. Potatoes should be dormant when treated with corrosive sublimate. It will be a hard matter for growers this spring to keep potatoes dormant until planting time. Potatoes can be treated now and then be placed in thin layers on the barn floor where they will be exposed to the light. They will keep quite firm when handled in this manner and will develop short green sprouts.

Cutting and Planting the Seed

Seed potatoes should be cut shortly before they are planted. If the cut seed is held over some little while before planting it should be spread out and stirred two or three times a day to prevent the seed from heating. When cutting the seed discard for seed purposes all potatoes that show discoloration in the flesh as such markings usually indicate disease. The seed pieces should be blocky weighing one and one-half to two ounces and should of course contain one or more strong eyes. The growing sprout is dependent upon the seed piece for its sustenance until its root system becomes established. Very small seed pieces dry out quickly and cannot give sufficient nourishment to the sprouts. It does not pay to be too "economical" of seed. The soil should be in a cool moist condition when the seed is planted. Cut seed planted in a hot dry soil is very apt to give a poor stand. Whole seed ordinarily will withstand more hardship in the soil and usually give good stands even in very dry soils.

Planting distances are determined largely by the moisture and plant food content of the soil. In some sections of the state it is the general practice to plant 32 inches by 32 inches or 36 inches by 36 inches. Such a spacing allows for cultivation both ways which saves hand hoeing. However, in favorable seasons such wide spacing is apt to produce potatoes that are oversize and hollow. In tests conducted last year it was found that closer planting, that is, the rows 32 to 36 inches apart and the hills 16 to 18 inches apart in the rows gave increased yields of 15 to 30 per cent over the check row system of planting. Furthermore the percentage of oversized, rough unmarketable potatoes was reduced.

Early Cultivation is Important

Cultivation of the potato crop should start before the plants are up. By giving the surface soil a few stirrings with a spike tooth harrow or a weeder many weed seedlings will be destroyed and considerable labor will be saved later in the season. The first cultivation between the rows should be given soon after the plants are up. This should be quite deep and close to the plants. Later cultivation should be more shallow. Much harm is done the potato crop by deep cultivation throughout the growing season.

Begin Spraying Operations Early in the Season

Give the growing plants a good start by protecting them from insect and disease attacks. Spray with arsenicals and Bordeaux Mixture before the troubles appear. The first spraying should be made ordinarily before the plants are six inches high. The arsenicals such as Paris Green and Arsenate of Lead are effective in controlling potato bugs, etc. Bordeaux Mixture aids in repelling leaf hoppers which are small green insects that cause serious damage to the foliage; it is also effective in preventing attacks of blight.

Since the arsenicals can be combined with the Bordeaux Mixture the extra expense involved in using this mixture is very little. Growers who are not familiar with the preparation or Bordeaux Mixture should write to the Michigan Agricultural College for Special Bulletin No. 85 which describes in detail the handling of this material.



Here's the best way to blast small stumps

WITH the driving iron as shown, or a crow-bar—make a hole three or four feet deep under center of the stump. Loosen driving iron by striking on each side and pull out carefully to prevent loose dirt and stones entering the hole. Insert one or more cartridges (number depending on size of stump) of



RED CROSS 20% DYNAMITE

Unless the soil is wet, each should be slit with a knife except the last one containing cap and fuse (the primer). Fill hole with clay or dirt. Tamp with wooden tamping rod (a broom stick makes a good one)—gently at first and more forcibly as hole becomes filled. This ensures complete confinement of explosive gases and a successful "shot."

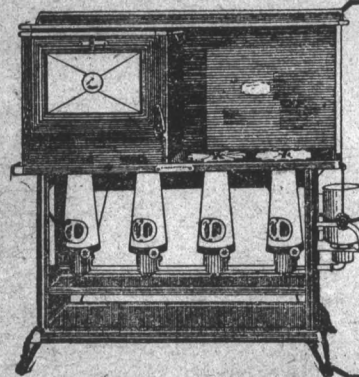
Your dealer can furnish you with Du Pont Explosives and Blasting Accessories.

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Annual White Sweet Clover
This is the new clover discovered by Prof. Hughes. All the 1920 crop of seed is exhausted. But seed of an early strain planted in Texas since Xmas has reached maturity. You can get it in time to raise a crop yet this year. Make big profits growing seed for yourself and neighbors. Order from The Henry Field Seed Co., Shenandoah, Iowa, or direct from The Grower Who Guarantees. The price is \$5.00 per pound.

THE DEGRAFF FOOD CO., DeGraff, Ohio

IS YOUR FARM FOR SALE?

Write out a plain description and figure 10c for each word, initial or group of figures for three insertions. There is no cheaper or better way of selling a farm in Michigan and you deal direct with the buyer. No agents or commissions. If you want to sell or trade your farm, send in your ad. today. Don't just talk about it. Our Business Farmers' Exchange gets results. Address the Michigan Business Farmer, Adv. Dept., Mt. Clemens.

Little Livestock Ads.

in M. B. F.

Do the Trick

The Children's Hour

DEAR CHILDREN: Every day more and more interesting letters from nieces and nephews come to my desk. Some of them are about trips—flower hunting, visiting, etc.—while others contain stories that were made up by the writers. Many write asking if I would care to receive original stories they have written. I would be more than pleased to receive and publish them on our page. If you are good at making up stories make up one and send it in. Also if you have had to write an essay about some great man or some country for school work send a copy to me for publication in "The Children's Hour." I am living in hopes that some day we can have two pages instead of just one. I have so many things I would like to print which I know you would enjoy but we haven't the space.

One little girl wrote to me this week and she said in her letter that she never knew how much Mothers' Day meant until she read my letter to you and she did all she could to help her mother on that day. She also wrote that she would like to have set aside one day in the year to observe as Fathers' Day. Let me hear from others about this. I will print this girl's letter soon.

How is your garden coming along? My lettuce, corn and peas are up now and everything is growing fine; even the weeds. It just seems as though when I cut a weed down

and turn my back a moment that when I turn around again it has grown up nearly as big as ever. But I'm going to keep after them and I'll win in the end.—UNCLE NED.

OUR BOYS AND GIRLS

Dear Uncle Ned:—I have been reading the M. B. F. and I thought that I would write to you. I am nine years old and am in the fifth grade. We have our arithmetic and grammar with the sixth grade. I have three sisters and one brother. Their names are Lester, age 14; Esther, age 8; Alta, age 6, and Lola, age 2. I went to a party last week. There were thirty children there. We played some games, then we ate our dinner all at one table. We then sang and spoke pieces. Then we made lemonade and popped some corn. We got home at 4:30. Wish some of the girls would write to me.—Edna Haystead, Coopersville, Michigan, R-1, Box 100.

Dear Uncle Ned:—As the little girl from Oakfield, N. Y. would like to hear something besides the age and the number of sisters and brothers in a family I will try and tell you what we have been doing this spring at our school. I go to the Rainy Lake school. Our teacher's name is Mr. Steele and the boys all like him. I think some of the girls do too because he teaches us games. One of the games that we have just learned is basket ball. We had an experience social and each one of us earned a few cents and bought us a nice basket ball. Then my sister and a few other girls and boys wrote some nice poems about how they earned the money. Maybe my sister will send you her poem next time.—Harry Vernon, Millersburg, Michigan.

Dear Uncle Ned:—I would like to join your merry circle. I was eleven years old, April 24th. I am in the fourth grade

at school. We take the M. B. F. and like it just fine. I like the children's page. I have eight brothers living and three sisters. I would like to have some of the boys and girls write to me. I am staying with my oldest sister. My mother died a year ago last October. My youngest brother is six years old. I am the youngest girl. For pets we have 3 old rabbits and 4 little ones. I think they are so cute. We have one cow and a two-year-old heifer and a horse. My father has one cow and a calf. He lost three, a cow and two calves last fall. I will close with a riddle. Long legs and crooked thighs, little head and no eyes? Answer: A pair of tongs.—Elma Elizabeth Davenport, Topinabee, Mich., Box 45.

Dear Uncle Ned:—It has been a long time since I wrote to the Children's Hour and I did not see my letter in print. I am 12 years old and am in the 7th grade. I made two grades last year. We have a basket ball and base ball and bat for good attendances at school. It was presented to our school by the county commissioner. I read the letter from the little girl in New York and will say that I cannot agree with her. Farmer's boys and girls cannot build aircastles of trips they are going to make for they very seldom can carry out their plans. I enjoy reading the children's letters telling all about their pets and brothers and sisters. If we want a farm "Children's Hour," we must tell about our homes so we can imagine seeing each with their pets and friends. I would like to hear from some of the boys and girls.—Margaret Lather, Manclona, Michigan, R-2.

Dear Uncle Ned:—As I took up the good old Michigan Business Farmer I saw a letter in there from a girl who said that she wished the boys and girls would write some stories and not just letters telling about their brothers and sisters and how old they were. As we probably will never meet any of these children I think it would be nicer if the boys and girls wrote stories of adventure. It surely would be better and more

interesting. So I am sending a story called "The Wicked Elf", and I hope to see it in print.—Raymond McConnell, Vermontville, Mich.

The Wicked Little Elf

Once upon a time long, long ago there was a wicked Elf called Tim. Tim lived under a stone surrounded by jagged stones. All the elves hated Tim for his cruel, mean ways. The flowers didn't even like him nor the birds. He didn't have many friends. One night as Tim was reading his wicked eyes fell upon some verses which were called, "Good and Bad." They read like this:

The little Elves that are bad,
Are hateful, hateful things,
The cruel words some say hurts and stab
Like that of a lash that stings.
But all good little Elves they say
Are sweet and good and fair.
They sing and work all day.

At night they listen to the bluebells
Play their music so sweet and rare.
Their music echoes from hills to dells
And from there to the sweet lilies fair.

This made Tim very angry. He decided that he would punish the one that wrote the poem if he could find them. Just then a queer little figure appeared before Tim. "Who are you and why are you here?" he said in his gruff way. "Why, don't you know me? I am Kindways." "Kindways," echoed Tim. "I don't want you here. Go!" But the queer little figure did not move one step. Tim again shouted "go" but the queer little figure didn't, so Tim struck at him but there wasn't anything to strike at, he was gone. Instead Tim found himself falling until he landed with a thud upon a floor. He seemed dazed for a moment but came to himself soon and found himself surrounded by little lizards with spears. Tim begged to be freed and he said he would be good. So the lizards let him go and he soon found his home. Tim wasn't very bad any more, but at times he grew angry but he didn't hurt anybody because he was afraid he would be punished. So he changed his name to "Conscience," and acted like lots of people do today, for he is really our conscience.



SLEEPY SAM, the hobo, is a happy man today. He has managed to get a dancing elephant and Sam and the elephant are the attraction in Doo-ville. Better still the elephant is a good collector of money. Folks are so delighted to see the elephant dance that they throw money into the dipper, which he holds in his trunk, to see him do it over again. All Sam

Sleepy Sam's Dancing Elephant

has to do is grind away at the hand organ, which I am sure you will agree, isn't very hard work. The pigs of Doo-ville are terribly frightened at the sight of such a large and strange looking animal. Percy Haw Haw, the dude, is very much worked

up over the pigs, dirty things that they are, rushing about in such an unmannerly way upsetting people and scaring them out of their wits.

Old man Grouch should not stand so close to the horses heels in the blacksmith's shop. Horses don't like

cranky people and besides old Grouch pretty nearly got the red-hot shoe intended for the horse. Roly and Poly are planning some mischief again. They have heard that the elephant is more frightened of a tiny little mouse than almost anything else. Funny isn't it that such a big creature should be afraid of such a little one? The twins have one ready.

CO-OP. ELEVATORS AND FARM BUREAUS ENDORSE FINANCE PLAN OF U. S. G. S.

(Continued from page 2)

company allow the farm organizations in each state, where satisfactory arrangements can be made, to take charge of organizing the grain growers within its own state. The suggestion was favorably received by Wm. G. Eckhardt, chairman of the Organization Committee, President Gustafson and Secretary Myers. President Gustafson says there is little doubt but that the executive committee would modify organization plans accordingly at their next session.

Under this arrangement, a limited number of organizers will be brought to the central office for instruction on full details of the contracts, plans of the finance corporation, export company and sales and pooling department. After an intensive course of training under direction of the organization department these men will act as instructors in similar schools in each state where solicitors will be informed as to these details before being permitted to enter the field. Extreme care will be taken to select men for organization work who will not exaggerate the advantages to be gained by membership in the U. S. Grain Growers, Inc., and, at the same time, the men will be thoroughly familiarized with the real opportunity that is being offered the grain growing farmers of joining a worthwhile co-operative effort.

Farmers' Unions, Farm Bureaus, State Granges, Equity organizations, Farmers Grain Dealers' Associations and other Associations of farmers interested in grain marketing will be given an opportunity of taking their part in organizing the new company. In this way every co-operative company or association in each state, which has requested permission to assist in organization, can use their energy, good will and knowledge of local conditions to good advantage. Duplication of effort and needless organization expense will likewise be avoided.

SECOND INTERNATIONAL CLUB JUDGING CONTEST

COINCIDENT with the opening of the busiest season in club work, interest of the keenest sort is being manifested by club boys and club leaders everywhere in the second International Club Judging Contest to be held at the Southeastern Fair, Atlanta, Georgia, in late October.

More than half the states in the union are bending every effort to have a team of club boys on the ground when the second big fight comes off; this including states from Florida to Michigan, and from New York to the state of Washington. Several of the Canadian provinces are warmly interested, and the little Island of Guam, far across the Pacific Ocean is determined to be in the scrap either this year or next.

Continuing the policy established last year, the Southeastern Fair is offering as prizes in the International Club Judging Contest, seven trips with all expenses paid to the Royal Live Stock Show in England. Under the rules of the contest: "The states of the American union, insular possessions, provinces of Canada, South American countries and foreign nations are eligible to enter teams, provided that in such state, possession or nation Boys' Club work is organized and conducted under rules and regulations which do not conflict with those applying in the United States of America."

Twelve rings of livestock are to be judged which includes Guernsey, Jersey, Holstein-Friesian dairy cattle, Aberdeen-Angus, Shorthorn and Hereford beef cattle, Shropshire and Southdown sheep, and Duroc-Jersey, Poland China, Berkshire and Hampshire hogs.

The club boy receiving the highest score receives a free trip to, the Royal. The state team of three club boys attaining the highest score secures three trips to the Royal. Accompanying the team, also at the expense of the Southeastern Fair, will be the county agent coaching

the high man, the state club leader from the state represented by the winning team, and the official from the Department of Club Work in the Washington office whose territory is represented by winning team.

In addition, the Southeastern Fair announces that, in the 1921 contest, it will award a prize of \$300 to the state team ranking second and \$200 to the state team ranking third.

CARO FARMERS INSPECT CATTLE

A 250 MILE tour by four or five hundred farmers of Tuscola and surrounding counties will be made on May 23, 24, 25, according to plans of a number of the leading farmers around Caro, under the direction of Alex MacVitte, county agent. They expect to have one hundred automobiles on the trail and will visit the farms of leading stock breeders along the roads which lead between Caro, Flint, Lansing, Jackson, Ann Arbor, Pontiac and Lapeer.

A TWENTY DOLLAR DROP IN THE LUMBER MARKET

A REPRESENTATIVE from the Co-operative Lumber Exchange of South St. Paul recently visited the neighboring corner of Wisconsin to take a few orders for lumber. When the local lumber dealers learned of his arrival, they kept the telephone wires hot and used up a lot of good gasoline notifying farmers that prices on lumber had suddenly dropped \$20 per thousand feet. But the prices of the Co-operative Lumber Exchange were even below these figures, so the lumber men made a flat offer to sell shingles and barn boards lower than the best price the Co-operative Lumber Exchange could quote. One lumber man called up his customers three times in the same day to tell them that he had received telegrams advising him of sudden drops in the price of shingles. Funny how the bottom fell out of the lumber market in a few hours! As the Wall Street Journal warns us, "Co-operation is a signal failure,"—for the profiteers.

Co-operative lumber yards have proved splendid successes in many northwestern cities. Like other co-operative enterprises, there is nothing magical about them. Able management, honest goods, and sales at reasonable prices with dividend rebates to members, are the sound co-operative principles that apply equally to the success of co-operative stores or lumberyards. Co-operation puts an end to extortionate profits, and enables the people to pay the legitimate profits in the lumber business of themselves.

DRAINAGE IN MICHIGAN

THE Director of the Census announces, subject to correction the following preliminary figures for organized drainage enterprises in the state of Michigan, as of December 31, 1919.

Total area in organized enterprises, 9,778,269 acres; improved farm land, 7,754,161 acres; timbered and cut-over land, 1,663,345 acres; other unimproved land, 360,763 acres; total land area of state, 36,787,200 acres; area of state in drainage enterprises, 26.6 per cent; swampy or wet or subject to overflow; in organized drainage enterprises, 1,037,361 acres; cost of organized drainage enterprises, \$25,480,099.

STATE LEGISLATURES CONSIDER CO-OPERATIVE BANKING LAW

THE MODEL Co-operative Banking Bill drafted by the All American Co-operative Commission has already been introduced in a number of state legislatures now in session. Legislative representatives of organized labor and of organized farmers are effectively urging its enactment. The bill makes it safe and easy for the workers to mobilize their credit resources in banks co-operatively controlled. Copies of this model bill can be obtained from the headquarters of the Co-operative Commission, Bliss Building, Washington, D. C.

ASPIRIN

Name "Bayer" on Genuine



Take Aspirin only as told in each package of genuine Bayer Tablets of Aspirin. Then you will be following the directions and dosage worked out by physicians during 21 years and proved safe by millions. Take no chances with substitutes. If you see the Bayer Cross on tablets, you can take them without fear for Colds, Headache, Neuralgia, Rheumatism, Earache, Toothache, Lumbago and for Pain. Handy tin boxes of twelve tablets cost few cents. Druggists also sell larger packages. Aspirin is the trade mark of Bayer Manufacture of Mono-acetic acid ester of Salicylic acid.

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25c

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The Michigan Business Farmer, Mt. Clemens, Mich.

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The True Army Worm and Its Control

By W. R. WALTON

Entomological Assistant, U. S. Department of Agriculture

THE FULLY developed parent of the army worm is a moth or "miller" measuring about 1 1-2 inches across the expanded wings. It is brownish gray in color, having a single small white spot near the center of the front pair of wings, the hind wings being somewhat darker along the hind legs. Altho these parents of the worm sometimes are very numerous, they fly only at night and are therefore often entirely overlooked by the farmer. The stage of the insect most familiar to him is the full-grown, striped, nearly naked cater-

though countless thousands of them may be present, they consume, at this time, comparatively little food. Feeding near the ground, sheltered from view by the overhanging grain or grasses, they almost invariably escape the notice of the farmer. If the colony of worms can be discovered at this stage of their growth the infestation usually can be stamped out completely by prompt and vigorous measures, such as spraying with arsenicals or covering with straw and burning over the infested spot.

As the young worms grow and feed, their skins become too small for them, so presently they split and are shed, and the caterpillars begin feeding more greedily than ever. This occurs several times during the life of the caterpillar, until the worm becomes full-grown. The time required for full growth is from 3 to 4 weeks. The full-grown army worm is a nearly naked, smooth, striped caterpillar, about 1 1-2 inches long. Its general color is usually greenish, and the stripes, one along each side and a broad one down the center of the back, are dark and often nearly black. The stripe along the back usually has a fine light colored, broken stripe running down its center. The color of the body between the dark stripes varies from greenish to reddish brown. The head is greenish brown speckled with black.

When an army of these worms is at work in a field the champing of their jaws is plainly to be heard, as they greedily devour every blade in sight. In this stage the army worm



The true army worm; full-grown larva or caterpillar. Enlarged. (Original.)

pillar usually discovered in the act of devouring his crops and in most cases after having already destroyed the greater portion of the infested crop.

The army worm injures crops in but one way, and that is by eating away all the tender portions of the leaves, the immature seed, and sprouts, and when numerous it may even devour the plants down to the very ground. The more important and by far the most conspicuous injury is always inflicted by the nearly full-grown caterpillar, whose greed and capacity for food are almost unbelievable. The pupa takes no food. The moth subsists principally upon the nectar gathered from flowers.

The army worm feeds by preference upon grasses, both wild and cultivated; next, upon the grasslike grains, such as the several varieties of millet, which suffer severely during outbreaks of the insect. Wheat in its unripe stages, corn, oats and rye seem to be preferred in the order named.

Generally speaking, outbreaks of the true army worm are more common following cold, backward springs and should be looked for first in neglected portions of fields upon which rank growth of wild grasses or lodged and fallen unripe grain are to be found. These should be examined frequently and closely, especially during late April, May, June and early July, in order to discover the small greenish caterpillars, which may be found in great numbers feeding near the surface of the ground under the sheltering overhanging leaf blades.

Life History

The army worm, like many other common insect pests, has four forms or stages as follows: First, the parent moths or millers, which seek out rankly growing grass or grasslike grains, such as millet, upon which they lay their eggs. From these eggs hatch the little caterpillars or "worms" which feed and grow rapidly. When full-grown they shed their skins and change to the brown pupa or resting stage, usually beneath the surface of the soil. From these pupae come the parent moths, which in turn mate and lay their eggs, thus providing for another brood of caterpillars. There are usually three generations of caterpillars in any one year, but seldom or never two successive outbreaks in any given locality.

The eggs are laid by the parent moths at night, usually in the folded blades or under the leaf sheaths of grains and grasses. These resemble small white beads, each considerably smaller than the head of a common pin and are deposited in masses or rows on the plants selected. Moist or shaded spots usually are chosen for this purpose by the moths, many of which seem to congregate and lay their eggs in the same locality. These eggs hatch in from 8 to 10 days and from them come the very small greenish caterpillars or "worms."

When the caterpillars are first hatched they are very tiny and, al-



The true army worm; pupa. Enlarged. (Original.)

frequently consumes all of the food supply near the place where it has developed from the egg. When such is the case the caterpillars mass together and crawl away in a body in search of other food. It is this habit which has gained for the insect the popular name of "army worm." The massing together of the worms affords the farmer an opportunity of destroying them in great quantities by mechanical methods described later. When the full-grown caterpillars cease feeding they usually burrow into the soil to the depth of a few inches and by dint of twisting and turning form a cavity or cell therein. The worm then begins to shrink and shorten, after which the skin splits and is shed and the pupa appears beneath it. When the worms are very numerous many of them pupate on the surface of the ground, hidden under clods, boards or bunches of dried grass and fallen grain.

The pupa or resting stage of the true army worm resembles a date seed in size and shape, but is more pointed at one end. In color it is at first a reddish or chestnut brown, becoming almost black as the time for emergence of the moth approaches. Its skin or covering is smooth and tough, and the pupa is unable to move any portion of its body excepting its tail, which it wriggles vigorously upon being disturbed. If the soil in which the pupae are resting be lightly cultivated during this time and the pupae thrown to the surface, most of them will be killed by exposure to the weather, crushed by the cultivating implements, or eaten during the day by birds or at night by skunks which roam the fields and consume great quantities of such food.

When the moth crawls forth from the pupal case it has not yet developed its wings, which are crumpled and folded in padlike masses on each side of its back. It usually crawls up the stem of some plant and begins to expand its wings, waving them back and forth slowly for about an hour, by which time they are completely developed and the insect is capable of flying. However, if

(Continued on page 22)

"Keep M. B. F. coming!"

YOU WANT THIS WEEKLY IN YOUR MAIL BOX EVERY SATURDAY, BECAUSE—

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RATES OF TAXATION ON INCOME IN SEVERAL STATES SHOW WIDE VARIATION

(Continued from page 5)

was levied in 1918 on both personal and business incomes, a total of \$11,784,151. Under the Massachusetts income tax law there was levied in 1919 \$15,164,844. The Massachusetts income tax law is not a general income tax and does not tax the income of corporations but only certain classes of personal incomes, and allows many exemptions, such as income from mortgages on Massachusetts real estate. We have no data as to income tax levied in New York, the report of her Tax Commission for 1920 not having yet reached us. Prof. Seligman in an address delivered in 1916 stated that, a tax of one per cent upon personal income would in that year have yielded \$30,000,000. The State Tax Commissioners of New York in their report for 1919 estimated that the New York business income tax for that year would be \$32,000,000. They stated, also, that changes made that year in the corporate income tax laws would increase the above sum considerably. The Secretary of the Michigan State Tax Commission in a report to the legislature in the spring of 1917, (which report was based upon a comparison of returns made to the United States government of taxable incomes in the state of Wisconsin and Michigan) estimated that an income tax law similar to that in operation in the state of Wisconsin, would yield in that year, to the State of Michigan approximately \$12,235,000. We have no figures from which to compare national income returns for Michigan and Wisconsin since that date, but we have figures showing that the income tax levied in Wisconsin has increased from \$4,140,565, the sum used in the comparison, to \$11,784,000, with no change in rates. Judging from the increase in wealth in Michigan as reflected in the assessment of property, from the increase in bank deposits, from the wonderful development in commercial and industrial business since 1915, and from the increase in the income taxes in Wisconsin, we feel justified in declaring that a progressive income tax, with the moderate rates we have suggested applied to personal and business incomes, would produce many million dollars more than was estimated in 1917. Income tax receipts would not all be increased revenue. There would be losses due to repealing taxes on intangible property. The repeal of the Mortgage Tax Law would cost approximately \$800,000 annually; but allowing for these losses the net increase in revenue would certainly be more than twenty million dollars, and a twenty-five million dollar increase could reasonably be counted upon.

One feature of state income taxation is especially to be noted,—practically the entire amount levied is collected. Out of \$11,784,000 levied in Wisconsin in 1918, all but \$125,480 had been collected by the end of 1919,—almost ninety-nine per cent. Of \$14,844,000 income tax levied in Massachusetts for 1918, all but \$110,000 had been collected by December 31, 1919,—more than ninety-nine per cent. Reports from other states, where the tax is administered by a state board, show equally close collection.

What distribution should be made of revenue accruing from income taxation? Manifestly it should not all be turned back to the assessing district in which collected because, while the taxpayer resides there, the income is drawn from the entire state. A person with his office in the Ford Building in the city of Detroit, but residing in the village of Grosse Pointe Farms, might draw his income from iron or copper interests in the upper peninsula, or from lumber mills in Canada, or vessel property upon the Great Lakes, or industrial establishments in Flint, Lansing, or Grand Rapids, or he might be exploiting a subdivision in Royal Oak. Neither the copper and iron country, the lumber districts, the industrial cities, from whence his revenue came, nor the city of Detroit where his offices

might be and all the business transacted, would be credited with any of the revenue from his net profits, if turned back to the district where levied. It would all go to the township of Grosse Pointe in which he was domiciled. Under such a distribution system the revenue accruing in some districts would be many times that needed for all governmental purposes, and districts in which much of the income may have been produced would have no revenue from income taxation. In most states where an income tax is levied, a division of the net income from the tax is made between the state and subordinate political units. For Michigan, we suggest that the state retain a very considerable portion of the tax, that another portion be divided among the counties on some fixed basis, and that the balance be distributed among the townships and cities on the basis of assessed valuation. Under this scheme of distribution every individual or corporation in the state, paying taxes under the general property tax law, would directly benefit through a reduction in the amount of state tax levied. Such taxpayers would also benefit through a reduction in the county tax. The same condition would be true as to city and township taxes with the additional beneficial feature that assessing officers would have the inducement of a larger allotment from the income tax for maintaining full cash value assessments. The portion distributed directly to the state could easily be made sufficient to pay all state expenses and bring about the ideal situation,—no state tax, no annual equalization, each assessing district unconcerned with an unaffected by assessments in other districts.

There is a disposition on the part of taxpayers to endure conditions with which they are familiar rather than to substitute for them other conditions with which they have had no experience. There is the feeling on the part of many people that the country is now going through a period of readjustments, in the course of which the program of federal taxation may be radically changed. There are some who suggest alternative propositions for the state income tax, such as a refund by the federal government to all the states of a fixed per cent of the income tax collected in each state; or the levy of a surtax upon the federal income tax by such states as desire state income taxation. Both alternative propositions could limit the actual administration of all income tax legislation to officials of the United States government. The proposition of a refund to the states by the federal government would also result in uniform tax rates and uniform methods of administration throughout the United States. All holding such views argue that we should delay entering upon the solution of our taxation problems. With this sentiment we have no sympathy. Income taxation, for state and nation, has come to stay. The operations of the federal income tax have made the people familiar with the principle of income taxation and the question of introducing this principle into our taxation system should in no way depend upon the rates of the federal income tax or the amendment of its excess profit tax features. Thirteen states have adopted some form of income taxation. We have the legislation and practical experience of these states to guide us. An income tax law could not be enacted until after Section 3 of Article X, of the state constitution has been amended. The legislature at its coming session could only adopt such amendment and submit it to the voters for ratification or rejection. Should the amendment be adopted it would be two years, unless a special session were called, before details, such as exemptions and rates of taxation could be determined, and by that time changes in the federal income tax law will have been made and the question determined whether any of the alternative propositions suggested could be substituted. Let us at once initiate action for income taxation whatever may be the form eventually decided upon.



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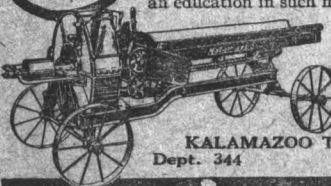
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New Haven, Mich.
May 26, Holsteins. Wm. Cox, Williams-
ton, Michigan.
May 27, Holsteins. Mich. Holstein Friesian
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May 28, Holsteins. George E. Bench,
Plymouth, Mich.
June 9th, Aberdeen-Angus. Michigan Ab-
erdeen-Angus Breeders' Association, East
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Herd under Federal Supervision.

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of Wood-Crest Farm and Fisher Farms at

WOODCREST FARM, Plymouth, Michigan

consisting of 55 head of Holstein-Friesian cattle. Both herds under State and Federal test.

Saturday, May 28, 1921

There are five granddaughters of King of the Pontiacs, with records as high as 18.81 lb. butter at two years old.
Five daughters of a 32-lb. son of Johan Hengerveld Lad.
Seven daughters of a son of King of the Pontiacs Segis.
A 25.70 lb. cow that milked 581.5 lbs., granddaughter of Laura Dosh, that we expect will make 30 lbs. before sale.
A 19.55 lb. two year old with two of her daughters.

BULLS

A two-year-old son of King Korndyke Sadie Vale, from a 32.12 lb. four year old daughter of Sir Veeman Hengerveld.
A three-year-old grandson of King of the Pontiacs, from a 24-lb. 11-year-old cow.
A two-year-old grandson of Johan Hengerveld Lad, from a 25.70 lb. 5-year-old cow.
All cows and heifers old enough to be bred are bred to King Korndyke Sadie Hengerveld, a 32.12 lb. son of King Korndyke Sadie Vale.
Sixty to ninety day guarantee for tuberculosis.
Wood-Crest Farm is located on the Plymouth Road, 8 miles east of Plymouth, and 14 miles west of Detroit.

Sale will be held under cover.

Auctioneer: **HARRY ROBERTSON**. Sale Manager: **S. T. WOOD**
Plymouth, Mich.

For catalogs address

G. E. BENCH, Woodcrest Farm, Plymouth, Mich.

A three unit Perfection Milking Machine will also be included in the sale.

FOR SALE—3 GOOD BULLS, LIGHT, MEDIUM and dark. Dams' records at 2 yrs. 3 yrs. and 4 yrs. 16 pounds, 24 pounds and 26.48 lbs. First two dams average 22,000 pounds milk and over 1,000 pounds butter in year. All good type. Also a few registered cows and heifers.
M. J. ROCHE, Pinckney, Mich.

HERD SIRES IN SERVICE

KING ZERMA ALCATRA PONTIAC NO. 143461 a son of the \$50,000 bull.
SIR ECHO CLYDE NO. 247367 a double grandson of MAY ECHO SYLVIA the champion cow of Canada.
I am offering a yearling son of King from a cow with a 7 day A. R. O. of 18.48 butter, 427.8 milk. Next dam 15.11 butter, 387.8 milk. Price \$150. Also some yearling grand daughters of KING Price \$150 each. Pedigrees sent on request.
H. E. BROWN, Breedsville, Mich.
Breeder of Registered Stock Only

SOLD AGAIN

Bull calf last advertised sold but have 2 more that are mostly white. They are nice straight fellows, sired by a son of King Ona. One is from a 17 lb. 2 yr. old dam and the other is from a 20 lb. Jr. 3 yr. old dam, she is by a son of Friend Hengerveld De Kol Butter Boy, one of the great bulls.
JAMES HOPSON JR., Owosso, Mich., R. 2.

BRANDONHILL FARM

Ortonville, Michigan

Bull calves sired by 35 pound son of King of the Pontiacs—\$100.00— and upwards—good individuals—from a clean herd.

JOHN P. HEHL

1205 Griswold Street, Detroit, Michigan

Veterinary Dep't

Dr. W. Austin Ewalt, editor

STIFF IN HIPS

I have a sow nearly two years old and in good condition with good appetite. For about two months this winter she was not able to get up without help and then would squeal as if in pain. Of late she gets up herself but still hasn't the right use of her hind parts. I have been feeding oats and corn ground, but she did not seem to eat it very well so am just feeding corn on ear now which she eats good. This sow was kept in the straw shed with floor in, with door to the south. After keeping her there for a couple of months I put her in cow barn where she still is. Could you tell me through the columns of our valuable paper what to do for her?—J. H. W., Arenac County, Michigan.

Get her out on the ground as soon as the weather permits and give her one dram of sodium bicarbonate three times daily in the feed.

PIGS HAVE WORMS

We have a litter of fall pigs which seem to be thrifty but there are two of them that grate their teeth nearly all of the time. What should we give them for this?—C. A. T., Jackson, Michigan.

Treat them for worms.

INDIGESTION

I have a calf about one month old that is not doing well and as it is from a good cow, part Guernsey and sired by a pure blood Guernsey, I would like to raise it and have it do well, but all my efforts seem to be a failure. I will explain to you just how it acts. At first it seemed as if its bowels would not move. It was on its mother until the milk was fit to use. Then I fed it the good milk but it seemed after it was 10 days or 2 weeks old that it would not drink any more. It kept getting weaker each day. I gave it 2 tablespoonsful of castor oil twice; one dose each day. Still its bowels would not move properly. Then I gave it 2 tablespoonsful of salts. That did the work. I put a little salt-peter in the salts. For a time it did fine, was lively and drank good, but now it seems to have a cold. I greased its head with camphorated oil but I notice it has a rattling in the throat as if its cold was loose, but it has no appetite. It still gets a quart of whole milk with some separated milk and I put in one teaspoonful of stock tonic to give it a desire to drink, but it does not try at all. Seems to chew its cud all the time. Can you tell me what to do or what ails it?—N. C. Twining, Mich.

Your calf is suffering with indigestion, caused by improper nutrition. You should give her plenty of pure milk, undiluted; also give one tablespoon olive oil two or three times a day about one hour after feeding. Also give Tr. Nux Vomica, five drams, acid hydrochloric dilute, three drams, essence of pepsin, add sufficient amount to make four ounces and give two teaspoonfuls in a little water three times a day before feeding. I will mail you this prescription so you can have it filled.

MARE HAS COUGH

I have a mare that caught cold last December and has had a cough ever since. There are no signs of heaves and she is fat and in good spirits. Can you tell me what I can do for same?—R. Z., Burt, Michigan.

Write the Toledo Pharmacal Company and order one hundred compressed Veterinary Tablets consisting of Terpin Hydrate, ten grains; ammonium chloride, fifteen grains; lobelia, five grains and eucalyptol, Q. S. Give one of these tablets three times daily. You might mention the above treatment was recommended by me; this may help you to get the tablets.

LYMPHINGITIS

I have a good five year old draft mare that has Lymphingitis; just developed. Is there any cure for it? If so, what?—W. J. G., Sunfield, Michigan.

While this disease is curable the treatment must be energetic and careful; a good physic consisting of Barbadoes aloes, one ounce, powdered Nux Vomica, ginger and capicum of each one dram, made in the form of a ball, should be given as soon as possible. Follow this up in twenty-four hours with potassium nitrate (powdered) giving one ounce four times daily well back on the tongue with a spoon. The swollen leg should be bathed, or fomented as often as possible using quite warm water, after which a tight bandage should be applied.



BREEDERS DIRECTORY



(SPECIAL ADVERTISING RATES under this heading to honest breeders of live stock and poultry will be sent on request. Better still, write out what you have to offer, let us put it in type, show you a proof and tell you what it will cost for 13, 26 or 52 times. You can change size of ad. or copy as often as you wish. Copy or changes must be received one week before date of issue. Breeders' Auction Sales advertised here at special low rates; ask for them. Write today! BREEDERS' DIRECTORY, THE MICHIGAN BUSINESS FARMER, M. Clemens, Michigan.

AUCTION SALE HOMESTEAD FARMS

Williamston, Michigan

May 26, 1921 at 1:00 P. M.

6 head Registered and high grade Holstein Cows, fresh or soon to be. One cow giving over 70 pounds of milk per day.
5 head Heifers, some of them bred.
1 Bull Calf 8 weeks old.
1 Bull Calf 18 months old.
10 head Poland China Gilts bred for August Farrow.
9 April Pigs. Two Tried Sows.
1 eight months old Boar.
1 DeLaval Cream Separator, nearly new.
Some small tools and other articles

WM. COX, Proprietor,
Williamston, Mich.

GLADWIN COUNTY PURE BRED LIVESTOCK
Association. Holstein, Jersey, Shorthorn, and Hereford cattle; Duroc-Jersey, Poland China and Hampshire hogs; Oxford, Shropshire, Hampshire sheep.
A place to buy good breeding stock at reasonable prices.
FRED B. SWINEHART, O. E. ATWATER,
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Gladwin, Mich.

Fairlawn Herd—Holsteins

Hire Sire, Emblaggard Lillith Champion 108073
His sire's dam Colantha 4th's Johanna, world's first 35 lb. cow, and world's first 1,200 lb. cow. The only cow that ever held all world's butter yearly milk record at the same time. His dam records from one day to one year, and the world's Lillith Plebe Da Kol No. 93710, over 1,150 lbs. of butter from 20,599.4 pounds of milk in a year. World's 2nd highest milk record when made and Michigan state record for 6 years. Only one Michigan cow with higher milk record today. His two nearest dams average:
Butter, one year 1,199.22
Milk 28,515.9
Champ's sons from choice A. R. O. dams will add prestige to your herd and money to your purse.
J. F. RIEMAN, Owner
Flint, Mich.

FOR SALE—TWO BULL CALVES, A HOL-
stein and Durham about 8 months old. Both have heavy milking dams. Not registered. \$50 each if taken at once.
CHASE STOCK FARM, Marlette, Mich

LAKEVIEW DAIRY FARM HOLSTEIN-FRIES-
ians. Herd sire Paul Pieterje Wane Prince. Two nearest dams average 31.9 lbs. butter, 672 lbs. milk in 7 days. Dam milked 117 lbs. in one day; 3,218 lbs. in 30 days; 122.37 lbs. butter in 30 days. His bull calves for sale. One from a 22 lb. two-year-old. Good individuals. Prices reasonable. Age from 2 to 5 months.
E. E. BUTTERS, Coldwater, Mich.

HOLSTEINS FOR SALE—EITHER SEX.
Bulls ready for heavy service from dams with A. R. O. records up to 31 lbs. Also bull calves with same breed. They are all fine individuals and nicely marked and priced to sell. Also a few well bred females.
D. H. HOOVER, Howell, Mich.

A PROVEN BLOOD LINE

KING SEGIS transmitted to his sons the power to transmit to their daughters the greatest of production over long periods. It is his offspring that has recently made the greatest yearly production ever dreamed of, 37,381.4 pounds of milk in a year.
We have for sale at moderate prices beautiful individuals of show type **KING SEGIS** bulls.
GRAND RIVER STOCK FARMS
111 E. Main Corey J. Spencer, Owner
Jackson, Mich.
Under State and Federal Supervision

TWO BULL CALVES

Registered Holstein-Friesian, sired by \$9.87 lb. bull and from heavy producing young cows. These calves are very nice and will be priced cheap if sold soon.
HARRY T. TUBBS, Elwell, Mich

FOR SALE—HOLSTEIN BULL, READY FOR
service. Dam's record 28 lbs. butter and 543 lbs. milk. About 7-8 white and straight. Write for pedigree. Price very reasonable.
AUGUST RUTTMAN
Fowlerville, Mich.

FOR SALE—2 REG. HOLSTEIN BULLS
ready for service from 19 1-2 and 24 1-2 lb. dams. Price \$100 and \$125. Herd on accredited list.
Wm. GRIFFIN, Howell, Mich.

HEREFORDS

FOR SALE—SMALL HEAD OF REG. HERE-
fords. Belvidere 569766, heads the herd.
RALPH S. SMITH, Kewadin, Mich.

REGISTERED HEREFORD CATTLE—KING
REPEATERS 713941, and Beau Perfection 327899 head our herd. Bulls are sold: have some very fine heifers for sale, bred or opened, bred to our herd bulls. Come and see them; they will please you.
Tony B. Fox, Prop., Henry Gehrzholz, Herdsman,
MARION STOCK FARM, Marion, Michigan

HEREFORD CATTLE and HAMPSHIRE HOGS.

We can furnish registered bulls from 12 months and older, best of breeding and at a very low price, have also some extra good Herefords. We have also a large line of registered Hampshire Hogs, Gilts, Sows and Pigs.
Write us, tell us what you want and get our prices.
LA FAYETTE STOCK FARM, La Fayette, Ind.
J. Crouch & Son, Prop.

HEREFORDS FOR SALE

Fairfax and Disturbed blood, 150 Reg. head in herd. \$35.00 reduction on all sires. Choice females for sale. Write me your needs.
EARL C. MCCARTY, Bad Axe, Mich.

150 HEREFORD HEIFERS. ALSO KNOW
of 10 or 15 loads fancy quality Shorthorns and Angus steers 5 to 1,000 lbs. Owners anxious to sell. Will help buy 50c commission.
C. F. BALL, Fairfield, Iowa

LAKEWOOD HEREFORDS GOOD TYPE,
strong boned young bulls, 12 months old for sale. Also high class females any age. Inspection invited.
E. J. TAYLOR, Fremont, Mich.

RIVERVIEW HEREFORDS FOR SALE
four bulls, one a grandson of the \$9,500 Bullion 4th. Also a few females.
Wm. C. DICKEN, Smyrna, Mich.

HEREFORDS FOR SALE. WE HAVE BEEN
breeders of Herefords for 50 years. Wyoming 9th, 1920 International prize winner heads our herd. Have 5 choice yearling bulls, 8 yearling heifers and a few choice cows for sale. Let us know your wants.
CRAPO FARM, Swartz Creek, Mich.

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CENTRAL MICHIGAN SHORTHORN BREED-
ers' Association offer for sale 75 head; all ages, both milk and beef breeding. Send for new list.
M. E. MILLER, Sec'y, Greenville, Mich.

IF YOU WANT TO BUY OR SELL I MAY
have just what you want. I handle from one animal up to the largest consignment sale in the country.
O. A. Rosmussen, Sale Co., Greenville, Mich.

RICHLAND SHORTHORNS

Herd bulls for quick sale. Fair Acres Goods and Collynie Cullen 5th. Both roan five year olds and tried sires.
Best of blood lines and show prospects.
Both quiet to handle.
A real bargain.
Write for particulars.
C. H. PRESCOTT & SONS
Tawas City, Mich.

\$125.00 DELIVERED

To close out our bulls we will offer a nice straight roan bull, 11 months old of Scotch blood, for use. A bargain.
Write or call.
H. B. PETERS & SON, Elsie, Mich.

Huron Co. Shorthorn Breeders' Ass'n
offer for sale Scotch and Scotch topped males and females of all ages, 300 head to select from. For information address
Jas. R. Campbell, Secretary
Bad Axe, Michigan

THE VAN BUREN CO. SHORTHORN BREED-
ers' Association have stock for sale, both milk and beef breeding.
Write the secretary.
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BUY SHORTHORNS NOW. 4TH ANNUAL
herd test without a reactor. Some bargains in bulls.
JOHN SCHMIDT & SON, Reed City, Mich.

SHORTHORNS COWS, HEIFERS, BULLS
offered at attractive prices before January first. Will trade for good land.
Wm. J. BELL, Rose City, Mich.

3 EXTRA GOOD BULL CALVES FOR SALE.
From the Maple Ridge herd of Bates Short-horns. Calved in September 1920.
J. E. TANSWELL, Mason, Michigan.

SHORTHORN CATTLE AND OXFORD DOWN
sheep. Both sex for sale.
J. A. DeGARMO, Muir, Mich.

KENT COUNTY SHORTHORN BREEDERS'
Ass'n are offering bulls and heifers for sale, all ages. Sell the scrub and buy a purebred.
A. E. RAAB, Sec'y, Caledonia, Mich.

FOR SALE—REGISTERED SHORTHORNS
and Duroc Jersey spring pigs, either sex; two red bulls, one 11 months and one 5 months old. Several heifers from 6 months to 2 years old. Scotch Top and Bates bred. Address
GEORGE W. ARNOLD or JARED ARNOLD
Williamsburg, R 1, Michigan

JERSEYS

JERSEY YEARLING BULL (SIRE BY PEN-
hurst Fern Sultan, R. M. Breeding.
J. E. MORRIS & SON, Farmington, Michigan.

REG JERSEYS HEIFERS 1 YR. OLD—
Young cows in milk sired by Majesty's Oxford Shyllock 156,692 also young bulls sired by Frolic's Master Pogos 177688, a grandson of Pogos 99th and Sophie 19th's Tormentor, two great bulls of the breed. Write for prices and pedigree.
GUY C. WILBUR, R 1, Belding, Mich.

IF THE BULL IS HALF THE HERD, HOW
much would a son of Pogos 99th's Duke 8th, who has 60 per cent blood of Sophie 19th, be worth to your herd?
Let me send you pedigrees and prices on bull calves from this bull and Sophie Tormentor cows.
FRED HAYWARD
Scotts, Mich.

ONE OF OUR MAJESTY BULLS WOULD IM-
prove your herd.
FRANK P. NORMINGTON, Ionia, Mich.

HIGHLAND FARM JERSEYS FEDERAL
Accredited herd. High production, splendid type and breeding. Write us your wants.
Samuel Odell, Owner. Adolph Heeg, Mgr.
Shelby, Michigan

GUERNSEYS

GUERNSEY BULL CALF 7 MOS. OLD, SIRE,
Langwater-Prince Charmante, A. R. 4 A. R. daughters average 416 lbs. fat 2 1-2 yrs. Dam: Lawton's Lady Lu, A. R. 416 lb. fat class A. A. (farmers class) 1 A. R. daughter, 409 lbs. fat D. D. Write
MORGAN BROS.,
Allegan, R 1, Michigan

GUERNSEY BULL FOR SALE

Good individual, six months old. Herd under state and federal supervision.
Write for particulars to
O. A. HENNESEY, Watervliet, Mich.

AYRSHIRES

FOR SALE—REGISTERED AYRSHIRE
bulls and bull calves, heifers and heifer calves. Also some choice cows.
FINDLAY BROS., R 5, Vassar, Mich.

ANGUS

BARTLETTS' PURE BRED ABERDEEN-
ANGUS CATTLE AND O.I.U. Swine are right and are priced right. Correspondence solicited and inspection invited.
CARL BARTLETT, Lawton, Mich.

The Home of Imp. Edgar of Dalmeny Probably The Worlds' Greatest BREEDING BULL

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

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

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

Send for Illustrated Catalogue.

WILDWOOD FARMS
Orion, Mich.

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

REGISTERED ABERDEEN-ANGUS-BULLS,
Heifers and cows for sale.
Priced to move. Inspection invited.
RUSSELL BROS., Merrill, Michigan

The Best Breeders

advertise in The Michigan Business Farmer. It will be worth your while to read the livestock advertisements in every issue to keep posted on what they have to offer.



MICHIGAN ANGUS SALE

Annual Spring Sale of the

MICHIGAN ABERDEEN-ANGUS

BREEDER'S ASSOCIATION

to be held at

MICHIGAN AGRICULTURAL COLLEGE

East Lansing, Mich.

on

JUNE 9TH, 1921
50 HEAD

35 COWS 15 BULLS

All the fashionable families are represented, including: Ericas, Prides, Blackcaps, Blackbirds, Queenmothers, Heatherblooms, etc.

These cattle are not only fashionably bred but are wonderfully good individuals as well.

Many have show records to their credit and others will do well in the shows this fall if properly handled.

This is the best lot of cattle ever sold by this association. The majority are either sired by or bred to the following famous bulls:

Imp. Edgar of Dalmeny. ("The sire supreme.")

Bardell (Jr. Champ. at 1921 International.)

Imp. Elcho of Harvestoun. (Reserve Champ. at Perth.)

Imp. Edgardo of Dalmeny.

Ames Plantation Beaumont.

Prides Lad of Rosemere.

Enos of Woodcote.

Edgerton W.

Blackbird Brandon.

Blackcap Brandon of W. 2nd.

Blackrook of Fairview.

Duke of Woodcote.

Dr. K. J. Seulke of the American Aberdeen-Angus Association will be present to handle your bids.

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Ovid, Michigan



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BREEDERS' DIRECTORY, THE MICHIGAN BUSINESS FARMER, Mt. Clemens, Michigan.

SWINE

POLAND CHINA

HERE'S SOMETHING GOOD
THE LARGEST BIG TYPE P. C. IN WICH.
Get a bigger and better bred bear pig from my herd, at a reasonable price. Come and see them. Expenses paid if not as represented. These bears in service: L's Big Orange, Lord Chasman, Orange Prince and L's Long Prospect.
W. E. LIVINGSTON, Parma, Mich.

BIG BOB MASTODON

Is sired by Caldwell Big Bob Champion of the world. His dam Sire is A's Mastodon, Grand Champion at Iowa State Fair. Enough said. I have a fine September Bore Pig that will make a herd boar sired by Big Bob, and a fine lot of spring pigs when weaned. Book your order now.
C. E. GARNANT,
Eaton Rapids, Michigan.

HERE IS SOMETHING GOOD. BIG TYPE
Poland Chinas. One extra good large long boned smooth gilt bred to Howley's Chasman. Price \$100. Also younger gilts \$30 to \$50.00.
HOWLEY BROS., Merrill, Mich.

FARWELL LAKE FARM

L. T. P. C. Boars all sold. A few spring boars and some gilts left. Will sell with breeding privilege. Boars in service: Chasman's Image 2nd, W. B.'s Outpost and Smooth Wonder. Visitors welcome.
W. S. RAMSEDELL,
Hanover, Mich.

BIG TYPE POLAND CHINA BRED GILTS ALL
sold, but have some fall gilts at reasonable price. Will be bred for fall litters.
DORUS HOVER, Akron, Mich.

GILTS Sired by BIG BOB MASTODON, BRED
to Jumbo Lad. Price very reasonable.
DEWITT C. PIER, Evart, Mich.

L S P C—4 BOARS BY CLANSMAN'S IM-
AGE and Big Defender, that are extra good. Bred gilts all sold.
H. O. SWARTZ, Schoolcraft, Michigan.

BIG TYPE POLANDS. AM OFFERING TWO
good growthy fall gilts, from best sow in our herd.
W. CALDWELL & SON, Springport, Mich.

BIG TYPE P. C. BRED SOWS ALL SOLD.
Closing out a few choice boars at a bargain also some extra good fall pigs, either sex. From growthy stock.
L. W. BARNES & SON, Byron, Mich.

BIG TYPE POLAND

China boar ready for service \$25.00.
JOHN C. BUTLER, Portland, Mich.

B. T. P. C. A FEW TOP GILTS BRED TO
Highland Giant, the \$500 boar. Others bred to Wiley's Perfection. Weight, 700 at 18 months.
JOHN D. WILEY, Schoolcraft, Mich.

L. T. P. C. DOES YOUR NERVE SAY BUY
hogs? Vote yes and order a good one. Fall gilts \$30 to \$50; spring boars, \$15 to \$25. Two Prospect Yank gilts bred to Hart's Block Price March 24th at \$50 each.
F. T. HART, St. Louis, Mich.

LEONARD'S BIG TYPE P. C. BOAR PIGS
at weaning time, from Mich. Champion herd \$25 with pedigree. Satisfaction guaranteed. Call or write E. R. LEONARD, R 3, St. Louis, Mich.

I Am Offering Large Type Poland China Sows,
bred to F's Orange at reasonable prices. Also fall pigs. Write or call.
CLYDE FISHER, R 3, St. Louis, Mich.

BIG TYPE POLAND CHINA BRED GILTS
sold. Some extra good fall pigs of both sex for sale. Write for breeding and price.
MOSE BROTHERS, St. Charles, Mich.

WALNUT ALLEY BIG TYPE P.
C. One gilt for sale with pig by the Grand Champion boar of Detroit, 1920, due May 8th. First check for \$75 takes her. Gilt is right, so is the price.
A. D. GREGORY,
Ionia, Mich.

DUROCS

BUY GOOD HOGS NOW

In the state. Open fall gilts at \$25. Sows and gilts bred for summer and fall farrow. Booking orders for spring pigs. Will accept a few sows to be bred to good sons of Great Orion Sensation and Duration. Write or visit us.
Michigan Farm, Pavilion, Mich., Kalamazoo Co.

FOR SALE—FINE MARCH AND APRIL PIGS
Sired by Gladwin Col. 188995. Write us your wants.
HARLEY FOOR & SONS, R 1, Gladwin, Mich.

Duroc Jersey Bred Stock all Sold. Orders taken
for venting pigs. 1,000 pound herd boar.
JOS. SCHUELLER, Weldman, Mich.

MEADOWVIEW FARM REG. JERSEY HOGS.
Booking orders for spring pigs.
J. E. MORRIS & SON, Farmington, Mich.

DUROC JERSEY BOARS. Boars of the large, heavy-boned type, at reasonable prices. Write, or better, come and see.
F. J. DRODT, R 1, Monroe, Mich.

PEACH HILL FARM
offers tried sows and gilts bred to or sired by Peach Hill Orion King 152489. Satisfaction guaranteed. Come look 'em over.
Also a few open gilts.
INWOOD BROS., Romeo, Mich.

AM OFFERING SOME HIGH CLASS
SPRING DUROC BOARS
at reasonable prices. A few gilts bred for September farrow at bargain prices.
W. C. TAYLOR,
Milan, Mich.

FOR SALE—REG. DUROC-JERSEY SPRING
gilts bred to Rambler of Sangamo 1st. The boar that sired our winners at Michigan State Fair and National Swine Show.
F. HEIMS & SON,
Davison, Mich.

OAKLANDS PREMIER CHIEF

Herd Boar—Reference only—No. 129219

1919 Chicago International

4th Prize Jr. Yearling

BOOKING ORDERS FALL PIGS AT \$25
BLANK & POTTER
Pottsville, Mich.

DUROCS—SOWS AND GILTS ALL SOLD.
Have a few choice fall boars at reasonable price.
C. L. POWER, Jerome, Mich.

FOR SALE—DUROC FALL GILTS. WE ARE
booking orders for choice spring pigs, \$15.8 to 10 weeks old.
JESSE BLISS & SON, Henderson, Mich.

FOR SALE: ONE DUROC BOAR FROM
Brookwater breeding stock. Choice spring pigs.
JOHN CRONENWETT, Carleton, Mich.

Duroc sows and gilts bred to Wait's King \$2949
who has sired more prize winning pigs at the state fairs in the last 2 years than any other Duroc boar. Newton Barnhart, St. Johns, Mich.

Durocs. Hill Crest Farms. Bred and open sows
and gilts. Boars and spring pigs. 100 head. Farm 4 miles straight S. of Middleton, Mich.
Grat Co. Newton & Blank, Perrinton, Mich.

WE OFFER A FEW WELL-BRED SELECT-
ed spring Duroc Boars, also bred sows and gilts in season. Call or write
McNAUGHTON & FORDYCE, St. Louis, Mich.

O. I. C.

FOR SALE—O. I. C. AND CHESTER WHITE
Swine. Two good tried sows due to farrow in August. Choice March pigs ready for shipment, some excellent boar prospects. Prominent bloodlines, Prince Big Bone, Schoolmaster and Champion Giant predominate. Get my prices before buying. Recorded free.
CLARE V. DORMAN, Snover, Mich.

O. I. C.

GILTS BRED FOR SPRING FARROW
and one Shorthorn bull calf eight months old. Milking strain, full fed.
F. C. BURGESS, Mason, R 3, Mich.

O. I. C. SWINE—MY HERD CONTAINS THE
blood lines of the most noted herd. Can furnish you stock at "live" and "let live" prices.
A. J. GORDEN, Dorr, Mich., R 3.

O. I. C.'S SERVICE BOARS, SPRING PIGS
at Farmer's prices.
CLOVER LEAF STOCK FARM, Monroe, Mich.

SAGINAW VALLEY HERD OF PRIZE WIN-
ning O. I. C.'s. Jan. and Feb. pigs ready priced reasonable. John Gibson, Foster, Mich.

CHESTER WHITES

BRED GILTS FOR JUNE FARROW. ONE
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THE MICHIGAN BUSINESS FARMER, Buyers' Bureau, Mt. Clemens, Michigan.

THE TRUE ARMY WORM AND ITS CONTROL

(Continued from page 18)

undisturbed, the moths will usually remain at rest for several hours before flying away to mate and lay their eggs. It takes from 7 to 8 weeks for the insect to develop from the egg to the adult or moth.

After the moths have expanded their wings they do not grow any larger, the small moths are not the young of larger moths, but the male moth or parent of the army worm is usually considerably smaller than the female.

The army worm has been known as a serious pest on cereal and forage crops in the United States since early colonial times. As early as the year 1632 it is recorded as injuring corn in New England by Peter Kalm, a Swedish naturalist who traveled in this country. In the year 1743 a great outbreak of the army worm is recorded as having occurred throughout that portion of the country now known as the North Atlantic states. From then down to the present time the insect has hampered agriculture and robbed the farmer mercilessly at comparatively short but irregular intervals of time. The most recent serious invasion occurred during the summer of 1914, at which time the entire agricultural region east of the Rocky Mountains and north of the Gulf States suffered to a greater or less degree. From the past history of the insect the farmer may confidently expect to be compelled to cope with it from time to time, and he should ever be on the alert during the spring and early summer.

Control Measures

The importance of watchfulness on the part of the farmer, as a factor in combating the army worm can not be too greatly emphasized. Upon the discovery of the pest in its younger stages depends very largely the possibility of stamping out an infestation before serious injury to crops has occurred. The farmer should examine his meadows frequently during the spring and early summer months, particularly those planted to timothy, bluegrass, and especially millet. He should not be satisfied with looking merely at the surface of the stand; the thicker and longer the growth, the greater the danger from the army worm. The grass or grain should be parted with the hands in various parts of the field and the lower portions of the growth closely examined, in order to discover the presence of the small, greenish caterpillars, and if such be found in any number the area covered by the infestation should be determined and vigorous action taken at once to destroy the worms before they become large enough to begin their journey to other portions of the farm. If the infested spot be small, the grass or grain can be mowed off and straw scattered over the spot and burned, thus destroying the worms. If the caterpillars have become distributed over a considerable area, this can be marked off by stakes and the crop sprayed heavily with a mixture of Paris green at the rate of 1 pound to 50 gallons of water. In case this poison is used, care should be exercised in preventing stock from gaining access to the poisoned grass or grain and being injured or killed by eating it. It is far better to sacrifice a portion of the crop, if the destruction of the pest can be accomplished thereby, because if the army worms are not destroyed they will take the crop anyway and probably devastate other portions of the farm.

In case the worms are crawling in a body, surround them with a furrow or ditch and crush them with a log drag as they fall into it.

Poison them by spraying crops not intended for forage purposes with 1 pound of Paris green to 50 gallons of water, or with 2 pounds of arsenate of lead to 50 gallons of water. In case the Paris green is used on tender plants, like corn, 2 pounds of freshly slaked lime should be added to 50 gallons of the mixture. This is to prevent burning the tender plants. Where spraying is not practicable, the use of the poisoned bran-bait is highly recommended.

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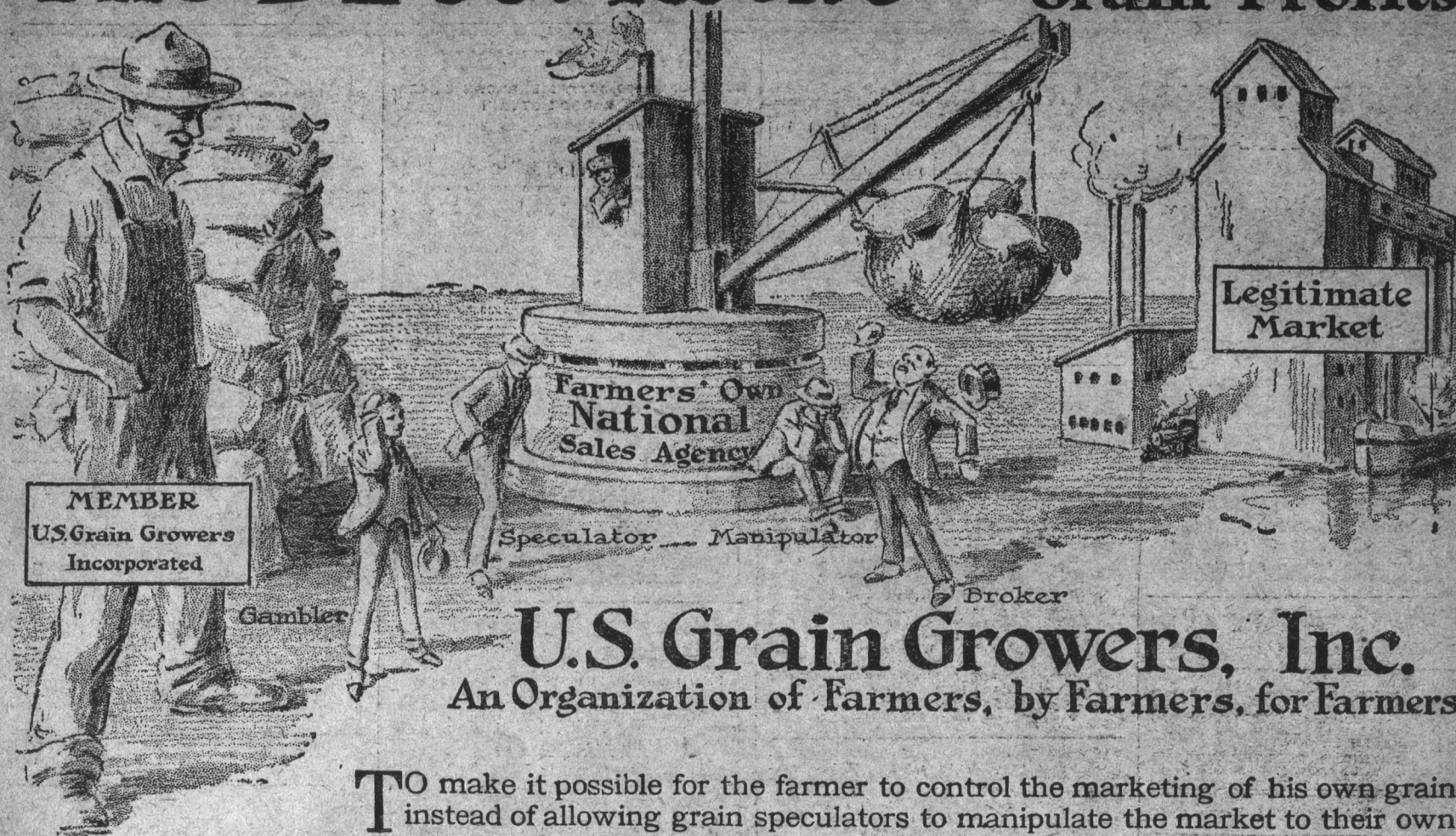
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